

ENVIRONMENTAL  
CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive,  
and Virtuous Environmental Single-Window Hub)



Government of India  
Ministry of Environment, Forest and Climate Change  
(Issued by the State Environment Impact Assessment  
Authority(SEIAA), KERALA)

To,

The DIRECTOR  
DAIWIK INDUSTRIES PRIVATE LIMITED  
Daiwik Industries Pvt. Ltd.  
T.C. 15/836, Vazhuthacaud P.O.,  
Behind Trivandrum Club, Sasthamangalam, Thiruvananthapuram, Kerala-  
695010 -695010

**Subject:** Grant of Environmental Clearance (EC) to the proposed Project Activity  
under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC)  
in respect of project submitted to the SEIAA vide proposal number  
SIA/KL/MIN/444972/2023 dated 06 Oct 2023. The particulars of the environmental  
clearance granted to the project are as below.

- |                                               |                                      |
|-----------------------------------------------|--------------------------------------|
| 1. EC Identification No.                      | EC25B001KL191892                     |
| 2. File No.                                   | 2407/EC3/2023/SEIAA                  |
| 3. Project Type                               | New                                  |
| 4. Category                                   | B                                    |
| 5. Project/Activity including<br>Schedule No. | 1(a) Mining of minerals              |
| 6. Name of Project                            | M/s Daiwik Industries Pvt. Ltd.      |
| 7. Name of Company/Organization               | DAIWIK INDUSTRIES PRIVATE<br>LIMITED |
| 8. Location of Project                        | KERALA                               |
| 9. TOR Date                                   | N/A                                  |

The project details along with terms and conditions are appended herewith from page  
no 2 onwards.

Date: 10/03/2025

(e-signed)  
Mir Mohammed Ali IAS  
Member Secretary  
SEIAA - (KERALA)

*Note: A valid environmental clearance shall be one that has EC identification  
number & E-Sign generated from PARIVESH. Please quote identification  
number in all future correspondence.*

*This is a computer generated cover page.*





**PROCEEDINGS OF THE  
STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT  
AUTHORITY – KERALA, THIRUVANANTHAPURAM**

*(Present : Dr.H.Nagesh Prabhu IFS (Retd), Chairman,  
Shri.K.Krishna Panicker, Member, Dr.Rathan U.Kelkar IAS, Member Secretary)*

**Sub:- Environmental Clearance for the Granite Building Stone Quarry Project of  
M/s. Daiwik Industries Private Limited., TC 15/836, Vazhuthacaud P.O.,  
Thiruvananthapuram, Kerala - Granted – Orders issued.**

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**STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA**

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**Proposal No. SIA/KL/MIN/444972/2023**

**File No. 2407/EC3/2023/SEIAA**

**Ref:** 1. Application for EC received from M/s. Daiwik Industries Pvt Ltd on 06.10.2023.  
2. Minutes of the 174<sup>th</sup> meeting of SEAC held on 22<sup>nd</sup> November 2024.  
3. Minutes of the 151<sup>st</sup> meeting of SEIAA held on 30<sup>th</sup> & 31<sup>st</sup> December 2024.

**ENVIRONMENTAL CLEARANCE NO. 29/Q/2025**

Sri. N Vinod Lal, Director, M/s. Daiwik Industries Private Limited., TC 15/836, Vazhuthacaud P.O., Thiruvananthapuram, read as 1<sup>st</sup> paper above, submitted an application for Environmental Clearance for the Granite Building Stone Quarry Project for an area of 5.4586 Ha at Block No. 48, Re-Sy. Nos. 346/1-2, 347/2- 4, 346/3, 346/1-1, 346/1-3, 347/5, 347/4, 346/4, 346/1-9, 347/2-3, 346/1-5, 346/1- 4, 346/1-7, 346/1-8, 354/1-5-1, 354/1-5, 354/1-16, 355/7, 345/4, 345/6, 345/3-1, 354/1-3, 354/1-7, 347/1, 347/2-1, 347/2, 355/6, 345/3, 354/1-7-1, 346/2-1, 347/3-2 in Aryanad Village, Nedumangad Taluk, Thiruvananthapuram.

## **1. Project Details**

<b>Sl. No</b>	<b>Particulars</b>	<b>Details</b>
1	Name of the Project	Granite Building Stone Quarry Project of M/s. Daiwik Industries Private Limited
2	Proposed Activity	Mining of Granite Building Stone
3	Name of the Sector & Schedule No. (in the EIA Notification, 2006)	Non Coal mining, Activity 1(a), Category B2
4	Name & Address of the Project Proponent	Sri. N Vinod Lal Director, M/s. Daiwik Industries Private Limited. TC 15/836, Vazhuthacaud P.O. Thiruvananthapuram,, Kerala- 695010
5	Project Location	
	a) Block No. b) Re Survey Nos.	48 346/1-2, 347/2- 4, 346/3, 346/1-1, 346/1-3, 347/5, 347/4, 346/4, 346/1-9, 347/2-3, 346/1-5, 346/1- 4, 346/1-7, 346/1-8, 354/1-5-1, 354/1-5, 354/1-16, 355/7, 345/4, 345/6, 345/3-1, 354/1-3, 354/1-7, 347/1, 347/2-1, 347/2, 355/6, 345/3, 354/1-7-1, 346/2-1, 347/3-2
	c) Revenue Village	Aryanad
	d) Taluk	Nedumangad
	e) District	Thiruvananthapuram
6	Extent (in Hectare)	5.4586 Ha
7	Project Cost	Rs. 9.36 Crores
8	Mineable Reserve	The Mining & Geology Department shall re-assess the mineable quantity as per Specific Condition no.(4)
9.	Date of Field inspection	21.01.2024

## **II. EMP DETAILS**

<b>Description</b>	<b>Item</b>	<b>Capital Cost (in Lakh)</b>	<b>Recurring Cost (in Lakh)</b>
Water Environment	Construction of garland drains with intermittent siltation traps (storm water management)	10	4
	De-silting operations	5	2
	Construction of ponds (rain water harvesting)	10	2
	Construction of retaining wall for waste dump in slope side	4	2

<b>Sub total</b>		<b>29</b>	<b>10</b>
Noise & vibration Environment	Maintenance of machinery suitably	6	3
	PPE's like Ear muffs	2	1
	Acoustic enclosure for DG set	3	0.5
	Blasting siren and notice boards	2	0.2
<b>Sub Total</b>		<b>13</b>	<b>4.7</b>
Ecological Environment	Green Area development in buffer of mine lease area. Saplings of trees in mine lease area will be transplanted to land outside mine lease area owned by PP. Development of medicinal garden own land outside mine lease area owned by PP	46.75	4.5
<b>Sub Total</b>		<b>46.75</b>	<b>4.5</b>
Occupational Safety and Health	First aid kits – 2 nos. Fire extinguishers-2 nos.	2	1
	Training and awareness programs on risk factors during emergencies by the experts.	2	3
	Periodical medical check-up and supply of medicines	4	4
<b>Sub Total</b>		<b>8</b>	<b>8</b>
Air Environment	Personnel Protective Equipments (PPE) to mine workers	5	15
	Uniform for mine workers	0.4	0.2
	Blast mats	0.8	0.4
	Wetting of roads (paved and unpaved) and sprinkler system	8	5
	on road side-3m interval and buffer zone – 3m interval plus maintenance	5	1
	Regular cleaning of paved roads,	0.1	3
	Construction of speed controllers	0.5	0.1
	Asphalting of roads and its maintenance	15.0	1.5
<b>Sub-Total</b>		<b>34.8</b>	<b>26.2</b>
<b>Grand Total</b>		<b>131.55</b>	<b>53.4</b>

### **III. CER DETAILS**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Amount</b>
1.	Construction of 6smart class rooms at Govt. L P School, Parangod	58,00,000
2.	Convert 6 class rooms in to smart classrooms at Govt. U P School, Parangod	7,00,000
	<b>Grand Total</b>	<b>65,00,000</b>

2. After due appraisal, in the 174<sup>th</sup> SEAC meeting, the Committee recommended EC for 12 years subject to the certain specific conditions in addition to the general conditions and production of NOC from the Irrigation Department in compliance to Section 40(2) of the Kerala Irrigation and Water Conservation Act, 2003 as ordered by the Hon'ble High Court of Kerala 19-04-2024.
3. In the 151st meeting, the Authority perused the proposal and noted the decisions of various SEAC meetings held on different dates. Authority noticed that the SEAC had appraised the project based on Form 1, Pre-Feasibility Report, Mining Plan, additional details/documents obtained from the Project Proponent during appraisal, EIA report, and the Field Inspection Report and recommended EC for 12 years. The Authority noted that for the sustainable management of quarry operations, the approved mining plan is revised every five years till the project life of mine as per KMMC Rules, incorporating scheme of activities to be carried out for the next 5 years. Authority is of the opinion that it is essential to match these procedures and time lines followed in the department of Mining and Geology with the time lines ECs issued for the sustainable management of quarry operations and protection of environment in the project region. In these circumstances, the Authority decided to accept the recommendations of 174<sup>th</sup> SEAC meeting and to issue Environmental Clearance initially for a period of 5 years from the date of execution of mine lease / permit and then to extend the EC period to cover the project life of 12 (Twelve) years, subject to the review by SEAC at the end of every five years, to verify whether the Project Proponent has violated any of the EC conditions and thereby caused any damage to the Environment in the project region.

The EC is subject to General Conditions and the following Additional Specific Conditions.

1. *The Project Proponent shall carry out quarrying as per the approved Mining Plan and as per the Specific Conditions mentioned hereafter. The Project Proponent should strictly follow the Kerala Minor Mineral Concession Rules 2015 and amendments thereby.*
2. *The EC shall be valid from the date of execution of permit/lease from the Department of Mining and Geology. The copy of the permit / lease order should be provided to the SEIAA before commencing the mining activity.*

3. *The EC issued will be subject to a review by SEAC after every 5 years through field verification to ensure that mining is carried out sustainably as per the EC conditions.*
4. *The depth of mining should be limited to 105m AMSL considering the depth to water table and the mineable resources shall be reworked accordingly by the Mining and Geology Department while approving the Scheme of Mining / issuing the lease or permit.*
5. *All the assurances and the mitigation measures committed by the Project Proponent as per the minutes of public hearing should be complied with and submit the report along with HYCR.*
6. *A temporary protection wall of 5m height connecting boundary pillars BP5-BP4-BP2-BP10-BP9 should be provided prior to the commencement of mining activities.*
7. *Boulders spread over in the site should be removed observing utmost safety precaution prior to the commencement of mining.*
8. *Since the project area located within 10km radius from the Neyyar WLS and Peppara WLS, the Project Proponent has to obtain Wildlife Clearance from the SCNBWL as per the OM dated 17.05.2022 of MoEF&CC as per the directions in the Hon'ble Supreme Court Judgement dated 26.04.2023 in IA 13177 of 2022 before the commencement of mining.*
9. *The Authority makes it amply clear that EC issued does not necessarily imply that Wildlife clearance shall be granted to the Project Proponent and that the proposal for Wildlife clearance will be considered by the respective Authorities on its merit and decision taken accordingly. The investment made in the project if any based on this EC in anticipation of clearance from Wildlife angle shall be entirely at the cost and risk of the Project Proponent and MoEF&CC and SEIAA shall not be responsible in this regard in any manner.*
10. *Copy of the EC shall be marked to IGF (WL), MoEF&CC, PCCF and Chief Wildlife Warden, Kerala, District Collector, Thiruvananthapuram and Department of Industries GoK, besides others for information and necessary further action.*
11. *Copy of the EC shall be marked to Wildlife Warden of respective wildlife sanctuaries and to the District Geologist. They are directed to ensure that Project*

*Proponent will not commence the mining operations without clearance from SCNBWL.*

- 12. The Mining and Geology Department shall issue permit / lease only after the production of the NOC from the Irrigation Officer in compliance with Section 40(2) of the Kerala Irrigation and Water Conservation Act, 2003. The Project Proponent shall scrupulously follow all the conditions in the NOC issued by the Irrigation Officer. The Project Proponent shall submit copy of the NOC with the first HYCR.*
- 13. The transportation management plan should be strictly implemented to prevent the impact on road traffic.*
- 14. Development of green belt should be initiated prior to the commencement of mining using indigenous species. The suggested species are Phyllanthus emblica (Nelli), Syzygium cumini (Njaval), Writia tinctoria (Dhanthapala), Ficus bengalensis (Peral), Ficus racemosa (Atti), Bambusa bamboos (Mullumula), Dendrocalamus strictus (Kallan mula), Strychnos nuxvomica (Kanjiram), Terminalia cattappa (Thanni), Schleicheria oleosa (Poovam), Artocarpus hirsutus (Ayiniplavu) etc.*
- 15. Compensatory afforestation should be done prior to the commencement of mining, by planting local species of trees as proposed.*
- 16. Geotagged photographs of the progress of compensatory afforestation should be submitted along with HYCR.*
- 17. Adequate number of avenue trees of indigenous species should be planted along both sides of the haulage road.*
- 18. The haulage road should be provided with sprinkling facility to prevent dust pollution.*
- 19. Drainage system incorporating garland canal, silt traps, siltation pond and outflow channel connecting to a natural drain should be provided prior to the commencement of mining.*

20. *Garland drain, silt-traps, siltation ponds and outflow channels should be desilted periodically and geo-tagged photographs of the process should be included in the half-yearly compliance report (HYCR).*
21. *Overflow water from the siltation pond should be discharged to the nearby natural drain after adequate filtration.*
22. *Drainage water should be monitored at different seasons by an NABL accredited lab and clear water should only be discharged into the natural stream. Geotagged photographs of the drainage and sampling site should be submitted along with HYCR.*
23. *Overburden should be stored at the designed place and gabion wall should be provided for the topsoil and overburden storage sites.*
24. *The impact of vibration due to blasting on the houses and other built structures within 200m distance from the project boundary should be monitored in terms of Peak Particle Velocity and amplitude for maximum charge per delay and included in the Half Yearly Compliance Report.*
25. *Implementation of CER Plan should be done during the first two years of the EC period itself and its operation and maintenance should be done till the completion of mine closure plan.*
26. *Transportation of mined material should not be done during the peak hours in the forenoon (8.00am to 10.00am) and afternoon (3.30pm to 5.00 pm).*
27. *Adequate sanitation, waste management and restroom facilities should be provided to the workers.*
28. *Adequate energy conservation measures should be implemented including solar power installations. At least 40% of the energy requirement shall be met from the solar power.*
29. *The Environment Management Cell (EMC) should include one subject expert in environment management and local ward member. The proceedings of the monthly meeting of the EMC should be submitted along with the HYCR.*



30. Adequate measures should be adopted to harvest the rainwater as per the guidelines issued by the Central Groundwater Authority.
31. Blasting mats should be used during rock blasting to contain the blast, prevent fly rocks and suppress dust.
32. In the wake of occurrence of large scale landslides in the state, as per the information provided by the Department of Mining & Geology, it is directed to use only NONEL (Non Electrical) technology for blasting to reduce the vibration of the ground, which is one of the causative factors that triggers landslides, formation of cracks in the surrounding buildings and disturbance to human and wildlife.
33. As per OM no F.No.22-65/2017-IA.III dated 30th September 2020, under Corporate Environmental Responsibility (CER) the Project Proponent should implement the Environment Management Plan (EMP)/CER as directed by SEAC during appraisal, covering the issues to address the environmental problems in the project region, from the beginning of the project, indicating both physical and financial targets year wise. The EMP/CER shall be implemented in consultation with Local Self Govt. Institutions. A copy of the approved EMP/CER shall be made available to the concerned Panchayat for information and implementation support. The indicated cost for implementation of CER activities shall be 2% of the project cost.
34. As per the directions contained in the OM F.No.22-34/2018-IA.III dated 16<sup>th</sup> January 2020 issued by MoEF&CC, in obedience to the directions of the Hon'ble Supreme Court the Project Proponent shall, undertake re-grassing the mining area and any other area which may have been disturbed due to his mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The compliance of this direction shall be included in the Half Yearly Compliance Report which will be monitored by SEAC at regular intervals.
35. The Project Proponent is directed to install a CCTV camera and take all other essential measures to ensure that mining site is not used by antisocial elements for nefarious antisocial activities which are detrimental for peaceful coexistence in the project region. In case if such complaints are received, the EC given is likely to be cancelled after a police verification.

36. *The violation of EC condition may lead to cancellation of EC and action under The Environment (Protection) Act 1986.*

4. **Environmental Clearance as per the EIA Notification, 2006 is hereby accorded for the Granite Building Stone Quarry Project of Sri. N Vinod Lal, Director, M/s. Daiwik Industries Private Limited., TC 15/836, Vazhuthacaud P.O., Thiruvananthapuram, for an area of 5.4586 Ha at Block No. 48, Re-Sy. Nos. 346/1-2, 347/2- 4, 346/3, 346/1-1, 346/1-3, 347/5, 347/4, 346/4, 346/1-9, 347/2-3, 346/1-5, 346/1-4, 346/1-7, 346/1-8, 354/1-5-1, 354/1-5, 354/1-16, 355/7, 345/4, 345/6, 345/3-1, 354/1-3, 354/1-7, 347/1, 347/2-1, 347/2, 355/6, 345/3, 354/1-7-1, 346/2-1, 347/3-2 in Aryanad Village, Nedumangad Taluk, Thiruvananthapuram, initially for a period of 5 years from the date of execution of mine lease / permit as per S.O.1807 (E) dated 12.04.2022 of MoEF & CC and then to extend the EC period to cover the project life of 12 (Twelve) years, subject to the review by SEAC at the end of every five years, for the quantity reassessed by the Mining and Geology Department as per Specific Condition. The EC is subject to the Specific Conditions stipulated by SEIAA in Para 3 above, and all the environmental impact mitigation and management measures undertaken by the Project Proponent in the Form I, EIA, EMP, PFR and Mining Plan submitted to SEIAA. The assurances and clarifications given by the Project Proponent will deemed to be a part of this Proceedings as if incorporated herein. Also the General Conditions for projects stipulated for mining (items 1 to 57), mentioned below will be applicable and have to be strictly adhered to.**
5. The Environmental Clearance issued will also be subject to full and effective implementation of all the undertakings given in the Application Form, mitigation measures as assured in the Environment Management Plan and the mining features including Progressive Mine Closure Plan as submitted with the application. The above undertakings and the conditions and the undertakings of the Mining Plan in (Mining), (Blasting), (Mines Drainage), (Stacking of Mineral rejects and Disposal of waste), (Environment Management Plan) & (Progressive Mine Closure Plan) as submitted will deemed to be part of this Proceedings as conditions as undertaken by the project proponent, as if incorporated herein.
6. Validity of the Environmental Clearance will be initially for Five (5) years and then to extend the EC period to cover the project life of **12 (Twelve) years**, subject to the review

by SEAC in every five years, or earlier review of EC in case of violation or non – compliance of any of the conditions or genuine complaints from residents within the security area of the quarry.

7. Compliance with the conditions herein will be monitored by the State Level Environment Impact Assessment Authority or its authorised offices and also by the Regional Office of the Ministry of Environment, Forest & Climate Change, Govt. of India, Bangalore. Necessary assistance for entry and inspection should be provided by the Project Proponent and those who are engaged or entrusted by him to the staff for inspection or monitoring. Instances of violation if any shall be reported to the District Collector, Thiruvananthapuram by the State Level Environment Impact Assessment Authority – Kerala.
8. The Half Yearly Compliance Report (HYCRs) with name of the project, EC No. and date, the period of submission with its contents, compliance report and environmental monitoring data & covering letter have to be uploaded in the Parivesh Portal as per O.M. F.No.IA3-22/1/2022-IA-III(E)-17264 dated 14.06.2022 and on the website of the Project Proponent. Hardcopy of HYCRs shall not be acceptable.
9. The given address for correspondence with the authorised signatory of the project is Sri. N Vinod Lal, Director, M/s. Daiwik Industries Private Limited., TC 15/836, Vazhuthacaud P.O., Thiruvananthapuram,, Kerala- 695010.

### **Standard Conditions for Granite Mining Projects**

<b>Statutory Compliances</b>	
<b>Sl. No.</b>	<b>Conditions</b>
1.1	The Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Courts, NGT and any other Court of Law, from time to time, and as applicable to the project.
1.2	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
1.3	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
1.4	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife

	Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).
1.5	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee. A copy of the same shall be included with HYCRs.
1.6	The project proponent shall obtain the necessary permission from the Central / State Ground Water Authority, if the project intersects ground water table.
1.7	Solid/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.
1.8	Permission of power supply to be taken from the concerned authority for meeting power demand of the project site.
1.9	The maximum production or peak production at any given time shall not exceed the limit as prescribed in the approved mining plan/scheme of mining.
1.10	Project Proponent should obtain all necessary statutory clearances for mining.
1.11	If EC period is more than 6 months, Half Yearly Compliance Report (HYCR) shall be uploaded in the PARIVESH Portal and also submitted to SEIAA, Kerala via email.
1.12	The minimum distance norm from the boundary/periphery of other properties buildings/civil structures as prescribed in KMMC Rules and other statutory rules and orders shall be followed.

<b>Air Quality Monitoring and Mitigation Measures</b>	
2.1	Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
2.2	Applicable labour laws for mining shall be followed. Proper masks and onsite facilities shall be provided to the workers. All safety measures shall be followed while cutting laterite using machines.
2.3	The Project Proponent shall monitor the air quality during operation and submit ambient air quality monitoring details along with the HYCRs.
2.4	Major approach roads shall be black topped and properly maintained. The transportation of the material should be done in covered trucks to contain dust emissions.
2.5	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution such as haul road, loading and unloading points and transfer points and having high levels of PM10 and PM2.5. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board or State Pollution Control Board.
2.6	Fugitive dust emissions from all the sources should be controlled regularly. Water

	spraying arrangement at project site, parking area, on haul roads, loading and unloading and at transport points should be provided and properly maintained.
2.7	Project Proponent should install wind breaker/shield arrangement along the boundary where there are houses within 100m radius.
2.8	Post environmental closure third party monitoring by reputed institution in air quality, water, land & soil etc shall be carried out and analysed with EMP measures at regular interval. A suitable recommendation in this regard, shall be furnished to IRO, MoEF&CC for compliance. The data used for analysis shall be obtained from continuous AQMS, site specific water regime. Also third party shall analyse the implementation of river diversion, meeting to the requirement of project report.

### **Water Quality Monitoring and Mitigation Measures**

3.1	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974, and other applicable standards as amended from time to time by the Central Pollution Control Board or State Pollution Control Board.
3.2	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No.J-20012/1/2006-IA.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
3.3	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/IRO.
3.4	Water quality monitoring of upstream and downstream portion of river including ponds, lakes, tanks shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
3.5	Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
3.6	The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side, stabilized with plantation so as to withstand the peak water pressure preventing any chance of mine inundation.
3.7	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps, to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, and for green belt development etc. The drains shall be regularly desilted and maintained properly, particularly after monsoon.
3.8	Garland drains and silt traps are to be provided in the slopes around the core area to channelize storm water. De-silting of Garland canal and silt traps have to be

	attended on a daily basis. A labour has to be specifically assigned for the purpose. The proponent shall ensure the quality of the discharging storm water as per the General Effluent Discharge Standards of CPCB or SPCB.
3.9	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
3.10	Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
3.11	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations shall be prepared, considering the presence of any river/rivulet/pond/lake etc., with impact of mining activities on it, and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the provisions of the approved Mining Plan/ EIA-EMP submitted to this Ministry and the same should be done with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved mining plan and as per the permission of DGMS.
3.12	Domestic water shall be providing to the residents/villages which are coming under the zone of influence of the project due to ground water extraction by installing a RO plant with proper supply line and taps, if there is any shortage of potable water due to the mining activity.
3.13	The project proponent shall take all precautionary measures to ensure the riverine/ riparian ecosystem in and around the mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation/water resource department in the state government.

#### **Noise And Vibration Monitoring And Prevention**

4.1	Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.
4.2	Speed of trucks entering or leaving the mine site is to be limited to moderate speed of 15 kmph to prevent undue noise from empty trucks.
4.3	Acoustic enclosures should be provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standard limit indicated by CPCB/KSPCB.
4.4	Measures should be taken for maintaining noise levels below 85 dBA in the work environment.
4.5	The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

<b>Mining Plan</b>	
5.1	Mining shall be carried out as per the approved mining plan (including Mine Closure Plan), suggestions from SEAC, KMMC Rules 2015 and amendments thereby and all other statutory rules and orders.
5.2	The blasting should be done in a controlled manner using NONEL technique as specified by the regulations of Petroleum and explosive safety organization (GOI) or any other concerned authorized agency. A licensed person should supervise/control the blasting operations mining activity should not involve blasting.
5.3	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
5.4	The quarrying operation shall be restricted between 7 AM and 5PM.
5.5	Maximum depth of mining shall be as per the mining plan and / or as per specific direction of SEAC. The maximum depth of mining should not be deeper than the local ground water table.
5.6	No mining operations should be carried out at places having a slope greater than 45°.
5.7	As per regulation no. 106(2) of Metalliferous Mines Regulation under Mine Act, the height of any bench shall not exceed five meters and breadth shall not be less than the height.
5.8	The top soil, if any, shall be temporarily stored at earmarked place (s) and used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained at 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. At critical points, use of geo textile shall be undertaken for stabilization of the dump. Protective wall or gabions should be made around the dump to prevent erosion / flow of sediments during rains. The entire excavated soil shall be used for backfilling as per mine closure plan.
5.9	All the mining equipment like backhoe loaders and excavators cause pollution and hence shall be serviced regularly & maintained for their efficient functioning and for reducing pollution. Disposal of spent oil from diesel engines should be as specified under relevant Rules/ Regulations.
5.10	A minimum buffer distance specified as per existing rules and statutory orders shall be maintained from the boundary of the quarry to the nearest dwelling unit or other structures, and from forest boundaries or any other ecologically sensitive and archeologically important areas or the specific distance specified by SEIAA in EC as per the recommendations of SEAC depending on specific local conditions.
5.11	The lease area shall be fenced with barbed wire to a minimum height of 4ft around, before starting mining. All the boundary indicators (boards, markings, etc) shall be conspicuous and maintained at all times.
5.12	Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department. Blasting mats to reduce fly rock blasts to a maximum of 10 PPV should be provided.
5.13	Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged stipulated by Explosive Department.

5.14	Periodical monitoring of the vibration at specified location (preferably at a distance of 50 m and 100 m) to be conducted and records kept for inspection. This could also form a part of the compliance reports.
5.15	The pits in the abandoned quarries and in the mined area shall be used for activities like water harvesting, aqua culture etc. in an eco-friendly manner.
5.16	Mine has to be closed as per progressive mine closure plan and final mine closure plan.

#### **Land Reclamation**

6.1	Regular monitoring of subsidence movement on the surface over and around the working areas and its impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil/suitable material.
6.2	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
6.3	Appropriate fencing all around the burrowed/excavated pit shall be made to prevent any mishap.
6.4	Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
6.5	The project proponent should plant seedlings at least 5 times of the loss of trees that has occurred while clearing the land for the project and follow planting measures as suggested by SEAC. Suitable avenue trees should be planted along the sides of the approach road and internal roads and open parking areas, if any. Preference should be given to endemic native and fruit bearing species. Planting in buffer areas should be taken up beforehand. Proper upkeep and maintenance of planted seedlings shall be ensured by the project proponent.
6.6	The project proponent should ensure that the vegetation in the buffer is retained, maintained and strengthened with additions of native broad leaved plants.
6.7	Thorough inspection of the mine lease area for any cracks developed at the surface due to mining activities below ground shall be carried out to prevent inrush of water in the mine.
6.8	Native tree species shall be selected and planted over areas of greenbelt and compensatory afforestation affected by subsidence.
6.9	Eco-restoration including the closure of mine as per the progressive closure plan and final closure plan shall be done at the cost of the project proponent. This eco-restoration should follow scientific standards available for restoration, full recovery of the original vegetation and improving the resilience of different ecosystems. Overburden materials should be managed within the site and used for reclamation of mined pit as per mine closure plan / specific conditions.



6.10	At least 10 percent out of the total excavated pit area should be retained as water storage areas and the remaining area should be reclaimed with stacked dumping and overburden and planted with suitable indigenous plant species, if no other specific condition on reclamation of pit is stipulated in the E.C. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.
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#### **Public Hearing And Human Health Issues**

7.1	Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored.
7.2	The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.
7.3	The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.
7.4	Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.
7.5	Safeguards shall be adopted against health risks on account of breeding of vectors in the waterbodies created due to burrowing/excavation of laterite building stone.
7.6	Effective arrangement shall be made to provide and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed.
7.7	Implementation of the time bound action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the time bound action plan submitted with budgetary provisions during the public hearing.
7.8	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area', if applicable
7.9	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.

#### **Corporate Environment Responsibility**

8.1	The company shall have a well laid down environmental policy duly approve by
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	the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/ stake holders.
8.2	The Project Proponent shall implement the EMP and environmental conditions along with CER from the comments of activity. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office/SEIAA along with the Six Monthly Compliance Report.
8.3	Corporate Environmental Responsibilities (CER) as prescribed by SEIAA/SEAC should be carried out leading to environmental stability of the project region. The certificates from the beneficiaries, if the CER part is completed should also be submitted to the State Environment Impact Assessment Authority (SEIAA) along with year wise expenditure.
8.4	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
8.5	Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.

<b>Miscellaneous</b>	
9.1	The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.
9.2	The project authorities shall inform to the Regional Office of the MoEFCC/SEIAA regarding commencement of activity.
9.3	No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC) or SEIAA, Kerala.
9.4	In the case of any change(s) in the scope of the project, extent, quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which the E.C was issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority. In the case of transfer of ECs, the matter shall be intimated and get the approval from the Authority as per the existing norms.
9.5	All the statutory clearances should be obtained, as applicable, by the project proponent from the respective competent authorities including that for blasting and storage of explosives. Copies of all statutory clearances shall be submitted along with First Half Yearly Compliance Report.
9.6	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which, one shall be in the vernacular language within seven days, and in addition, the EC shall also be displayed on the project proponent's website

	permanently.
9.7	The project proponent shall send a copy of the EC to concerned Grama Panchayat/ District Panchayat/ Municipality/Corporation/Urban Local Body and also to the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal.
9.8	The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font size of not less than 40. Sign board with extent of lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public.
9.9	The project proponent must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
9.10	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, if any, commitment made during Public Hearing, if any and also during their presentation to the State Expert Appraisal Committee.
9.11	The project proponent shall upload the status of compliance with the stipulated environment clearance conditions, including results of monitored data on their website and update the same on a half-yearly basis. The HYCRs shall be uploaded in the PARIVESH Portal to IRO MoEF&CC, Bangalore & SEIAA, Kerala.
9.12	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the PARIVESH portal.
9.13	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
9.14	The Regional Office of the MoEFCC and the SPCB shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office / SPCB or any other officers delegated by the SEIAA, by furnishing the requisite data / information/monitoring reports.
9.15	If Government land is partly or fully used for mining, the area shall be returned at the end of lease period after mine closure with separate demarcation with suitable survey marks.
9.16	Any accident occurring in the mined out area after the lease period due to negligence in carrying out safety measures and non-closure, will lead to suspension of all EC obtained for mining by the project proponent.
9.17	In case of transfer of EC the matter shall be intimated and approval from the Authority shall be obtained as per the existing norms.
9.18	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
9.19	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

9.20	The EC given will be withdrawn at any time if the area is declared high hazardous by the SDMA.
9.21	The Environmental Clearance will be subject to the final order of the courts on any pending litigation related to the land or project, in any court of law.
9.22	The SEIAA, Kerala reserves the right to stipulate additional conditions if found necessary. The Project Proponent in a time-bound manner shall implement these conditions.
9.23	The SEIAA, Kerala reserves the right to revoke or suspend the Environmental Clearance, if implementation of any of the above conditions is not satisfactory.
9.24	The Environmental Clearance shall be liable to be cancelled in case of violation of any of the above conditions.
9.25	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**To,**

Sri. N Vinod Lal  
Director  
M/s. Daiwik Industries Private Limited.,  
TC 15/836, Vazhuthacaud P.O., Thiruvananthapuram  
Kerala- 695010

**Copy to**

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4<sup>th</sup> Floor, E&F Wing, II Block, Koramangala, Bangalore-560034.(through e-mail: rosz.bng-mefcc@gov.in).
2. IG (WL) Wildlife Division, MoEF&CC
3. The Secretary to Government, Environment Department, Government of Kerala.
4. The Director, Directorate of Environment & Climate Change, 4th Floor KSRTC Bus Terminal, Thampanoor, Thiruvananthapuram, Kerala 695001.
5. PCCF & Chief Wildlife Warden, Forest & Wildlife Department, Govt. of Kerala
6. Wildlife Warden, Neyyar Wildlife Sanctuary, Thiruvananthapuram.
7. Wildlife Warden, Peppara Wildlife Sanctuary, Thiruvananthapuram.
8. The District Collector, Thiruvananthapuram.
9. The Director, Mining & Geology, Thiruvananthapuram -4
10. The Secretary, Department of Industries, GoK.
11. The Member Secretary, KSPCB, Thiruvananthapuram.
12. The District Geologist, Thiruvananthapuram.
13. The Environmental Engineer, KSPCB, Thiruvananthapuram.
14. The Tahsildhar, Nedumangad Taluk, Thiruvananthapuram District.
15. The Secretary, Aryanad Panchayath, Thiruvananthapuram.
16. The Chairman, SEIAA.
17. Website.
18. S/f / O/c