

# **Building Stone Quarry Project**

**Block No. 29, Re-Survey No. 120/10 at Manickal  
Village, Nedumangad Taluk, Thiruvananthapuram  
District, Kerala**

Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020

**Half Yearly Compliance Report (HYCR)  
for the Period October 2021 to March 2022**

Project Proponent



**Adani Vizhinjam Port Private Ltd. (AVPPL)**

**May 2022**



Ports and  
Logistics

AVPPL/MoEF/2022-23/1970

Date: 26<sup>th</sup> May 2022

To,  
Additional Principal Chief Conservator of Forests (C),  
Ministry of Environment Forest and Climate Change (MoEF&CC),  
Regional Office (Southern Zone), Kendriya Sadan,  
IV<sup>th</sup> Floor, E&F Wings, 17<sup>th</sup> Main Road, II<sup>nd</sup> Block,  
Koramangala, Bangalore-560034  
[rosz.bng-mefcc@gov.in](mailto:rosz.bng-mefcc@gov.in)  
Ph: 080-25635901

**Subject:** Submission of **Half Yearly Compliance Report (HYCR)** to Conditions of Environmental Clearance (EC) for the Period October 2021 to March 2022 - Reg.

**Reference:** EC for Building Stone Quarry in Block No.29, Re-Survey No.120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala; by M/s. Adani Vizhinjam Port Pvt. Ltd. vide **No. 1416/EC1/2019/SEIAA dated 27.02.2020**

Dear Sir/Madam,

This is with reference to the Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA issued on 27<sup>th</sup> February 2020 (vide reference cited) by the State Environmental Impact Assessment Authority (SEIAA), Kerala for the building stone quarry project in Block No.29, Re-Survey No.120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala; of M/s. Adani Vizhinjam Port Pvt. Ltd. (AVPPL).

The Half Yearly EC Compliance Report (HYCR) of the conditions stipulated in the cited reference for the period from **October 2021 to March 2022** is enclosed herewith for record and reference. You are requested to kindly acknowledge the receipt of the same.

Thanking you.

Yours Sincerely  
Rajesh Jha  
MD & CEO – Authorized Signatory


Enclosed: As mentioned above

Copy to: State Environment Impact Assessment Authority (SEIAA), K.S.R.T.C Bus Terminal Complex, 4th Floor, Thampanoor, Thiruvananthapuram, Kerala


Adani Vizhinjam Port Pvt Ltd  
3<sup>rd</sup> Floor, Aspinwall House,  
Kuravankonam  
Thiruvananthapuram,  
Kerala-695003

Tel +91 79 2656 5555  
Fax +91 79 2555 5500  
[info@adani.com](mailto:info@adani.com)  
[www.adani.com](http://www.adani.com)  
CIN: U61200GJ2015PTC083954

Registered Office:  
Adani Corporate House, Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad-382421

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2021 To: March 2022
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2021 to March 2022		
S. No.	Conditions	Compliance Status as on March 31, 2022
Specific Conditions		
1	The Proponent shall follow the directions given by the District Collector, Thiruvananthapuram vide his NOC No. 137/127325/18 dated 13.07.2018. The copy of the NOC may also be enclosed with the EC.	<b>Complied</b> Adani Vizhinjam Port Pvt. Ltd. (AVPPL) will follow the directions given by the District Collector, Thiruvananthapuram vide NoC No. B7-127329/18 dated 13.07.2018. Copy of the NoC is Enclosed as <b>Annexure-8 of Approved Mining Plan (Annexure A)</b> .  The NoC was further renewed on the same terms and conditions vide NoC No. B7-127329/18 dated 04.01.2020 ( <b>Annexure B</b> ).
2	Activities relating to Corporate Environmental Responsibility amounting to Rs. 1.64 lakhs shall be carried out leading to protection and promotion of environment including waste management in the project district as per OM FNo.22-65/2017-IA-III dt.01.05.2018 of MoEF& CC as directed by Director, Directorate of Environment & Climate Change and supervised by District Collector.	<b>Will be Complied</b> A total of Rs. 1.64 Lakhs will be spent on Corporate Environment Responsibility (CER) with expense heads under specific activities leading to protection and promotion of environment including waste management in the project in line with Ministry of Environment and Forests & Climate Change (MoEF&CC) Office Memorandum (OM) F.No.22-65/2017-IA.III dated 01.05.2018.  Since the EC for the project was issued on 27.02.2020 and AVPPL did not initiate any work at site till 23.03.2022, therefore, the amount for CER activities will be spent in due course of time.
3	The proponent shall carry out quarrying as per the approved Mining Plan and the proponent should strictly follow the Kerala Minor Mineral Concession Rules 2015 and amendments thereby.	<b>Being Complied</b> After obtaining Renewed NoC from village panchayat on 04.01.2020 ( <b>Annexure B</b> ), AVPPL has commenced operation on 23.03.2022. AVPPL will carry out quarrying as per the Approved Mining Plan ( <b>Annexure A</b> ) and will strictly follow the Kerala Minor Mineral Concession Rules (KMMCR), 2015 and amendments.
4	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	<b>Being Complied</b> Mining is being conducted using Non-Electric Detonator (NONEL) method of Blasting only to minimize the air blast, fly rock and ground vibration. The Ignition will be the Non-Conventional and Eco Friendly method by NONEL.


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	triggers landslides, formation of cracks in the surrounding buildings and disturbance to human and wildlife.	
5	As per the directions contained in the OM F.No. 22-34/2018-IA.III dated 16th January 2020 issued by MoEF &CC, in obedience to the directions of the Honourable 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.	<b>Will be Complied</b> After obtaining Renewed NoC from village panchayat on 04.01.2020 ( <b>Annexure B</b> ), AVPPL has commenced operation on 23.03.2022. AVPPL shall undertake plantation as per Progressive Mine Closure Plan which is included in the Approved Mining Plan ( <b>Annexure A</b> ) as per KMMCR, 2015. AVPPL shall also undertake re-grassing in any other area which may have been disturbed due to mining activities to restore the land to a condition fit for growth of suitable flora.
General Conditions		
1	A separate environmental management and monitoring cell with qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	<b>Complied</b> A separate Environmental Management and Monitoring Cell (EMMC) with qualified personnel has been set up by AVPPL. The cell is under the control of the Head of Department (HoD), Environment who reports directly to the Chief Executive Officer (CEO), AVPPL. The Organizational Structure for EMMC is enclosed as <b>Annexure C</b> .
2	Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including of approach road and internal roads.	<b>Will be Complied</b> AVPPL will plant avenue trees at suitable locations like buffer zone, etc. for greenbelt development during the upcoming monsoon season. A safety barrier area of 7.5 m from the boundary shall be developed as greenbelt area by planting the local species. At Mine Closure stage, the working pit shall be developed for water storage surrounded with local bio diversified vegetation. Totally 0.2922 Ha safety barrier area shall be used for development of greenbelt. Apart



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<b>S. No.</b>	<b>Conditions</b>	<b>Compliance Status as on March 31, 2022</b>
		from this the plantation shall be carried out outside the lease area along haulage road.
3	Sprinklers shall be installed and used in the project site to contain dust emissions.	<p><b>Being Complied</b> Regular water sprinkling through water tankers is being carried out on haul roads and other dust prone areas such as loading and unloading of minerals.</p>  <p><b>Water Sprinkling through Tankers</b></p>
4	Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent	<p><b>Will be Complied</b> Eco-restoration including Mine Closure Plan is provided in the Approved Mining Plan (<b>Annexure A</b>). The same shall be implemented during the closure at the cost of AVPPL.</p>
5	In view of the deep pits left after the excavation, stacking at maximum top level should be carried out.	<p><b>Not Applicable</b> Stacking of materials is not being carried out as all the produced materials are used for Breakwater Construction at Vizhinjam Port and being transported directly to the Port site and not stacked at the quarry site.</p> <p>As per the mine closure plan the pit will be utilized as a pond for storing of water through rainwater harvesting method and will also be induced to sustain the groundwater table. The pit shall be properly fenced with single opening for drawing the water. As per the post mining land use, an area of 0.22 Ha will be used for water pond for storage of water.</p>
6	Corporate Environment Responsibility agreed upon by	<p><b>Will be Complied</b> A total of Rs. 1.64 Lakhs will be spent on CER</p>


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	the proponent should be implemented.	with expense heads under specific activities leading to protection and promotion of environment including waste management in the project in line with Ministry of Environment and Forests & Climate Change (MoEF&CC) Office Memorandum (OM) F.No.22-65/2017-IA.III dated 01.05.2018.
7	The project proponent shall comply the conditions stipulated by the statutory authorities concerned.	<b>Being Complied</b> AVPPL is complying with all applicable conditions stipulated by respective competent statutory authorities.
8	Tarring /multiple options on the access roads shall be undertaken so as to reduce dust pollution during movement of vehicle.	<b>Will be Complied</b> AVPPL is developing a tar road of around 0.8 km from the quarry project site to Pirappancode Road (which is connected to Main Central (MC) Road – State Highway (SH)-1) for movement of vehicles; thereby reducing the dust pollution.
9	Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions	<b>Being Complied</b> As such, the quarry had been mined earlier by another party and since this is already an open mine, there was minimal top soil or overburden available in the quarry; all the produced materials are being used for Breakwater Construction at Vizhinjam Port and there would be no generation of waste.  Weathered rock was found at the site and that is being stored between pillar No. 1 and 2 within the site. Weathered rock will be used for development of internal roads within the mine.
10	Height of benches should not exceed 5 m, and width should not be less than 5 m, if there is no mention in the mining plan/specific condition.	<b>Being Complied</b> As per the Approved Mining Plan ( <b>Annexure A</b> ), bench height and width need to be maintained at maximum of 6.0 m also a 45° pit slope will be maintained; same is being adhered to.
11	Ground level should be fixed in individual cases separately	<b>Being Complied</b> For every bench, ground level is fixed in MSL as individual cases separately. Surface plan with MSL levels is provided in the Approved Mining Plan ( <b>Annexure A</b> ).
12	No mining operations should be carried out at places having a slope greater than 45.	<b>Being Complied</b> No mining operations are being carried out at places having a slope greater than a 45 degrees angle.


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13	Acoustic enclosures should have been 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 standards given by CPCB/KSPCB. This condition is applicable only in such cases if a crusher is adjacent to the quarry	<b>Not Applicable</b> There is no crusher adjacent to the quarry as there will be no crushing and screening within the lease area.
14	The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.	<b>Being Complied</b> All employees are provided with relevant Personal Protective Equipment (PPEs) like Helmets, Shoes, Fluorescent Reflective Jackets, etc. <div> </div> <p style="text-align: center;"><b>Employees with PPEs</b></p>
15	Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.	<b>Being Complied</b> Mining operations are being carried out in the top level during the compliance period; mining operations commenced on 23.03.2022. However, garland drainage/garland canals of 30 m is being developed in the lower slopes all along periphery of mining area to channelize storm water and prevent the entry of rainwater in the pit. The water from garland drain shall be diverted to silt settling tanks & rainwater harvesting ponds before releasing clarified water to the natural water course.

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<b>S. No.</b>	<b>Conditions</b>	<b>Compliance Status as on March 31, 2022</b>
16	The transportation of minerals should be done in covered trucks to contain dust emissions. The proponent should plant trees at least 5 'times of: the loss: that has been occurred while clearing the land for the project. SEAC should assess the number of trees in each project site before the issuance of EC so as to ensure the promptness in, planting.	<p><b>Being Complied</b></p> <p>The transportation of minerals in trucks is being undertaken covered with tarpaulin cover.</p>  <p><b>Truck with Tarpaulin Cover</b></p> <p>Since this is an existing quarry which was already mined earlier, the quarry is in opened condition. There was no clearing of land for the project and no trees have been cut as there are no trees inside the lease area.</p>
17	Explosives should be stored in magazines in isolated place specified and approved by Explosives Department	<p><b>Not Applicable</b></p> <p>As on date, explosives are being procured directly from the approved dealer and not being stored at the project site.</p>
18	A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.	<p><b>Complied</b></p> <p>As per the Government of Kerala (GoK) State Gazette Notification G.O. (P) No. 25/2017/ID dated 22.06.2017, permit holder shall not carry on or allow to be carried on any quarrying operations at or to any points within a distance of 50 m from any residential buildings or from the nearest dwelling unit or other structures.</p> <p>Also, as per the Consent to Operate (CTO) obtained from KSPCB, quarrying activities are restricted to a distance more than 50 m from the nearby residential buildings.</p> <p>Further, DMG had communicated to SEIAA vide its letter No. 9363/M3/2018 dated 23.03.2019 (<b>Annexure D</b>) that as per Rule 40 1(i) of the KMMC Rules, the lessee is permitted to carry out</p>




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		<p>mining at a distance of 50 m from the residential houses.</p> <p>As per the map prepared by the village officer, the nearest house is 57.7 m from the boundary of the quarry.</p>
19	50 m buffer distance should be maintained from forest boundaries.	<p><b>Not Applicable</b></p> <p>There are no forests or forest lands in the vicinity of the project site.</p>
20	Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.	<p><b>Complied</b></p> <p>CTO has been obtained from Kerala State Pollution Control Board (KSPCB) vide Consent No. vide Consent No.: PCB/TVM-DO/ICO/NDD/QRY/29/2020 dated 16.03.2020 valid up to 26.02.2025 (A copy of the same was submitted along with Letter No. AVPPL/MOEF/2020-21/1127 dated 13.05.2020 enclosed in <b>Annexure E</b>).</p>
21	All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.	<p><b>Complied</b></p> <p>AVPPL have obtained all applicable statutory clearances from the respective competent authorities. The following clearances have been obtained:</p> <ul style="list-style-type: none"> <li>• Approved Mining Plan by District Geologist, Thiruvananthapuram vide Letter No. 362/DOT/ML/18 dated 24.07.2019 (<b>Annexure A</b>).</li> <li>• No Objection Certificate (NoC) from Thiruvananthapuram District Collector vide Letter No. B7-127329/18 dated 13.07.2018 for Govt. land (<b>Annexure-8 of Approved Mining Plan (Annexure A)</b>).</li> <li>• The NoC was further renewed on the same terms and conditions vide NoC No. B7-127329/18 dated 04.01.2020 (<b>Annexure B</b>).</li> <li>• Directorate of Mining and Geology, Govt. of Kerala, Thiruvananthapuram has issued a Letter of Intent (LOI) vide No. 5219/M3/2019 dated 07.06.2019. The copy of the LOI is enclosed as <b>Annexure-1 of Approved Mining Plan (Annexure A)</b>.</li> <li>• CTO has been obtained from Kerala State Pollution Control Board (KSPCB) vide Consent No. vide Consent No.: PCB/TVM-</li> </ul>




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		<p>DO/ICO/NDD/QRY/29/2020 dated 16.03.2020 valid up to 26.02.2025 (A copy of the same was submitted along with Letter No. AVPPL/MOEF/2020-21/1127 dated 13.05.2020 enclosed in <b>Annexure E</b>).</p> <ul style="list-style-type: none"> <li>• Purchase and Use of Explosives Approval from Petroleum &amp; Explosives Safety Organization (PESO), Ernakulam vide Letter No. E/SE/KL/22/129(E95316) dated 18.02.2022 (<b>Annexure F</b>).</li> <li>• Dangerous and Offensive Trade (D&amp;O) License (Deemed as granted vide judgment dated 13.01.2021 in WP(C). No. 274 of 2021 (<b>Annexure G</b>).</li> <li>• Lease Order from DMG vide Letter No. 7671/M3/2021 dated 22.01.2022 and Lease Execution from Additional Director of Mining and Geology vide Pro. Order No. 428/2021-22/5219/M3/2019/DMG dated 22.01.2022 (<b>Annexure H</b>).</li> <li>• Quarrying Lease Registration Agreement in Form H at Thiruvananthapuram Registrar Office dated 28.01.2022 (<b>Annexure I</b>).</li> </ul>
22	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 only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority	<b>Noted</b>
23	The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act,	<b>Noted</b>

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	1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	
24	The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.	<b>Noted</b>
25	The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at <a href="http://www.seiaakerala.org">www.seiaakerala.org</a> . The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.	<p><b>Complied</b></p> <p>EC for the project was issued on 27.02.2020. Details of the EC were advertised in the local newspapers published on 01.03.2020 (A copy of the same was submitted along with HYCR for the period October 2019 to March 2020). The signed EC was submitted to SEIAA vide AVPPL/SEIAA/2019-20/1083 dated 04.03.2020 (A copy of the same was submitted along with Letter No. AVPPL/MOEF/2020-21/1127 dated 13.05.2020 enclosed in <b>Annexure E</b>).</p> <p>A copy of the EC is available with the SEIAA office and it is also available on the website of the Authority at <a href="http://www.seiaakerala.in">www.seiaakerala.in</a>. The copy of EC is also uploaded to the company website: <a href="https://www.adaniports.com/Downloads">https://www.adaniports.com/Downloads</a></p>
26	The Environmental Clearance shall be put on the website of the company by the proponent.	<p><b>Complied</b></p> <p>The copy of EC is uploaded to the company website: <a href="https://www.adaniports.com/Downloads">https://www.adaniports.com/Downloads</a>. Screenshot of the same was submitted along</p>

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		with Letter No. AVPPL/MOEF/2020-21/1127 dated 13.05.2020 (enclosed in <b>Annexure E</b> ).
27	Proponent shall submit half yearly reports in soft copy and SEIAA will upload it on the website.	<p><b>Being Complied</b></p> <p>Since the EC for the project was issued on 27.02.2020 and AVPPL did not initiate any work at site till 23.03.2022, therefore, the compliances till the end of the half yearly period ending 30.09.2021 was not substantial. AVPPL requested MoEF&amp;CC that the Half Yearly Compliance reports (HYCRs) for the period from October 2019 to September 2021 be exempted. AVPPL had complied with the conditions that were applicable prior to commencement of operations and details of the same was submitted to MoEF&amp;CC vide letter AVPPL/MOEF/2020-21/1127 dated 13.05.2020 and email dated 14.05.2020 (enclosed as <b>Annexure E</b>); same has been copied to State Environmental Impact Assessment Authority (SEIAA), Kerala.</p> <p>This present report is the Half Yearly Compliance to EC conditions for the period October 2021 to March 2022.</p>
28	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 of 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	<p><b>Complied</b></p> <p>The details of EC have been displayed at the site next to the entrance of the quarry, visible to the public.</p>


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		 <p><b>EC Details Displayed on Board at Site</b></p>
29	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.	<b>Complied</b> AVPPL have submitted Notarized Affidavit stating that all the conditions stipulated in the EC shall be scrupulously followed was submitted to SEIAA vide SEIAA vide AVPPL/SEIAA/2019-20/1083 dated 04.03.2020. A copy of the affidavit was submitted along with Letter No. AVPPL/MOEF/2020-21/1127 dated 13.05.2020 (enclosed in <b>Annexure E</b> ).
30	No change in mining technology and scope of working should be made without prior approval of the SEIAA, No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable	<b>Noted</b>
31	The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary	<b>Not Applicable</b> There are no natural water courses and/or water resources of first order streams in and around the mine lease area.


	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2021 To: March 2022
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2021 to March 2022		
S. No.	Conditions	Compliance Status as on March 31, 2022
	safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.	
32	The top soil, if any, shall temporarily be stored at earmarked site(s) only for the topsoil shall be 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 to. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.	<p><b>Being Complied</b></p> <p>As such, the quarry had been mined earlier by another party and since this is already an open mine, there was no top soil or overburden available in the quarry; all the produced materials are being used for Breakwater Construction at Vizhinjam Port.</p> <p>Weathered rock was found at the site and that is being stored between pillar No. 1 and 2 within the site. Weathered rock will be used for development of internal roads within the mine.</p>
33	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, green belt development. etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.	<p><b>Being Complied</b></p> <p>AVPPL is developing a siltation pond (5m X 5m X 2m depth) at the bottom of the quarry area to prevent run-off of water and flow of sediments. The water so collected will be utilized for greenbelt development, etc.</p> <p>The drains will be regularly desilted particularly after monsoon and maintained properly.</p>
34	Effective safeguard measures such as- regular water	<p><b>Being Complied</b></p> <p>Regular water sprinkling through water tankers</p>




	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2021 To: March 2022
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2021 to March 2022																													
S. No.	Conditions	Compliance Status as on March 31, 2022																											
	sprinkling shall be carried out in critical areas prone to air pollution and having high levels. 'of PM 10, and PM 2.5, such as haul Road, loading and unloading points and transfer points— it shall 'be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard	<p>on haul road and other dust prone areas such as loading and unloading of minerals is being carried out.</p> <p>Environment Monitoring at the site has been carried out by NABL accredited laboratory; M/s. Standards Environmental &amp; Analytical Laboratories. Summary of the Ambient Air Quality Monitoring (AAQM) during the compliance period at 5 monitoring locations is mentioned below.</p> <table><tr><th>Parameter</th><th>Unit</th><th>Max</th><th>Min</th><th>Perm. Limit</th></tr><tr><td>PM<sub>10</sub></td><td>µg/m<sup>3</sup></td><td>62.9</td><td>36.1</td><td>100</td></tr><tr><td>PM<sub>2.5</sub></td><td>µg/m<sup>3</sup></td><td>33.7</td><td>19.8</td><td>60</td></tr><tr><td>SO<sub>2</sub></td><td>µg/m<sup>3</sup></td><td>BDL</td><td>-</td><td>80</td></tr><tr><td>NO<sub>2</sub></td><td>µg/m<sup>3</sup></td><td>BDL</td><td>-</td><td>80</td></tr></table> <p>The Ambient Air Quality Monitoring Report is enclosed as <b>Annexure J</b>. All the monitored parameters were found within the prescribed limits.</p>			Parameter	Unit	Max	Min	Perm. Limit	PM <sub>10</sub>	µg/m <sup>3</sup>	62.9	36.1	100	PM <sub>2.5</sub>	µg/m <sup>3</sup>	33.7	19.8	60	SO <sub>2</sub>	µg/m <sup>3</sup>	BDL	-	80	NO <sub>2</sub>	µg/m <sup>3</sup>	BDL	-	80
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35	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained	<p><b>Being Complied</b></p> <p>AVPPL is developing a tar road of around 0.8 km from the quarry project site to Pirppanacode Road (which is connected to MC Road) for movement of vehicles; thereby reducing the dust pollution.</p> <p>Also, regular water sprinkling through water tankers on haul road and other dust prone areas such as loading and unloading of minerals is being carried out.</p>																											
36	Measures should be taken for control of noise levels below 85 dBA in the work environment.	<p><b>Being Complied</b></p> <p>The following measures are being taken for the control of noise levels:</p> <ul style="list-style-type: none"><li>• Drilling: The good captive silencers are being used in drilling equipment.</li><li>• Blasting: AVPPL is using NONEL method - bottom initiation to reduce the noise of blasting.</li><li>• Machineries &amp; Tippers: It is ensured that equipment's are fitted with effective silencers, mufflers, acoustic linings, or shields, as necessary.</li></ul>																											

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2021 To: March 2022
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2021 to March 2022																				
S. No.	Conditions	Compliance Status as on March 31, 2022																		
		<ul style="list-style-type: none"> <li>It is ensured that vehicles transporting the materials follow the speed limit in order to maintain the noise level.</li> <li>Vehicles are serviced regularly and maintained properly to avoid any unwanted generation of noise or vibration from them</li> </ul> <p>Ambient Noise is being monitored by NABL and MoEF&amp;CC accredited laboratory; M/s. Standards Environmental &amp; Analytical Laboratories as per Noise Pollution (Regulation &amp; Control) Rules, 2000 (Rules 3 (1) and 4(1)) at 5 locations. Summary of the Ambient Noise Monitoring during the compliance period at 5 monitoring locations is mentioned below:</p> <table border="1"> <thead> <tr> <th>Location</th><th>L<sub>eq</sub> Day time</th><th>L<sub>eq</sub> Night time</th></tr> </thead> <tbody> <tr> <td>Project Site</td><td>49.7</td><td>39.4</td></tr> <tr> <td>St. Johns Hospital, Manikkal</td><td>40.2</td><td>36.0</td></tr> <tr> <td>Govt. L P School, Perumala</td><td>45.7</td><td>37.3</td></tr> <tr> <td>Kovilvila Sree Mahavishnu Temple</td><td>37.2</td><td>35.0</td></tr> <tr> <td>Operators Rest Room</td><td>42.2</td><td>37.9</td></tr> </tbody> </table> <p>The results obtained were compared with Noise Pollution (Regulation &amp; Control) Rule, 2000 (Rule 3(1) and 4(1)) and it is observed that the noise readings were within limits at all monitoring locations. The Noise Monitoring report is enclosed as <b>Annexure K</b>.</p>	Location	L <sub>eq</sub> Day time	L <sub>eq</sub> Night time	Project Site	49.7	39.4	St. Johns Hospital, Manikkal	40.2	36.0	Govt. L P School, Perumala	45.7	37.3	Kovilvila Sree Mahavishnu Temple	37.2	35.0	Operators Rest Room	42.2	37.9
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Operators Rest Room	42.2	37.9																		
37	The funds earmarked for environmental protection measures and CER activate should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.	<p><b>Being Complied</b></p> <p>AVPPL has entered into a Concession Agreement with GoK for the construction and operation of Vizhinjam Port whereby it is mandated under Article 32 (<b>Annexure L</b>) that an Escrow Account has to be opened by AVPPL. All deposits have to be made into this account and all payments have to be routed through this account for the construction of the port. This account is directly under the monitoring of both the Central and State governments through the Senior Lenders.</p> <p>Therefore, it is requested that the provision of opening of separate account be absolved as there</p>																		

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2021 To: March 2022
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2021 to March 2022		
S. No.	Conditions	Compliance Status as on March 31, 2022
		will be a direct contradiction to the Concession Agreement. As the owner of the quarry, AVPPL guarantees that the amount of Rs. 1.64 Lakhs earmarked for CER and funds earmarked for environmental protection measures will be kept as a balance in the current Escrow Account.
38	The Regional Office of MOEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.	<b>Will be Complied</b> All necessary support will be extended to the Regional Office of MoEF&CC located at Bangalore for the monitoring of the compliance of the stipulated conditions by furnishing the requisite data/information/monitoring reports.
39	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.	<b>Noted</b>
40	Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	<b>Noted</b>
41	The SEIAA may revoke or suspend the order, for non-implementation of any of the specific or this implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest	<b>Noted</b>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2021 To: March 2022
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2021 to March 2022		
S. No.	Conditions	Compliance Status as on March 31, 2022
	of environment protection	
42	The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license on consent given by any other authority for the same project.	<b>Noted</b>
43	The Environmental Clearance will be subject to the final order of the courts in any pending litigation related to the land or project, in any court of law.	<b>Noted</b>
44	The mining operation shall be restricted to above ground water table and it should not intersect ground water table	<b>Will be Complied</b> Mining operations will be restricted to workings at a higher level at the quarry and will not touch the ground water table. The mine is located at higher elevation on hill and the water table in the mine is much below the general surface. However, a few perched aquifers has been observed at a distance of about 130m from the boundary of the mine. Here the observed water level to be about 10 m below from the surface. The expected deepest mining operation during this mining period shall be about 66 m above MSL; which will be much above the ground water table. No ground water is expected to be encountered during mining.
45	All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution taking centre. Washing of all vehicles shall be inside the lease area	<b>Being Complied</b> It is ensured that all vehicles used for transportation are having valid Pollution Under Control (PuC) certificate from authorized center.
46	Project proponent should obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and ground water for the project	<b>Not Applicable</b> AVPPL are not withdrawing the surface water or ground water from the project area for any purposes.
47	Regular monitoring of flow	<b>Not Applicable</b>

	<b>Adani Vizhinjam Port Private Limited (AVPPL)</b>	<b>From: October 2021 To: March 2022</b>
<b>Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District</b>		

<b>Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2021 to March 2022</b>		
<b>S. No.</b>	<b>Conditions</b>	<b>Compliance Status as on March 31, 2022</b>
	rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly reports to SEIAA	There are no springs and perennial nallahs flowing upstream and downstream of the mine lease area as there are no water courses and/or water resources of first order streams in and around the mine lease area.
48	Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed	<p><b>Will be Complied</b></p> <p>Occupational health surveillance program of the workers will be undertaken. The statutory norms shall be followed during the course of mining to ensure the proper health and safety of workers. All the health and safety aspects as per the requirement and standards of the DGMS shall be followed to ensure the health and safety of all persons employed at the mine.</p> <p>Since the mine has been in operation only since 23.03.2022, the medical health test of the workers and laborers shall be taken up periodically to observe any contractions due to exposure to dust and take corrective measures.</p>

**Enclosures:**

<b>Annexure Number</b>	<b>Details of Annexure</b>
Annexure A:	Approved Mining Plan by District Geologist, Thiruvananthapuram
Annexure B:	Renewed NoC from District Collector, Thiruvananthapuram
Annexure C:	EMMC Structure at AVPPL
Annexure D:	DMG Letter for permission to carry out mining at a distance of 50 m from the residential houses
Annexure E:	Submission of Signed EC, CTO, Advertisements of EC in Newspapers, Screenshot of EC Uploaded to Website and Notarized Affidavit that all EC Conditions will be followed
Annexure F:	Purchase and Use of Explosives Approval from PESO, Ernakulam
Annexure G:	D&O Trade License Deemed granted vide judgment dated 13.01.2021 in WP(C)
Annexure H:	Lease Order and Lease Execution from DMG
Annexure I:	Quarrying Lease Registration Agreement in Form H
Annexure J:	AAQM Report
Annexure K:	Noise Monitoring Report
Annexure L:	Article 32 of Concession Agreement with GoK



**Annexure A: Approved Mining Plan by  
District Geologist,  
Thiruvananthapuram**

No. 362/DOT/ML/18

Department of Mining & Geology  
**Government of Kerala**  
District Office, Thiruvananthapuram,  
Kesavadasapuram, Pattom Palace P. O.,  
Thiruvananthapuram 695004  
Phone 0471-2442055  
eMail: geo.thi.dmg@kerala.gov.in  
Dated 24.07.2019

From  
Geologist

To  
M/s. Adani Vizhinjam Port Pvt. Ltd.,  
2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud,  
Thiruvananthapuram

Sir,  
Sub:- Approval of Eco-friendly modified Mining Plan – Granite Building Stone  
quarry in Block no. 19 Re-sy. nos. 120/10, of Manickal Village,  
Nedumangad Taluk, Thiruvananthapuram District - reg.

Ref:- 1. Kerala Minor Mineral Concession Rules 2015  
2. Your application dated 10.06.2019 and 17.07.2019  
3. Site inspection dated 25.06.2019

The modified mining plan for the Granite Building Stone quarry of M/s. Adani Vizhinjam Port Pvt Ltd, 2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram District in Block no. 19 Re-sy. nos. 120/10 of Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala for an extent of 1.1081 Hectares is hereby approved vide the powers delegated to the District geologist for the approval of mining plan for the minor minerals issued under Rule 66 of Kerala Minor Mineral Concession Rules 2015, with the following conditions:-

1. That you will follow the prescribed Rules & Regulations of Central Government and State Government issued from time to time in regard to mining.
2. That you will follow the Mines Safety Rules & Regulations.
3. That you will store the mining waste in the earmarked location/dumping yard only as specified in the plan.
4. That you will carry out the plantation as committed in the plan.
5. That provision shall be made for the housing facility for the labour with all basic infrastructure facilities including safe drinking water, toilets etc., within the site.
6. That the yearly production (1<sup>st</sup> year-50152.50MT, 2<sup>nd</sup> year-70230MT, 3<sup>rd</sup> year - 60127.50MT, 4<sup>th</sup> year - 50122.50 & 5<sup>th</sup> year - 50400MT respectively) approved in the plan shall be strictly adhered to and if any deviation is required the same shall be intimated in advance.

Yours faithfully,  
  
Geologist

# MINING PLAN

(Including Progressive Mine Closure Plan)  
(Under Rule 55 of the Kerala Minor Mineral Concession Rule 2015)

for

## GRANITE BUILDING STONE QUARRY (Minor Mineral)

**Extent: 1.1081 Ha. (2.7381 Acres)**

at

Re-Survey Block. No: 19, Re-Survey. Nos. 120/10

Village	:	Manickal,
Taluk	:	Nedumangad,
District	:	Thiruvananthapuram,
State	:	Kerala,

**M/s. Adani Vizhinjam Port Private Limited.,**

2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram District, Kerala – 695 014,

**Production Capacity: 70,230.00 TPA (Max)**

Open Cast, Semi Mechanized Mining Method  
Government Land (with NOC from District Collector)

Prepared By

**C. Thambu Cherian**  
DMG/KERALA/RQP/17/2018

**GLOBAL Environment & Mining Services**  
(Consulting Engineers, Mine Designers, Geologists & Surveyors)

#212, Celestic Towers, Palm Avenue, Green Glen Layout, Bellandur  
BANGALORE: 560 103, Karnataka

Ph : +91 6361550211,  
e-mail : [gems.blr@globalmining.in](mailto:gems.blr@globalmining.in)  
webste : [www.globalmining.in](http://www.globalmining.in)

H.O.  
3<sup>rd</sup> Main Road, Basaveshwara Badawane  
HOSPET – 583201, Bellary Dist. (Karnataka)



*Mining Plan Approved*  
*24/11/19.*  
**GEOLOGIST**  
DISTRICT OFFICE  
DEPT. OF MINES & GEOL.  
THIRUVANANTHAPURAM



# **M/s. ADANI VIZHINJAM PORT Private Limited.,**

2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud,  
Thiruvananthapuram District, Kerala – 695 014,  
Ph No.: +91 9099005722.

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## **UNDERTAKING**

The Mining Plan including Progressive Mine Closure Plan for 'Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited.,' over an extent of 1.1081 Ha. (2.7381 Acres) at Re-Survey Block. No:29, Re-Survey. Nos. 120/10, Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State, has been prepared by C. Thambu Cherian, M/s. GLOBAL Environment & Mining Services, Bangalore.

We request the District Geologist, Department of Mining & Geology, Thiruvananthapuram District, Kerala State to make further correspondence regarding the Mining Plan including Progressive Mine Closure Plan with the Recognized Qualified Person at the following address:

**C. Thambu Cherian**

**M/s GLOBAL Environment & Mining Services,**

#212, Celestic Towers, Palm Avenue, Green Glen Layout, Bellandur,  
Bangalore – 560103,  
Karnataka State, India.  
Ph: +91 6361550211

**H. O.**

3rd Main Road, Basaveshwara Badawane  
**HOSPET – 583201, Bellary Dist. (Karnataka)**

We hereby undertake that all the proposals made in the Mining plan including Progressive Mine Closure Plan by the Recognized Qualified Person are deemed to have been made with the knowledge and consent of me in all respects.

**Place: Thycaud**

**Date: 08.06.2019**

**M/s. Adani Vizhinjam Port Private Limited.,**

  
**Shri. Rajesh Kumar Jha,**  
Chief Executive Officer.





**M/s. ADANI VIZHINJAM PORT Private Limited.,**

2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud,  
Thiruvananthapuram District, Kerala – 695 014,  
Ph No.: +91 9099005722.

---

**CERTIFICATE**

This is to certify that the Mining Plan including Progressive Mine Closure Plan for 'Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited.,' over an extent of 1.1081 Ha. (2.7381 Acres) at Re-Survey Block. No:29, Re-Survey. Nos. 120/10, Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State,, has been prepared in full consultation with me and I have understood its contents and agree to implement the same in accordance with the law.

**Place:** Thycaud  
**Date:** 08.06.2019

**M/s. Adani Vizhinjam Port Private Limited.,**

  
**Shri. Rajesh Kumar Jha,**  
Chief Executive Officer.





# **M/s. ADANI VIZHINJAM PORT Private Limited.,**

2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud,  
Thiruvananthapuram District, Kerala – 695 014,  
Ph No.: +91 9099005722.

---

## **CERTIFICATE**

“The provisions of Mines Act 1952, the Kerala Minor Mineral Concession Rule (KMMCR) 2015 under have been observed in Mining Plan including Progressive Mine Closure Plan for ‘Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited.,’ over an extent of 1.1081 Ha. (2.7381 Acres) at Re-Survey Block. No:29, Re-Survey. Nos. 120/10, Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State and where specific permissions are required, the Director General of Mines Safety will be approached. Further, standards prescribed by DGMS in respect of all provisions of the mines act 1952 will be strictly implemented.

**Place:** Thycaud  
**Date:** 08.06.2019

**M/s. Adani Vizhinjam Port Private Limited.,**

  
**Shri. Rajesh Kumar Jha,**  
Chief Executive Officer.



**M/s. ADANI VIZHINJAM PORT Private Limited.,**

2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud,  
Thiruvananthapuram District, Kerala – 695 014,  
Ph No.: +91 9099005722.

---

**CERTIFICATE**

This is to certify that the “Progressive Mine Closure Plan” in respect of Mining Plan for ‘Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited.,’ over an extent of 1.1081 Ha. (2.7381 Acres) at Re-Survey Block. No:29, Re-Survey. Nos. 120/10, Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State, complies and has taken in to consideration all statutory rules, regulations, orders made by the Central or State Government, Statutory Organizations, Court etc, and wherever any specific permission is required I will approach the concerned authorities.

I also give an undertaking to the effect that all the measures proposed in the closure plan will be implemented in a time bound manner as proposed.

**Place:** Thycaud

**Date:** 08.06.2019

**M/s. Adani Vizhinjam Port Private Limited.,**

  
**Shri. Rajesh Kumar Jha.**  
Chief Executive Officer.





**GLOBAL Environment & Mining Services**  
(Consulting Engineers, Mine designers, Geologist & Surveyors)

#212, Celestic Towers, Palm Avenue, Green Glen Layout,  
Bellandur, **BANGALORE – 560103**, Karnataka, India  
Ph : +91 6361550211  
e-mail : gems.blr@globalmining.in  
Website : globalmining.in

**H. O.**

3<sup>rd</sup> Main Road, Basaveswara Badavane,  
**HOSPET – 583201**, Bellary Dist., (Karnataka)

**CERTIFICATE**

1. Certified that provisions of Mines Act, the Kerala Minor Mineral Concession Rule (KMMCR) 2015 have been observed in the Mining Plan including Progressive Mine Closure Plan for 'Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited.,' over an extent of 1.1081 Ha. (2.7381 Acres) at Re-Survey Block. No:29, Re-Survey. Nos. 120/10, Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State and wherever specific permissions are required the applicant will approach Director General of Mines safety.
2. It is also certified that information furnished in the above mining plan including Progressive Mine Closure Plan are true and correct to the best of our knowledge.

Place: Bangalore

Date: 08.06.2019

**GLOBAL Environment & Mining Services**

  
**C. Thambu Cherian**  
DMG/KERALA/RQP/17/2018





## **GLOBAL Environment & Mining Services**

(Consulting Engineers, Mine designers, Geologist & Surveyors)

#212, Celestic Towers, Palm Avenue, Green Glen Layout,  
Bellandur, **BANGALORE – 560103**, Karnataka, India

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Website : globalmining.in

### **H. O.**

3<sup>rd</sup> Main Road, Basaveswara Badavane,

**HOSPET – 583201**, Bellary Dist., (Karnataka)

## **CERTIFICATE**

This is to certify that the provisions of the Kerala Minor Mineral Concession Rule (KMMCR) 2015 have been observed in the Mining Plan including Progressive Mine Closure Plan for 'Granite Building Stone Quarry M/s. Adani Vizhinjam Port Private Limited.,' over an extent of 1.1081 Ha. (2.7381 Acres) at Re-Survey Block. No:29, Re-Survey. Nos. 120/10, Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State, and wherever specific permissions are required, the applicant will approach the concerned authorities of the Department of Mining & Geology, Kerala.

Place: Bangalore

Date: 08.06.2019

**GLOBAL Environment & Mining Services**

**C. Thambu Cherian**

DMG/KERALA/RQP/17/2018





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## **LIST OF ANNEXURES**

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10	Production & Development Plan (V-Year)	5E	1:1000
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15	Progressive Mine Closure Plan	10	1:1000
16	Infrastructure Plan	11	1:5000
17	Buffer Map (5Km) Showing Site Location & Transportation Route Map	12	1:50,000



**MINING PLAN**  
**For "GRANITE BUILDING STONE QUARRY"**  
**M/s. Adani Vizhinjam Port Private Limited.,**

**INTRODUCTION:**

Granite Building Stone is one of the most common rock types in the Geology of Kerala. It is a coarse grained plutonic rock containing over 80-90% quartz, feldspar and a small percentage of biotite, hornblende and other ferromagnesian minerals. Due to its hard nature and easy availability it is commonly used as a construction material and road material all over the state. The abundance of granite building stone and its growing demand for the upcoming and other infrastructure projects has prompted the entrepreneur to apply for the mining in this area.

Shri. Rajesh Kumar Jha, Chief Executive Officer, M/s. Adani Vizhinjam Port Private Limited., 2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram, Kerala – 695014, India has proposed for their mining operations (Granite Building Stone Quarry) in the area over an extent of 1.1081 Ha. (2.7381 Acres) for the production of granite building stone at Re-Survey Block. No.29, Re-Survey Nos. 120/10 of Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State. The location of the proposed mine is shown on the Administrative Plan and Key plan enclosed vide **Plate No 1 & 1A**. The Survey Map showing the applied mining area is enclosed vide **Plate No – 2**.

Shri. Rajesh Kumar Jha, Managing Director & CEO, M/s Adani Vizhinjam Port Private Limited., has obtained NOC no: B7-127329/18 dated 13.07.2018 for mining in Government porampokku land for mining over an area of 3.1260 Ha, in Re-block No. 29 Re- survey Nos.120/10, in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State, for Mining of Granite Building Stone, which is enclosed as vide **Annexure -8**.

This granite building stone quarry is located at 1.0 Kms from Manickal village in Nedumangad Taluk. The quarry is at a distance of 19.3 Kms from Thiruvananthapuram town. It can be reached via Venjaramoodu - Vembayam road. The transportation route map is enclosed as vide **Plate No:12**

Now as a statutory requirement a Mining Plan (including Progressive Mine Closure Plan) showing systematic development of the mine and mining related proposals for next five years required to be prepared and submitted to the Geologist, Dept. of Mining and Geology





Thiruvananthapuram, Govt of Kerala for approval. Hence a Mining plan is prepared for the period of 5 years for the maximum production of 70,230.00 Tonnes per annum and submitted to Department of Mining & Geology, Kerala for approval.

The Mining is proposed to be operated by developing benches of 6m height and 6m width by Opencast Semi-Mechanised Mining Method. The mechanised operation of mining includes excavators, tippers, rock breakers, deep hole drilling and blasting.

The Granite building stones excavated from the quarry shall be supplied to Vizhinjam Port Project exclusively and If needed for any other Government Infrastructure projects.

The Mining plan is prepared as per the requirements of the Kerala Minor Mineral Concession Rule (KMMCR) 2015, and is submitted to the District Geologist, Thiruvananthapuram Kerala for approval.



**1.0 GENERAL****a) Name & address of lessee:**

**Shri. Rajesh Kumar Jha,**  
Chief Executive Officer,  
M/s. Adani Vizhinjam Port Private Limited.,  
2nd Floor, Vipanchika Tower, Thycaud,  
Thiruvananthapuram- 695 014,  
Ph No.: +91 9099005722

**b) Registered Office:**

**M/s. Adani Vizhinjam Port Private Limited.,**  
Shri. Rajesh Kumar Jha,  
Chief Executive Officer,  
2nd Floor, Vipanchika Tower, Thycaud,  
Thiruvananthapuram- 695 014,  
Ph No.: +91 9099005722

**Status of lessee**

Private Individual	:	No
Cooperative Association	:	No
Private Company	:	Yes
Public Company	:	No
Public Sector Undertaking	:	No
Joint Sector Undertaking	:	No
Other (Pl. specify)	:	No

Certificate of Incorporation is enclosed as **Annexure-4**, & The Id proof of Shri. Rajesh Kumar Jha. is enclosed as **Annexure -3**.

**c) Mineral/s which are occurring: Granite building stone.**  
**in the area and which the Lessee intends to mine****d) Period for which the mining lease is granted/renewed/proposed to be applied:**

Fresh Lease.





**e) Name & address of RQP Preparing Mining Plan**

The RQP certificate of C. Thambu Cherian is enclosed as **Annexure - 2**.

**f) Name of Prospecting Agency: GSI/DMG Kerala****g) Reference no. and date of consent letter from the State Government G.O. No.**

For mining of the said area, Directorate of Mining and Geology, Govt of Kerala, Thiruvanthapuram has issued a Letter of Intent (LOI) vide No. 5219/M3/2019 dated 07.06.2019. The copy of the LOI is enclosed as **Annexure -1**.



## **2.0 LOCATION & ACCESSIBILITY:**

### **LOCATION:**

The 'Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited.,' over an extent of 1.1081 Ha. (2.7381 Acres) for the production of granite building stone at Re-Survey Block. No.29, Re-Survey Nos. 120/10 of Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State.

### **ACCESSIBILITY:**

This granite building stone quarry is located at 1.0 Kms from Manickal village in Nedumangad Taluk. The quarry is at a distance of 19.3 Kms from Thiruvananthapuram town. It can be reached via Venjaramoodu - Vembayam road. The transportation route map is enclosed as vide **Plate No:12**

The location of this mining area is shown on the Administrative and Key Plan enclosed **Vide Plate No-1 and 1A.**

<b>a) Details of area (with location map) :</b>		<b>The lease is marked on Key plan / enclosed vide Plate No.1A.</b>
i)	District and state	: Thiruvananthapuram, Kerala
ii)	Taluk / Mandal	: Nedumangad
iii)	Village	: Manickal
iv)	Khasara No. / Plot No. / Block / Gat No etc.	: Re-Survey Block. No.29, Re-Survey Nos.120/10
v)	Lease Area (Hectares)	: 1.1081 Ha
vi)	Whether the area is recorded to be in forest (please specify whether protected, reserved etc.,)	: No
vii)	Ownership / Occupancy	: Govt Land.
viii)	Existence of public road/railway line, if any, nearby and approximate distance Nearest Port / Airport	: The nearest railhead is at Murukkampuzha is at 17.2 km from the mine. Nearest airport – Trivandrum International Airport, (25.4 km)
ix)	Topo sheet No.	: C43X2 (58H/2)
x)	Latitude & Longitude	: N-08°39'38.44" to N-08°39'33.51" E-76°55'46.62" to E-76°55'42.96"

The detail of lands is enclosed as **Annexure –8,**

The details of land i.e. Survey Number along with its extent and land proposed for mining are given in the Table 2.1



**Table No. 2.1: Details of Re-Survey Numbers of Re-Survey Block-50 and the area acquired for lease**

SL No	Doc No.	Re-Sy. No.	Village Name	Name of the Owner	Area of Possession in Ha.	Area for mining in Ha.	Area for Buffer zone in Ha.	Total applied Lease Area in Ha.
01	NOC No: B7-127329/18	120/10	Manickal	GOVT. LAND (with NOC)	1.2940 Ha.	0.8159 Ha.	0.2922 Ha.	1.1081 Ha.

**x) Land Use Pattern (Forest, Agricultural, Grazing, Barren etc.):**

The proposed mining area consist part of government poramboku land (with NOC from District Collector), there is no wet land or forest land involved.

The details of the land is given in the Table No 2.2.

**Table No. 2.2: The details of the land applied for mining**

Particulars	Extent in Ha.	Ownership
Lands	1.1081	Govt Land

Attach general location and vicinity map showing area boundaries and existing and proposed access roads. It is preferred that the area be marked on a Survey of India Topographical map or as the case may be. However, if none of these are available the area should be shown on accurate sketch map on a scale of 1: 50,000.

A general location plan is prepared in scale 1: 50,000 and enclosed vide Plate No. 1A.





### 3.0 GEOLOGY & RESERVES:

- a) Briefly describe the topography and general geology and local/mine geology of the mineral deposit include drainage pattern.

1. Topography of the area:

The lease is located on the slope of the area gently dipping towards West direction. The highest elevation in this area is 125m above MSL and the lowest elevation is 74.8m above MSL. The general slope of the lease hold area is between 15° to 30° degree.

Geology

Regional Geology:

The district can broadly be divided into two geological divisions viz. (i) the eastern part represented by the Archaean crystalline rocks and (ii) western coastal fringe occupied by Tertiary and Quaternary sediments (Figure 1).

The Archaean crystalline rocks comprise Khondalite Group, Charnockite Group and Migmatite Group. Khondalite Group is composed of garnetiferous biotite-sillimanite gneiss, with occasional bands of calc-granulite and quartzite, and constitutes the major rock type. Charnockites are acidic to intermediate in composition. Irregular patches of khondalite, veins of pegmatite and quartz are seen within the charnockite. Pyroxene granulite occurs within the khondalite as thin discontinuous lenticular bands conformable to the foliation planes. Migmatites are evenly distributed in the central part of the district as narrow zones within garnetiferous sillimanite gneiss. All these rocks are intruded by a number of dolerite dykes, but their distribution is restricted to the midland region of the district. Thin and impersistent veins of pegmatite and quartz veins are very common, and many of the pegmatites have gained importance because of their gemstone (chrysoberyl) content. Sedimentary formation of Mio-Pliocene age (Warkalli beds) occurs as detached patches unconformably overlying the crystalline rocks, along the coastal tracts. Quaternary Formation includes pebble beds (with ferruginous sandstone and bands of clay), coastal sands and alluvium. The Tertiaries and the basement rocks of the midland are extensively lateritised.

Local Geology:

The granite building stones are very well exposed as outcrop, whereas part of area with lower elevation is covered by top soil/Overburden of about 0 to 0.5m thickness,



A geological plan showing the granites and soil cover and the geological sections showing subsurface geology is prepared on 1:1000 scale and enclosed vide **Plate No 4. Table 3.1:**

**Local Geology**

Soil Cover/Overburden	0.5m(Average)
Granite	60m (min. estimate)

The geology of the lease area is shown the Geological Plan & Sections enclosed vide **Plate No-4.**

- b) The topographic plan of the lease area prepared on a scale of 1:1000 or 1:2000 with contour interval of 3 to 5 m. depending upon the topography of the area should be taken as the base plan for preparation of geological plan. The details of exploration already carried out including evidences of mineral existence should be shown on the geological plan.**

The topographic plan on 1:1000 scale is prepared with contour interval of 5m by incorporating all the existing details like topography, surface exposures, structures etc. and enclosed vide **Plate No 3.**

- c) Exploration Already carried out:**

The granite building stone in the lease area are of intrusive nature with good outcrops and very good exposures in the old open pit workings. Hence no exploration proposal is made.

- d) Geological sections should be prepared at suitable intervals on a scale of 1:1000 / 1:2000.**

The geological cross sections are prepared for every 30m interval based on the updated geological plan on 1:1000 scales and the geological sections are enclosed vides **Plate No - 4.**

- e) Broadly indicate the year wise future program of exploration, taking into consideration the future production program planned in next five years as in table below:**

The granite building stone are intrusive in nature and well exposed in the mine. As the granite building stone in this mining area is of proved nature, no exploration is proposed.

- f) Indicate geological and recoverable reserves and grade, duly supported by standard method of estimation and calculations along with required sections (giving split up of various categories i.e., proved, probable, possible) indicate cut-off grade. Availability of resources should also be indicated for the entire leasehold.**





The geological resources of granite building stones are estimated by cross sectional method and given in the **Table No 3.2**

**Table No: 3.2: The Geological Resources.**

Section No	Area (m <sup>2</sup> )	Influence (m)	Volume (m <sup>3</sup> )	Tonnage (T) BD 2.5T/m <sup>3</sup>	UNFC
A-A'	1012	38	38,456.00	96,140.00	332
B-B'	2267	30	68,010.00	1,70,025.00	332
C-C'	2884	30	86,520.00	2,16,300.00	332
D-D'	1832	38.5	70,532.00	1,76,330.00	332
Total			<b>2,63,518.00</b>	<b>6,58,795.00</b>	332

These resources of granite building stones are estimated in the 332 category of UNFC codification for the estimation of geological resources the area is marked with sections A-A' & D-D' with the interval of 30m. The section wise sectional area is measured and multiplied by the influence to obtain the volume in m<sup>3</sup> (cubic meter). The volume is multiplied by 2.5T/m<sup>3</sup> bulk density (BD) to calculate the resources of granite building stone in tonnes.

**g) Indicate mineral reserves by slice plan/level plan method, as applicable as per the proposed mining parameters.**

The mineable reserves of granite building stone in tonnes are estimated after deleting the granite building stone blocked in the 7.5m buffer area and ultimate benches. The granite building stone reserves are given in the Table No – 3.3

**Table No 3.3: Granite Building Stone Reserves**

Section No	Bench Level	Area (m <sup>2</sup> )	Influence (m)	Volume (m <sup>3</sup> )	Tonnage (T) BD 2.5T/m <sup>3</sup>	UNFC
A-A'	102	58	31	1,798.00	4,495.00	122
	96	164	31	5,084.00	12,710.00	122
	90	180	31	5,580.00	13,950.00	122
	84	102	31	3,162.00	7,905.00	122
Total				<b>15,624.00</b>	<b>39,060.00</b>	122
B-B'	102	84	30	2,520.00	6,300.00	122
	96	190	30	5,700.00	14,250.00	122
	90	268	30	8,040.00	20,100.00	122
	84	249	30	7,470.00	18,675.00	122
	78	174	30	5,220.00	13,050.00	122
	72	91	30	2,730.00	6,825.00	122
Total				<b>31,680.00</b>	<b>79,200.00</b>	122
C-C'	108	94	30	2,820.00	7,050.00	122
	102	182	30	5,460.00	13,650.00	122



	96	173	30	5,190.00	12,975.00	122
	90	164	30	4,920.00	12,300.00	122
	84	152	30	4,560.00	11,400.00	122
	78	143	30	4,290.00	10,725.00	122
	72	236	30	7,080.00	17,700.00	122
	66	213	30	6,390.00	15,975.00	122
<b>Total</b>				<b>40,710.00</b>	<b>1,01,775.00</b>	122
<b>D-D'</b>	114	80	30.5	2,440.00	6,100.00	122
	108	206	30.5	6,283.00	15,707.50	122
	102	287	30.5	8,753.50	21,883.75	122
	96	291	30.5	8,875.50	22,188.75	122
	90	54	30.5	1,647.00	4,117.50	122
<b>Total</b>				<b>27,999.00</b>	<b>69,997.50</b>	122
<b>Grand Total</b>				<b>1,16,013.00</b>	<b>2,90,032.50</b>	122

**h) Grades of granite building stone.**

The general analysis of granite building stone is given in the Table 3.4

**Table No 3.4: Analysis of granite building stone**

Minerals*	Percentage %
SiO <sub>2</sub>	72.1
Al <sub>2</sub> O <sub>3</sub>	13.0
Fe <sub>2</sub> O <sub>3</sub>	01.3
FeO	01.7
MgO	00.5
CaO	01.3
Na <sub>2</sub> O	03.4
K <sub>2</sub> O	04.7
H <sub>2</sub> O	00.6
TiO <sub>2</sub>	00.2
P <sub>2</sub> O <sub>5</sub>	00.2

\*Source: The Principles of Petrology by G W Tyrrell



## 4.0 MINING

- a) Briefly describe the existing/proposed method for developing/working the deposit with all design parameters.

There are old working pits in the proposed mining lease area. The proposed mining lease located in Re-Survey Block. No.29, Re-Survey Nos. 120/10 of Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State. In these five years of the mining plan period it is proposed to work on all the sections from A-A' to D-D'. No Crushing and screening plant is proposed within the lease area.

It is proposed to produce maximum 70,230.00 tonnes in the II-year of Granite Building stone from this mine by opencast semi-mechanised mining method. Deep hole drilling blasting shall be adopted for mining along with rock breaker. Excavators shall be used for excavating and loading the material to the tippers. A team of 10 labours shall be deployed for the miscellaneous and environmental work.

Large size boulders of 600mm to 1.5metre would be transported directly for breakwater construction apart from this the boulders of 0 to 600mm size shall be transported to the crushing and screening plant located outside the lease area for crushing and sizing. The sized product shall be used for port and other infrastructure/Construction work.

- b) Indicate quantum of development and tonnage and grade of production expected pit wise as in table below.

The year wise calculation of production for these five years of mining plan period is given in the Table No – 4.1. During mining the topsoil/Overburden shall be handled as waste. The same shall be used for the afforestation in the buffer zone. The quantity of generated topsoil/Overburden is given in Table No 4.2. The summary of the production and development of waste is given in the Table No 4.3

**Table No. 4.1 Year-wise calculations of granite building stone production**

Year	Section No	Bench Level	Area (m <sup>2</sup> )	Influence (m)	Volume (m <sup>3</sup> )	Tonnage (T) BD 2.5T/m <sup>3</sup>
I-Year	A-A'	102	58	31	1,798.00	4,495.00
	B-B'	102	84	30	2,520.00	6,300.00
	C-C'	108	94	30	2,820.00	7,050.00
		102	140	30	4,200.00	10,500.00
	D-D'	114	80	30.5	2,440.00	6,100.00
		108	206	30.5	6,283.00	15,707.50
Total					20,061.00	50,152.50





II-Year	A-A'	96	164	31	5,084.00	12,710.00
	B-B'	96	190	30	5,700.00	14,250.00
	C-C'	102	42	30	1,260.00	3,150.00
		96	173	30	5,190.00	12,975.00
	D-D'	102	287	30.5	8,753.50	21,883.75
		96	69	30.5	2,104.50	5,261.25
Total					28,092.00	70,230.00
III-Year	A-A'	90	180	31	5,580.00	13,950.00
	B-B'	90	268	30	8,040.00	20,100.00
	C-C'	90	122	30	3,660.00	9,150.00
	D-D'	96	222	30.5	6,771.00	16,927.50
Total					24,051.00	60,127.50
IV YEAR	A-A'	84	102	31	3,162.00	7,905.00
	B-B'	84	249	30	7,470.00	18,675.00
		78	65	30	1,950.00	4,875.00
	C-C'	90	42	30	1,260.00	3,150.00
		84	152	30	4,560.00	11,400.00
	D-D'	90	54	30.5	1,647.00	4,117.50
Total					20,049.00	50,122.50
V-YEAR	B-B'	78	109	30	3,270.00	8,175.00
		72	91	30	2,730.00	6,825.00
	C-C'	78	143	30	4,290.00	10,725.00
		72	236	30	7,080.00	17,700.00
		66	93	30	2,790.00	6,975.00
Total					20,160.00	50,400.00
Grand Total					1,12,413.00	2,81,032.50

Table No. 4.2 Year-wise generation of topsoil/waste

Year	Section No	Area (m <sup>2</sup> )	Influence (m)	Volume (m <sup>3</sup> )	Tonnage (T) BD 1.6T/m <sup>3</sup>
I-Year	A-A'	12	31	372.00	595.20
	B-B'	15	30	450.00	720.00
	C-C'	16	30	480.00	768.00
	D-D'	24	30.5	732.00	1,171.20
Total				2,034.00	3,254.40
II-Year	A-A'	12	46.5	558.00	892.80
	B-B'	10	40	400.00	640.00
Total				958.00	1,532.80
III-Year	B-B'	10	40	400.00	640.00
Total				400.00	640.00
Grand Total				3,392.00	5,427.20



**Table No 4.3: Summary of the production and development**

Year	Production (T)	Topsoil (T)	Total handling (T)	Ratio
I-Year	50,152.50	3,254.40	53,406.90	33:26.5
II-Year	70,230.00	1,532.80	71,762.80	01:00.0
III-Year	60,127.50	640.00	60,767.50	01:00.1
IV-Year	50,122.50	-	50,122.50	01:00.1
V-Year	50,400.00	-	50,400.00	01:00.0
<b>Total</b>	<b>2,81,032.50</b>	<b>5,427.20</b>	<b>2,86,459.70</b>	<b>01:00.0</b>

The Year wise production plan and pit position during this five year mining period is shown on the production and development plan enclosed vide **Plate No – 5A to 5E** respectively.

**c) Attach- Individual year wise plans & sections (in case of 'A' class mines):**

The year wise Production and Development at the end of every year (of all the five year) is given on the production and development Plan enclosed vide **Plate No 5A to 5E** and the production and development sections are enclosed vide **Plate No 6**.

**d) Attach supporting composite plan and section showing pit layouts, dumps, stacks of sub-grade mineral, if any, the year from which effected.**

The year wise Production & Development at the end of every year (of all the five year) is given on the production & development Plan enclosed vide **Plate No 5A to 5E** and the production and development sections are enclosed vide **Plate No 6**.

**e) Indicate proposed rate of production when the mine is fully developed, and the expected life of the mine and the year from which effected.**

The Geological Resources of granite building stone in this area are 6,58,795.00 Tonnes and Mineral Reserves are 2,90,032.50 Tonnes. In the first five years of plan period totally 2,81,032.50 Tonnes Granite Building Stone / aggregate shall be quarried. The balance mineral reserves of 9,000.00 Tonnes will be mined subsequently. Thus the life of the mine is about 6 years.

The production plan for 1st five years is given below,

Year	Production
I-Year	50,125.50
II-Year	70,230.00
III-Year	60,127.50
IV-Year	50,122.50
V-Year	50,400.00
<b>Total</b>	<b>2,81,032.50</b>





The production plan for the remaining plan period is given below,

Year	Production
VI-Year	9,000.00
<b>Total</b>	<b>9,000.00</b>

- f) Attach a note furnishing a conceptual mining plan for the entire lease period (for 'B' category mines) and up to the life of mine (for 'A' category mines) based on the geological, mining and environmental considerations.

**Conceptual mining plan:**

For any mine, preparation of Conceptual mining plan amounts to, fore-seeing in totality and planning for mining and related activities through-out its life span, till such time all the usable ore / minerals are exhausted to the economical limits and lease area is reclaimed to the best extent possible. Apart from physico-chemical and mineralogical parameters which form primary basis for compilation of conceptual mine plan, several other factors such as economic viability, safety, environment, sustainable development, marketability and the norms laid down by the Government agencies from time to time do play important roles, with ever increasing and changing needs of humanity, coupled with technological advancements and environmental norm and requirements.

A Conceptual Plan of the Mine Lease area and conceptual sections are enclosed vide **Plate No. 7.**

- (i) **Mineral reserves and anticipated life of the mine:**

The Geological Resources of granite building stone in this area are 6,58,795.00 Tonnes and Mineral Reserves are 2,90,032.50 Tonnes. In the first five years of plan period totally 2,81,032.50 Tonnes Granite Building Stone / aggregate shall be quarried. The balance mineral reserves of 9,000.00 Tonnes will be mined subsequently. Thus the life of the mine is about 6 years.

The production plan for 1st five years is given below,

Year	Production
I-Year	50,125.50
II-Year	70,230.00
III-Year	60,127.50
IV-Year	50,122.50
V-Year	50,400.00
<b>Total</b>	<b>2,81,032.50</b>



The production plan for the remaining plan period is given below,

Year	Production
VI-Year	9,000.00
<b>Total</b>	<b>9,000.00</b>

**(ii) Exploration:**

There are a few old workings pits within proposed mining lease area. The granite building stone in the lease area are of intrusive nature with good outcrops and very good exposures in the open pits. Hence no exploration proposal is made.

**(iii) Mine Development:**

At conceptual stage, there shall be one pit in this area with 9 benches of 6m height and 6m width. The pit at conceptual stage shall have 139.2 m length and 80.9 m width and it shall be developed upto 66m above MSL level. The overall pit slope shall be maintained at less than 45°.

The top benche shall be rehabilitated with simple vegetation by spreading the excess topsoil. The bottom benches at the conceptual stage shall be converted into rainwater storage pond. The pit shall be properly fenced with single opening for drawing the water.

Totally 5,427.20 Tonnes of topsoil/Overburden shall be recovered. 2,81,032.50 Tonnes granite building stone shall be generated in the first five years of the plan period. The topsoil shall be stacked at the designated area as shown in the mining plan and shall be used for Afforestation/Green belt development.

**(iv) Environmental Aspects:**

A safety barrier area of 7.5m from the boundary shall be developed as green belt area by planting the local species. At conceptual/Mine Closure stage the working pit shall be developed for water storage, pisciculture, surrounded by with good local bio-diversified vegetation. Totally 0.2922 Ha safety barrier area shall be used for development of green belt. Apart from this the plantation shall be carried out outside the lease area along haulage road.

A garland drain is proposed all along periphery of mining area to prevent the entry of rainwater in the pit. The water from garland drain shall be diverted to silt settling tanks & rainwater harvesting ponds before releasing clarified water to the natural water course.





During mining the main source of air pollution is expected to be drilling, blasting and transportation. The regular sprinkling of water with tanker on haulage road and stopping drilling and blasting during high wind would drastically reduce impact on air.

The present land use, proposed land use for the plan period and at conceptual stage is given in the Table No 4.2.

**Table No. 4.4: Ultimate land use at the end of mine**

Particulars	Land use pattern at present stage (Ha)	Land use pattern (end of progressive stage) (Ha)	Land use pattern at Conceptual stage (Ha)
Area for mining / mining activities	0.2545	0.8159	0.8159
Area for Safety Barrier / Green belt	-	0.2922	0.2922
<b>Total</b>	<b>0.2545</b>	<b>1.1081</b>	<b>1.1081</b>
Unused area	0.8536	-	-
<b>Total Lease area</b>	<b>1.1081</b>	<b>1.1081</b>	<b>1.1081</b>

\* Road area inside the mine Lease is not shown separately. Since the material is transported on the benches the road area is therefore included in the mining area.

**g) Opencast Mines:**

**i. Describe briefly giving salient features of the mode of working (mechanized, semi-mechanized, and manual):**

The mining is proposed by opencast semi-mechanized mining method and the sequence of mining shall be as given under,

- The topsoil/Overburden shall be recovered and transported to the safety barrier area for utilizing the same for afforestation / green belt development. The excess quantity shall be transported to the designated waste dump area.
- After exposing the granite building stone, drilling shall be done by 115mm dia by wagon drills.
- The blasting shall be carried out by Cartridge Slurry explosives with non-electric (Nonel) deck blasting method.
- The rock breakers and excavators fitted rock breaker attachment shall be used to break the oversize boulders left after blasting.
- Jack hammer drilling and blasting shall be used for leveling the humps in the road/bench.
- The blasted material and the broken material by rock breakers of size 0 to 600mm and 600mm to 1.5 m shall be loaded to the tippers by excavator and transported to



the port area for breakwater barrier and crushing and screening plant located outside the lease area.

The year wise planning, production & development of the mine is as given under,

**I-Year: -**

The mining in the I-year shall be done on the sections A-A' to D-D'. It is proposed to develop three benches of 6m height & 6m width to produce 50,152.50 Tonnes granite building stones. The simultaneous recovery of topsoil is expected to be 3,254.40 Tonnes. At the end of I-year the size of the pit shall be 118.4m in length & 45.2m in width. The mining operation shall be reach to the level of 102m above MSL.

**II-Year: -**

The mining in the II-year shall be done on the sections A-A' to D-D'. It is proposed to develop four benches of 6m height & 6m width to produce 70,230.00 Tonnes granite building stones. The simultaneous recovery of topsoil is expected to be 1,532.80 Tonnes. At the end of II-year the size of the pit shall be 139.2m in length & 62.3m in width. The mining operation shall be reach to the level of 96m above MSL.

**III-Year: -**

The mining in the III-year shall be done on the sections A-A' to D-D'. It is proposed to develop five benches of 6m height & 6m width to produce 60,127.50 Tonnes granite building stones. The simultaneous recovery of topsoil is expected to be 640.00 Tonnes. At the end of III-year the size of the pit shall be 139.2m in length & 71.2m in width. The mining operation shall be reach to the level of 90m above MSL.

**IV-Year: -**

The mining in the IV-year shall be done on the sections A-A' to D-D'. It is proposed to develop seven benches of 6m height & 6m width to produce 50,122.50 Tonnes granite building stones. There is no topsoil in this year. At the end of IV-year the size of the pit shall be 139.2m in length & 76.4m in width. The mining operation shall be reach to the level of 78m above MSL.

**V-Year: -**

The mining in the V-year shall be done on the sections B-B' to C-C'. It is proposed to develop nine benches of 6m height & 6m width to produce 50,400.00 Tonnes granite building stones. There is no topsoil in this year. At the end of V-year the size of the pit shall be 139.2m in length & 80.9m in width. The mining operation shall be reach to the level of 66m above MSL.





The mining shall be done by developing the benches of 6m height with 6m ultimate width. At the end of fifth year of mining totally there shall be 9 benches developed in this mine. The level of the bottom most bench shall be 66m above MSL.

The pit slope shall be 45°. In these five years of the plan period a pit of 139.2m in length & 80.9m width shall be formed.

The year wise (of all the five years) pit design is shown on the Production & Development Plan enclosed vide **Plate 5A to 5E** and the year wise movement of the benches is shown on the Production & Development Sections enclosed vide **Plate No 6**.

**ii. Describe briefly the layout of mine workings, the layout of faces and sites for disposal of over burden/waste.**

The year wise layout of the mine is shown on the year wise production and development plan enclosed **Plate No 5A to 5E** and production and development sections enclosed vide **Plate No 6**.

The excess topsoil and Overburden after utilizing for plantation work will be stocked separately in the predetermined area as shown in the production & Development plan.

**h) Underground Mines:**

Not Applicable

**i) Extent of Mechanization**

The mining shall be carried out by deploying one excavator, two tippers, for the maximum total handling of 71,762.80 Tonnes material in II-year. And one unit of wagon drills are required. One water tanker shall be deployed for the sprinkling of water, and jeep for travelling of the staff to mine site.

**1. Drilling Machines**

During this mining plan period, the maximum production is estimated is about 70,230.00 Tonnes in II-year. All the 70,230.00 Tonnes of granite building stone requires drilling and blasting. The drilling and blasting in granite building stone is 100%. It is proposed to drill with wagon drill with 115mm dia bit. The calculations for required number of drilling units are given below.

Total material handling (max.) per annum shall be 70,230.00 Tonnes

Height of the bench -- 6m

Hole depth -- 6.6 m (10% extra for clearing the toe)





Burden -- 3.0m

Spacing -- 3.5m

Therefore, the drilling machine required per year is calculated as under:

Rock broken / hole of 6.6 m depth

Spacing x Burden X Depth x efficiency x B.D. (2.5T/m<sup>3</sup>)

3.5m x 3.0m x 6m x 80% efficiency X 2.5 BD=126 Tonnes

Therefore, rock broken/m = 126 Tonnes/6.6 m = 19.1 Tonnes /m

Drilling meterage required/year =  $\frac{70,230.00}{19.1} = 3676.96 \text{ m}$

Therefore, drilling required per day = 3676.96/300 days = 12.25 m/day

The Wagon drill can drill about 150m per day as there are two shifts working from 6am to 6pm.

Hence the number of Wagon drill units required = (12.25/day) / 150m each  
= 0.08 units

Considering 80% availability number of units required = (0.08\*20%) + 0.08 = 0.09

Hence 1 unit of Wagon drill is required for drilling and blasting in this area for single shift. Considering the two working shifts from 6am to 6pm totally 1 Wagon drill units are required.

Two units of jackhammer drills will be used for clearing of humps on roads and benches.

**Table No. 4.5: Requirement of Wagon drills/ Jack Hammer Drilling Machines**

Type	No's	Dia. of hole (mm)	Make	Motive Power	Compressor HP
Wagon Drill (crawler mounted)	1	115	Atlas Capco	Diesel	170
Jack hammer (for hump breaking)	2	33/48mm	Atlas Capco	Diesel	40

## 2. Loading & Rock Breaking Equipment

During this mining plan period, the maximum handling estimated is about 71,762.80 Tonnes in II-year. Out of which 70,230.00 Tonnes granite building stone and 1,532.80 tonnes of topsoil.

So, total handling per day = 71,762.80 /300 days = 239.20 T



Total handling of 239.20 tonnes per day (for 300 working days) shall be loaded in the tippers by excavator. The loading capacity of excavator PC 220 in such terrain is 125Tonnes /hour.

The calculations of the excavators require are given below.

Tonnage proposed to be handled per hour

$$= 239.20 \text{ Tonnes} / 7 \text{ hours} = 34.17 \text{ tonnes}$$

#### **No. of Excavator**

One excavator can handle 125 tonnes/hour in such terrain. And hence considering 80% availability, 1 excavator can handle 100 tonnes/hour.

Thus one 1 excavator can make (100 X 7 hours) seven hundred tonnes per day

So, to handle 34.17 tonnes, we require 0.34 No. of excavators.

Hence Number of excavators required is 1.

**Table No 4.6: Requirement of Loading & Rock breaking Equipment.**

Type	No's	Capacity	Make	Motive Power	Hp
Excavator	1	1.2m <sup>3</sup> bucket capacity	PC220	Diesel	140

### **3. Haulage and Transport Equipment**

#### **a. Material Handling**

Totally 71,762.80 Tonnes material shall be handled in the II-year. Out of that 70,230.00 tonnes granite building stone shall be transported to the crushing and screening plant outside the lease area and 1,532.80 tonnes of topsoil shall be transported to buffer zone where plantation is to be carried out.

The requirements of the tippers to handle this material is calculated below

$$\text{Total Handling / day} = 71,762.80 / 300 \text{ days} = 239.20 \text{ T}$$

$$\begin{aligned} \text{No of tippers} &= (239.20 / 10 \text{ tonnes per trip} / 3 \text{ trips per hour} / 10\text{-hour effective shift}) \\ &= 0.80 \text{ units} \end{aligned}$$

Considering 80% efficiency No. tippers required will be = 0.95

Additionally, 1 tipper shall be used as spare

Hence two tippers are required for mining

The requirement of the transport equipment is given in the Table No 4.7



**Table No 4.7: Requirement of transporting equipments**

Type	No's	Size/ Capacity	Make	Motive Power	HP
Tipper	2	25 tonnes	Tata	Diesel	180

**b. Transport from mine head to the destination**

The broken material would be directly transported to the crusher outside the quarry by the same tipper. No additional tippers are required for the transportation.

**4. Miscellaneous:**

**Describe briefly any allied operations and machineries related to the mining of the deposit not covered earlier operations**

For afforestation one water tanker with spraying arrangement shall be deployed.

The details of the equipment required for miscellaneous is given in the Table No 4.8

**Table No. 4.8: Requirement of the equipment for miscellaneous**

Type	Nos.	Size/Capacity	Make	Motive Power	HP
Water tanker	1	8000	Tata	Diesel	97
Jeep	2	1+4	Mahindra	Diesel	40
Maintenance Van	1	-	Tata	Diesel	60





## 5.0 BLASTING

- a) Broad blasting parameters like charge per hole, blasting pattern, charge per delay, maximum number of holes blasted in a round, manner and sequence of firing etc.

BLASTING			
1.	Burden x Spacing x Depth	:	3.5m X 3.0m X 6.6m depth
2.	Number of holes	:	10
3.	Dia of holes	:	115mm
4.	Depth of each hole	:	6.6m
5.	Explosives to be used	:	Cartridge Slurry explosives
6.	Powder factor	:	6 Tonnes/kg
7.	Consumption of explosives per year	:	70,230.00Tonnes /6 tonnes/kg powder factor =11,705.00 kg.

### Drilling, Blasting and its paramters:

The nature of the rock is mainly hard to medium hard in nature hence drilling and blasting is required to dislodge / loosen the material from the main rock mass. The broad blasting parameters are determined for the blasting pattern and blast design, which are as follows:

The Drilling pattern will be decided by the Certificate Holders / competent personnel and the blasting hole area is marked on the ground by certificate Holders.

➤ Since the bench height needs to be maintained at 6.0 m, Blast hole will be, by deep hole where the diameter is normally 115 mm and the depth of the hole is 6.6 m including sub grade drilling. Considering the safety aspect, the single hole blast will be carried out in two phases i.e, 3.00 m each phase by using deck charging with non-electric Millisecond delay detonators.

➤ Blasting pattern is generally square or rectangle or staggered, The Burden and Spacing will be decided as per the requirements of the size of the boulders, generally the burden ranging from 2.00 to 3.00 meters and spacing of 2.50 to 3.50 meters.

➤ Usually single / double row of holes is blasted along free face to achieve optimum powder factor, best fragmentation and minimized adverse impacts on account of blasting.

Maximum numbers of holes will be blasted at a time in a round are generally limited to 20 with non - electrical detonators (NONEL) to mitigate adverse impacts such as air blast, fly rock and ground vibration. The Ignition will be the Non-Conventional and Eco Friendly method by NONEL (Non Electric Detonators).

➤ The 6 Meter hole will be blasted in two phases of 3.0 mts each one after the other, by inserting one NONEL at bottom and another one is at the middle of the hole, so the hole





will be blasted two intervals one after the other with delay of 17 Milli Seconds. The first 3 Meters at the bottom will be blasted first next blast of top 3m will get a gap of 17 Milli Seconds. The blast delay from hole to hole will be 17 Milli Second and 42 Milli Second from row to row. A schematic diagram of blasting pattern is shown below.

➤ After drilling the Statutory blaster/ mine foremen shall prepare the Blasting Date Sheet incorporating the Burden, Spacing, Depth, Conversion Factor, Expected Yield, Powder factor, Booster

consumption in Kgs and Percentage, Column charges in Kgs and Percentages, Charge per Delay, Time of Blasting and other Parameters as per the field and after the Blasting the Noise level, Fly rock distance, Vibration limit will be recorded in the Blasting Date Sheet Different Parameters and get approval from the Head of Mining Operation.

➤ Nitrate mixture types of explosives are used for blasting with 20 to 25 percent, proportion of primer / booster cartridges and rest as column charge. About 20 - 25kgs of explosives are loaded in 115 mm diameter holes. And powder factor ranging between 5 to 6 tons per kgs of explosives is achieved.

➤ Subsequent to the drilling and blasting, the material so fragmented / loosens from the rock mass, the boulders so generated subsequent to the blasting, will be broken with the help of the rock breakers. There after the material is loaded into trucks / tippers of 25 tonnes capacity with the help of the excavator.

#### **SCHEMATIC DIAGRAM SHOWING OF THE BLAST HOLE PATTERN**

O-17Ms-O-17Ms- O-17Ms-O-17Ms- O-17Ms - O-17Ms- O-17Ms-O-17Ms- O-17Ms O- Second row									
620	586	552	518	484	467	433	399	365	42Ms
603	569	535	501	467	450	416	382	348	
O-17Ms-O-17Ms- O-17Ms-O-17Ms- O-17Ms - O-17Ms- O-17Ms-O-17Ms- O-17Ms O- First row									
34	68	102	136	170	204	238	272	306	
17	51	85	119	153	187	220	255	289	

**Free face**

#### **PRECAUTION TAKEN WHILE BLASTING**

1. Siren will give three Times before the Blasting and Hooter announcement will be made before the Blasting
2. 8 persons will be sent to different locations with Red flag as a sign of caution of blasting.



3. After getting the confirmation from 8 persons through Mobile or Walke Talke (wireless) the ignition will be given.
4. One Time siren will be given after the Blasting.
5. The 8 persons will be called back to the Quarry and get the feedback about the Blasting.

**ADVANTAGES OF  
NONEL**

1. It is bottom ignition.
2. The Noise is less.
3. Fly Rock is less.
4. Ground Vibration is less.
5. Fragmentation is good.
6. NONEL is very safe to use in rainy season because it is Non - Electric Detonator.
7. It is ecofriendly method of blasting



## 6.0 MINE DRAINAGE

- a) **Likely depth of water table based on observations from nearby wells and water bodies:**

The mine is located at higher elevation on hill and the water table in the mine is much below the general surface however a few perched aquifers has been observed at a distance of about 130m from the boundary of the mine. Here we have observed water level to be about 10m below from the surface.

- b) **The deepest workings expected to reach.**

The expected deepest mining operation during this mining period shall be about 66m above MSL, which will be much above the ground water table.

- c) **Quantity and quality of water likely to be encountered, the pumping arrangements and places where the mine water is finally proposed to be discharged.**

No ground water is expected to be encountered during mining.





**7.0 STACKING OF MINERAL REJECTS & DISPOSAL OF WASTE**

- a) Indicate briefly the nature and quantity of topsoil, overburden/waste and mineral rejects likely to be generated during the next five years:

The year wise and section wise generation of topsoil/overburden is given in the Table No 7.1.

**Table 7.1 details of the topsoil/overburden generation**

Year	Section No	Area (m <sup>2</sup> )	Influence (m)	Volume (m <sup>3</sup> )	Tonnage (T) BD 1.6T/m <sup>3</sup>
I-Year	A-A'	12	31	372.00	595.20
	B-B'	15	30	450.00	720.00
	C-C'	16	30	480.00	768.00
	D-D'	24	30.5	732.00	1,171.20
Total				2,034.00	3,254.40
II-Year	A-A'	12	46.5	558.00	892.80
	B-B'	10	40	400.00	640.00
Total				958.00	1,532.80
III-Year	B-B'	10	40	400.00	640.00
Total				400.00	640.00
Grand Total				3,392.00	5,427.20

Threshold values in respect of apatite and rock phosphate, bauxite, barytes, chromite, chinaclay/kaolin, fluorite, graphite, gypsum, iron ore, kyanite and sillimanite, copper ore, manganese, magnesite, talc/steatite/soapstone, and wollastonite minerals as evolved by IBM may be adopted as applicable.

Not applicable

- b) Land chosen for disposal of waste with proposed justification.

The topsoil/overburden recovered during mining shall be used for afforestation / green belt development in the earmarked 0.2922 Ha safety barrier area.

- c) Attach a note indicating the manner of disposal, and configuration, sequence of buildup of dumps along with the proposals for the stacking of sub-grade ore to be indicated item wise.

As explained in 7.0(b) above the topsoil/overburden recovered during mining shall be used for afforestation/greenbelt development.





## 8.0 USE OF MINERAL

- a) Describe briefly the end-use of the mineral (sale to intermediary a parties, captive consumption, export and internal use).**

The granite building stone boulders are proposed to use for break water construction work in Vizhinjam Port project and other infrastructure project. And some part of the granite building stones are used as a base filling material in construction, infrastructure development and road making. The weathered Granite material will be used for base material for road work.

The Granite building stones excavated from the quarry shall be supplied to Vizhinjam Port Project exclusively or for any other Government related projects.

- b) Indicate the physical and chemical specifications stipulated by some of the buyers.**

The tumbler index of granite building stone should be +85; the size should be 100mm to 600mm, suitable for feed to the crushers. The boulders of size between 600m to 1.5m will be used as it is for breakwater construction work in the Port. The -150mm material is required for base material for road construction.

- c) Give details in case of blending of different grades of ores is being practiced or is being practiced at the mine to meet specifications stipulated by buyers.**

Not applicable



## 9.0 OTHERS

### a) Site Services:

The site services at mine shall take care of the workers requirements of food, shelter, water, emergency first aid services as well as equipment maintenance services in addition to recreational facilities for the employees, workmen and their families.

The following statutory and administrative facilities shall be made available near the mine site.

- Rest Shelter
- First Aid Station
- Latrines/Urinals
- Canteen
- Water supply for drinking purposes

The above site services shall be provided outside the lease area.

### b) Employment potential:

The list of the staff and workmen employed in the mine is given Table No 9.1

**Table No 9.1: Requirement of workmen & staff**

Sl. No	Particulars	No's
1	First class mine manager	1
2	Asst Mine Manager	1
3	Mine foremen	1
4	Mine Mate cum Blaster	2
5	Mechanical Engineer	1
6	Highly Skilled (Operator, Driver etc.)	5
7	Skilled (Supervisor, Accountant, Clerk etc.)	5
8	Semi-skilled (Helpers, spotters etc.)	5
9	Un-skilled(general purpose)	10
	<b>Total</b>	<b>31</b>



## 10.0 MINERAL PROCESSING

- a) If processing/beneficiation of the ore or minerals mined is planned to be conducted on site or adjacent to the extraction area, briefly describe the nature of the processing/beneficiation. This should indicate size and grade of feed material and concentrate (finished marketable product), recovery rate.

No processing / beneficiation would be undertaken in the Mining lease area. The entire product of rock of size 600mm to 1.5m shall be transported to the proposed breakwater port project. The -600mm shall be transported to crushing & screening plants outside the mine lease area and for road construction.

- b) Explain the disposal method for tailings or waste from the processing plant (quantity and quality of tailing proposed to be discharged, size and capacity of tailing pond, toxic effect of such tailings, if any, with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailing dam).

There is no crushing and screening within the lease. The entire rock produced would be transported breakwater construction and for the crusher outside the lease area. As all the products are saleable, there would be no generation of waste.

- c) A flow sheet or schematic diagram of the processing procedure should be attached.

There is no Crushing & Screening plant within the Mining lease area.

- d) Specify quantity and type of chemicals to be used in the processing plant.

Not Applicable

- e) Specify quantity and type of chemical to be stored on site/plant.

Not Applicable

- f) Indicate quantity (cu.m per day) of water required for mining and processing and sources of supply of water. Disposal of waste water and extent of recycling.

The requirement of water for the purpose of drinking, dust suppression by water tanker and afforestation as given in Table No 10.1



**Table.No.10.1 Requirement of water**

Purpose	Qty Required m <sup>3</sup> /day
Drinking water & Domestic	2
Afforestation	6
Dust suppression by water tanker	8
<b>Total</b>	<b>16*</b>

\*Water for dust suppression and afforestation may not be required for four to five months during the monsoon

- The required water for domestic, dust suppression and afforestation shall be brought from the Rainwater Harvesting Pond, and nearby old abandoned quarries.
- Water required for drinking purpose shall be provided from RO filters/mineral water cans.





**PART - II****11.0 ENVIRONMENTAL MANAGEMENT PLAN****a) Attach a note on the status of baseline information with regard to the following:**

This Granite Building Stone Quarry, over an extent of 1.1081 Ha. (2.7381 Acres) is located on the Western slopes of area. There is a working pit. The highest elevation in this area is 125m above MSL and the lowest elevation is 74.8m above MSL.

The district has a climate that borders between tropical savanna climate and tropical monsoon climate. In a broad sense, it can be said that the district experiences a tropical monsoon climate. The annual variation of mean air temperature at Thiruvananthapuram district is from 21° C to 34°C. The humidity is high and rises about 90% during the monsoon season. The average annual rainfall of the district is 2035mm. It is significant that the district gets benefits of both monsoon – southwest monsoon and northeast monsoon. The district is characterised by very high precipitation which is spread over very few wet days and a long dry season (December- May) and a marked gradient from the eastern hilly region to the sea rapidly re-conveying the rainfall back to the sea through short, fast, west flowing rivers. Thiruvananthapuram is the first city along the path of southwest monsoon and gets its showers by end of May/beginning of June. The district also gets rain from receding northeast monsoon which hits the district by October. The southwest monsoon contributes more than the northeast monsoon to the total rainfall in the district. The dry season sets by December in the district. December, January and February are the coldest months while March, April and May are hottest. The normal rainfall of the district is 2001.6 mm.

The area is surrounded by the lands with commercial crop like rubber plantation, teak, rose wood, pepper, coconut, aeracanut, mango, jackfruit etc. Snakes, squirrel, grander lizard, chameleon, crow, Sparrow, Pigeons etc are seen periodically. The nearest human settlement is Manikkal located at 0.64 Kms away from this mine. No public buildings, monuments exist inside the mining area.

**Existing land use pattern indicating the area already degraded due to mining/pitting, dumping, roads, processing plant, workshop, township etc., in a tabular form.**

The existing land use pattern is given in the Table No 11.1



**Table No. 11.1 Existing land use Pattern.**

Particulars	Land use pattern at present stage (Ha)
Area for mining / mining activities	0.2545
Area for Safety Barrier/Greenbelt	-
Roads	-
Total	0.2545
Unused area	1.1081
<b>Total Lease area</b>	<b>1.1081</b>

### ➤ Water regime

The district has a climate that borders between tropical savanna climate and tropical monsoon climate. In a broad sense, it can be said that the district experiences a tropical monsoon climate. The annual variation of mean air temperature at Thiruvananthapuram district is from 21°C to 34°C. The humidity is high and rises about 90% during the monsoon season. The average annual rainfall of the district is 2035mm. It is significant that the district gets benefits of both monsoon – southwest monsoon and northeast monsoon. The district is characterised by very high precipitation which is spread over very few wet days and a long dry season (December- May) and a marked gradient from the eastern hilly region to the sea rapidly re-conveying the rainfall back to the sea through short, fast, west flowing rivers. Thiruvananthapuram is the first city along the path of southwest monsoon and gets its showers by end of May/beginning of June. The district also gets rain from receding northeast monsoon which hits the district by October. The southwest monsoon contributes more than the northeast monsoon to the total rainfall in the district. The dry season sets by December in the district. December, January and February are the coldest months while March, April and May are hottest. The normal rainfall of the district is 2001.6 mm.

### Flora and Fauna

The common flora in this area are given in the Table No 11.2

**Table No 11.2: Common Flora in study area**

Sl No	Botanical Name	Common Name
1	Tectonagrandis	Teak wood
2	Areca catechu	Aeracanut
3	Artocarpusheterophyllus	Jackfruit
4	BorassusFlabellifer	Pana
5	Schleicheraoleosa	Poovam
6	Cocosnucifera	Coconut
7	Boutelovadactyloides	Buffalo grass
8	Oroxylumindicum	Palakapayyani
9	MacarangaPeltata	Vatta
10	Abrusprecatorius	Kunni
11	Piper nigrum	Pepper
12	Heveabrsiliensis	Rubber tree
13	Artocarpusaltis	Kadaplavu





14	Mangifera indica	Mango
15	Grewia tilifolia vahl	Chadachi
16	Dalbergia latifolia	Rosewood
17	Chromolaena odorata	Communist Pacha
18	Bambuseae	Bamboo

The common fauna in this area is given in the Table No 11.3

**Table No 11.3: Common Fauna in study area**

Sl No	Scientific Name	Common Name
1	Funambulus palmarum	Annan, Palm squirrel
2	Boiga irregularis	Tree snakes
3	Herpestes edwardsi	Keeri, Common Grey Mongoose
4	Bandicota bengalensis	Bandicoot, Peruchazhi
5	Rana hexadactyla	Frog

### Quality of Air, Ambient Noise Level and Water

#### **1. Ambient air quality**

The air quality in the area mainly depends on the nature & concentration of emissions and meteorological conditions. The major air pollutants include:

- Particulate Matter (Dust) of various sizes
- Gases, such as, Sulphur Dioxide, Oxides of Nitrogen, Carbon Monoxide etc. from vehicular exhaust.

Dusts are the single largest air pollutant observed in this area. Diesel operating vehicles produces NO<sub>x</sub>, SO<sub>2</sub> and CO emissions, usually at low levels. Dust can be a significant nuisance to surrounding land users and potential health risk in some circumstances. Dust is produced from a number of sources and through number of mechanisms such as

- Land clearing,
- Overburden removal,
- Crushing & screening,
- Loading & unloading of material on site &
- Subsequent transport off the site etc.

The detected ambient air quality is given in the Table 11.4

**Table No 11.4: Detected AAQ in core & buffer zone.**

Area	Sample Code	PM 10 µg/m <sup>3</sup>	PM 2.5 µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> µg/m <sup>3</sup>
Core Zone	A1	36.40	12.50	10.60	10.40
Manikkal	A2	38.40	12.80	12.40	10.60

The Environment monitoring data is enclosed as **Annexure – 10.**



**Noise levels:**

The noise level with in the core zone is found to be 50.99 dB (A) Leq\* during day time and 41.91 dB(A) Leq\* during night, whereas in the buffer zone it is 55.25dB(A) Leq\* during day time and 49.54dB(A) Leq\* during night time. The impact of mining on the ambient noise level would be hardly noticeable in nearby villages, as the nearest habitant Manikkal is 0.64 Kms away from the mine. The detected noise level is given in the Table 11.5.

**Table No 11.5: Detected noise level in core & buffer zone.**

Area	Sample Code	Day dB(A)LEQ	Night dB(A)LEQ
Core Zone	N1	50.99	41.91
Manikkal	N2	55.25	49.54

The Environment monitoring data is enclosed as **Annexure – 10**.

**Water Quality:**

There is no water regime of any importance in the mining area. In buffer zone the minimum pH value of water is detected as 7.40 in Manikkal, total dissolved solids detected minimum 86 mg/l in Manikkal. The total hardness of water is detected minimum 44 mg/l in Manikkal. The Environment monitoring data is enclosed as **Annexure – 10**.

**➤ Climatic conditions:**

The district has a climate that borders between tropical savanna climate and tropical monsoon climate. In a broad sense, it can be said that the district experiences a tropical monsoon climate. The annual variation of mean air temperature at Thiruvananthapuram district is from 21° C to 34°C. The humidity is high and rises about 90% during the monsoon season. The average annual rainfall of the district is 2035mm. It is significant that the district gets benefits of both monsoon – southwest monsoon and northeast monsoon. The district is characterised by very high precipitation which is spread over very few wet days and a long dry season (December- May) and a marked gradient from the eastern hilly region to the sea rapidly re-conveying the rainfall back to the sea through short, fast, west flowing rivers. Thiruvananthapuram is the first city along the path of southwest monsoon and gets its showers by end of May/beginning of June. The district also gets rain from receding northeast monsoon which hits the district by October. The southwest monsoon contributes more than the northeast monsoon to the total rainfall in the district. The dry season sets by December in the district. December, January and February are the coldest





months while March, April and May are hottest. The normal rainfall of the district is 2001.6 mm.

➤ **Human settlement:**

There is no human settlement in core zone. The nearest habitants are more than 86.5m away from the boundary of the mining lease area. The nearest human settlements are in Manikkal, which is about 0.64 Kms from the mining lease area.

➤ **Public buildings, places of worship and monuments historical or archaeological importance:**

There are no monuments of either historical or archaeological importance in the core or buffer zone.

➤ **Attach plans showing the locations of sampling stations:**

The environment monitoring is carried out in the core zone and in Mailamoodu. The location of sampling station is given in the key plan.

**b) Attach an Environmental Impact Assessment Statement describing the impact of mining and beneficiation of environment on the following over the next five years and up to conceptual plan period 'A' category mines.**

**i. Land area indicating the area likely to be degraded due to mining, pitting, dumping, road, workshop, processing plant, township etc.**

Due to this mining operation there shall be an impact on the environment. The area broken for mining at the end of five years of the mining plan period and at the conceptual stage is given in the Table No 11.6.

**Table no.11.6 Land use at the end mining plan period and life of the mine**

Particulars	Land use pattern at present stage (Ha)	Land use pattern (end of progressive stage) (Ha)	Land use pattern at Conceptual stage (Ha)
Area for mining / mining activities	0.2545	0.8159	0.8159
Area for Roads	-	-	-
Area for Safety Barrier / Green belt	-	0.2922	0.2922
<b>Total</b>	<b>0.2545</b>	<b>1.1081</b>	<b>1.1081</b>
Area for dump	-	-	-
Unused area	0.8536	-	-
<b>Total Lease area</b>	<b>1.1081</b>	<b>1.1081</b>	<b>1.1081</b>

\* Road area inside the mine Lease is not shown separately. Since the material is transported on the benches the road area is therefore included in the mining area.



The land use pattern at the end of first five years of plan period is given in PMCP enclosed vide **Plate No-10** and the ultimate land use pattern at conceptual stage is enclosed vide **Plate No-7**.

**ii. Air Quality**

The quality of air in lease area would be deteriorated to certain extent due to drilling, blasting and transportation of the rock produced. However, the following environment control measures and the mitigating measures to control air pollution due to mining operations shall be undertaken, so that the pollution levels are maintained well within the permissible limits.

**CONTROL MEASURES:**

**A. QUARRYING**

- Dust suppression systems (water spraying) would be adopted at mine working & loading points.
- Wet Drilling shall be Practiced to reduce dust generation.
- Speed control on vehicle movement, to limit speed.
- The blasting shall be carried out during day hours, it shall be avoided during strong wind and temperature inversion condition.
- Excavation operations shall be suspended during very strong wind condition.
- Wind reduction control by plantation. Trees and shrubs will be grown along the Green belt area/safety barrier area along the periphery of the quarry and along the haul roads.
- Plantation of wide leaf trees, creepers and tall grass along approach roads, and around hillock will help in to suppress the dust.
- Proper tuning of excavators and compressors will be ensured to keep the gas emissions from the vehicles within the prescribed norms of the CPCB and MoEF guidelines.
- All workers shall be provided with personal protective devices eg. Dust Mask, Goggles, Helmet, etc.

**iii. Water Quality**

There is no water source of perennial type passing through the area. The lease area is located at higher elevation on the area and here the ground water level is very much below the general surface from the lowest portion. Hence no ground water would be encountered during mining as the mining is proposed to extend up to 8.8m depth from the lowest level of the lease area. Hence there shall not be any impact on water quality. Also, granite building stone being a very stable material and is not





hazardous material does affect the water quality. The following mitigating measures for the surface run offs has been incorporated.

#### **MITIGATING MEASURES:**

The following mitigation measures are suggested for water management and water pollution control.

- Garland drains shall be constructed all along the periphery of the quarry. The garland drain shall be routed through Silt Settling Tank (SST) to remove suspended soils and the overflow water shall be discharged to natural water course. Rainwater Harvesting Pond (RWHP) is also envisaged for the use of the surface water. 1 SST & RWHP Ponds are proposed in the West direction of the Mining Lease area.
- Settling tanks and drains shall be periodically de-silted.
- Providing sufficient gully checks to check any silt flowing along with the surface run-off during monsoon. The environment management measures for the surface water run offs are shown in the Environment Management Plan enclosed vide - **Plate No 8 & 9.**
- No toilet is planned within the mine area. However, the toilets built at the site office, shall be provided with septic tanks to handle the sewage from the same.
- The quality of the water in the surrounding area and the Pre-& Post monsoon water quality shall be monitored to track any changes or contamination in the water quality.
- The working of quarry at present shall be restricted at 66m above MSL at conceptual stage of quarrying, which is much above the ground water level.

#### **iv. Noise Levels**

The noise level with in the core zone is found to be 50.99dB (A) Leq\* during day time and 40.0dB (A) Leq\* during night, whereas in the buffer zone it is 55.25dB(A) Leq\* during day time and 49.54dB(A) Leq\* during night time. The impact of mining on the ambient noise level would be hardly noticeable in nearby villages, as the nearest human settlement Manikkal is 0.64 Kms away from the mine.

#### **Control Measures:**

- Identification of mitigation measures for noise abatement for both point sources and line sources are undertaken and measures to minimize the impact is proposed.





- The equipment's and machines shall be maintained properly. Particular attention shall be given to the silencers and mufflers.
- Use of sharp drilling bits, delivery of compressed air at optimal pressure and proper maintenance of compressor, wagon drilling machine, jackhammers and tipper trucks.
- Limiting the speed of empty haulage vehicles/tippers to a moderate level to prevent undue noise.
- In addition to it, Green belt development shall be undertaken around the quarry lease area to minimize propagation of noise.
- Provision of rotation of workers to minimize exposure time as well as provision of earmuffs to workers exposed to high noise areas is also envisaged.
- Regular monitoring of noise level shall be done within the core zone and the buffer zone of the mining lease area.

#### **Vibration levels (due to blasting)**

The drilling is proposed by wagon drill with 115mm dia. The blasting shall be done sequentially. Delay shall be used for blasting keeping the vibration to minimum with least fly rock.

Thus, the vibration would not be of significance as the nearest habitants are beyond 86.5m from the boundary of the mining lease area and human settlements are in Manikkal, which is located at 0.64 Km away from the mine.

#### **Control Measures:**

#### **VIBRATION & NOISE MITIGATION MEASURES (BLASTING PRECAUTIONS):**

- With optimum blast design, effective blasting techniques with delay detonators and low charge per delay, and bottom hole initiation method with the help of NONEL and millisecond delays care shall be taken to limit the blast vibrations and the PPV below 10mm per second, i.e. within the permissible limits, vide DGMS circular 7 of 1997.
- Each blast would be being carefully planned, supervised, executed and observed by qualified Blasters.
- Design of optimum blast hole geometry i.e. burden, spacing, Blast hole layout pattern, inclination and depth considering, burden, nature of the rock, safe working space,



fragmentation size, etc., to keep the flyrock, noise and ground vibrations at the minimum.

- Blasting shall be done using appropriate millisecond delay detonators to keep the noise and vibration at the minimum levels.
- Proper sequencing of the blast so as to keep the vibration, noise and flyrock to the minimum levels.
- The appropriate Charge per delay shall be regulated to keep the PPV below 10mm/sec as per DGMS Circular 7 of 1997.
- The holes shall be properly stemmed, and the stemming of each hole shall be checked by the qualified blaster to avoid 'blown thorough' holes, that is one of the major source of noise and Airblast during primary blasting.

No secondary blasting like Pop Shooting or Plaster Shooting shall be undertaken for breaking down large boulders so as to avoid Airblasts and Fly rocks. Only rock breakers will be used for breaking down the bigger boulders

**v. Socio-economics**

**Social and demographic profile:** The mine is situated in the remote area, where the socio- economic status of the people is not satisfactory. The main occupation of the people is working in plantation and there are no major industries in this area. The mining operation in such remote places would provide 31 direct & equal number of indirect employments to local people. Hence mining operation will help in improving socio-economic status of the area.

**vi. Occupational health and safety hazards:**

The statutory norms shall be followed during the course of mining to ensure the proper health and safety of workers. All the health and safety aspects as per the requirement and standards of the DGMS shall be followed to ensure the health and safety of all persons employed at the mine. Apart from this there is no other factor envisaged during the mining operations.

**vii. Human settlement:**

The local population is well settled in the nearby villages. There is possibility of the migrating the laborers from surround area to the nearby villages due to increase in revenue earning in this area. There shall be better development of infrastructure due to mining activities. The infrastructure Plan is enclosed as vide **Plate No:11**





**viii. Recreation facilities:**

As of now there are no much recreational facilities available. Recreation facilities would be improved once the mining start and financial position of workers develop. The company also plans to provide good facilities as part of the CER/CSR works.

**viii. Historical monuments etc.**

There are no historical monuments in the core or buffer zone.

**c) Attach an Environmental Management Plan (supported by appropriate plans and sections and time-bound action proposed to be taken with sequence & timing in the following diagrams should be used).**

**Temporary storage and utilization of topsoil.**

Totally 5,427.20 tonnes topsoil is expected to be generated. This topsoil shall be transported to the safety barrier area and used for afforestation / green belt development all along periphery of the mine. Some quantity of topsoil shall be stocked separately within the lease area as specified in the Production & Development plan for the further utilization.

**➤ Year wise proposal for reclamation of land affected by abandoned mines and their mining activity during first five years (and up to conceptual plan period for 'A' category mines, clarifying to extent back filling and re-contouring and/or alternative use of unfilled/partially filled excavations to sides/slopes and mine.**

The mining operations during these five years of the plan period are planned upto 66m above MSL. At conceptual stage the pit shall be developed for water storage/ pisciculture with good local bio-diversified vegetation. The reclamation measures are shown on the environment management plan enclosed vide **Plate No - 9**.

**- Program for afforestation, year wise for the initial five years (and up to conceptual plan of 'A' category mines) indicating number of plants with name of species to be demarcated in areas in hectares.**

0.2922 Ha area earmarked for safety barrier shall be developed as green belt by planting minimum but not limiting to 800 nos. sapling of local species. Wherever, if it is not possible to undertake plantation for greenbelt in the safety zone area, the same plantation will be done in the nearest possible area to Develop a good green belt for environmental protection. Till conceptual stage totally 0.2922 Ha area shall be





covered under green belt. Apart from this Afforestation shall be done on the haulage road and public place by planting 1200 saplings.

The afforestation program is given in the Table No 11.7

**Table No 11.7: Afforestation program**

Year	No of Plants	Green Belt area covered	Location
I-Year	400saplings	0.05844 Ha	Green belt area & Haulage Road
II-Year	400saplings	0.05844 Ha	
III-Year	400saplings	0.05844 Ha	
IV-Year	400saplings	0.05844 Ha	
V-Year	400saplings	0.05844 Ha	
	<b>2000 saplings</b>	<b>0.2922 Ha</b>	

- **Stabilization and vegetation dumps along with waste dump management for next five years (and up to conceptual plan period for 'A' category mines).**

Only 5,427.20 tonnes topsoil is expected to generate in this area. The topsoil shall be stocked in the safety barrier and used for developing the green belt in safety barrier area. Totally minimum but not limiting to 800 saplings shall be planted in this area. Till conceptual stage totally 0.2922 Ha area shall be covered under green belt. Apart from this Afforestation shall be done on the haulage road and public place by planting another 1200 saplings.

- **Treatment and disposal of water from mine:**

Excepting during monsoon months, no water shall be discharged from mine. A garland drain shall be made all around the mine to divert the water away from the pit through silt settling tank. The clarified water from Silt Settling Tank (SST) shall be directed to Rainwater Harvesting Pond (RWHP). The clarified overflow water from Rain Water Harvesting Pond shall be released to natural water course.

- **Measures for minimizing adverse effects on water regime:**

Excepting during monsoon months, no water shall be discharged from mine. A garland drain shall be made all around the mine to divert the water away from the pit to Silt Settling Tank (SST). The water from Silt Settling Tank (SST) shall be directed to a rain harvesting pond before being released to natural water course. However, granite building stone is a Nontoxic and hence there shall not be any chemical hazardous effect on the water regime.

- **Protective measures for ground vibrations/air blast caused by blasting:**

The drilling is proposed by wagon drill with 115mm dia. The blasting shall be done with 83mm slurry cartridges with non-electric millisecond delay detonators. The



vibrations shall be maintained below 10mm/s as per the DGMS circular No. 7 of 1997. The nearest human settlement Manikkal is situated at about 0.64 Kms away from the mine. Secondary blasting shall not be undertaken to avoid air blast. Only rock breaker shall be used to break the bigger boulders.

**- Measures for protecting historical monuments and for rehabilitation of habitat, settlements, disturbed due to mining activity:**

There are no historical monuments in the core or buffer zone.

**- Socio-economic benefits arising out of mining:**

**Social and demographic profile:** The mine is situated in the remote area, where the socio- economic status of the people is not satisfactory.

The main occupation of the people is working in plantation. There are no major industries in the area. The mining operations in such remote places would provide 31 direct & equal number of indirect employments to local people. Hence mining operation will help in improving socio-economic status of the area.

**d) Monitoring schedules for different environmental components after the commencement of mining operations and related activities (for 'A' category mines only):**

For this mining project a quarterly monitoring mechanism for various environmental parameters shall be evolved as per the guidelines issued by State Environment Committee / MOEF.



**PART III****12.0 PROGRESSIVE MINE CLOSURE PLAN****12.01 Introduction**

<b>Name of the Lessee</b>	:	<b>Shri. Rajesh Kumar Jha,</b> Chief Executive Officer, M/s. Adani Vizhinjam Port Private Limited., 2nd Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram- 695 014, Ph No.: +91 9099005722
<b>Registered Office</b>	:	<b>M/s. Adani Vizhinjam Port Private Limited.,</b> Shri. Rajesh Kumar Jha, Chief Executive Officer, 2nd Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram- 695 014, Ph No.: +91 9099005722
<b>Location of the area</b>	:	A location plan is enclosed vide <b>Plate No. 1.</b>
<b>Extent of the area</b>	:	1.1081 Ha
<b>Type of the lease area:</b>		Govt Land
<b>Present Land Use Pattern</b>	:	

The present land use in mine area is given in the Table No 12.1

**Table No. 12.1: Present Land Use Pattern.**

Particulars	Land use pattern at present stage (Ha)
Area for Mining/Mining activities	0.2545
Area for Roads	-
Area for Safety Barrier / Green belt	-
Unused area	0.8536
<b>Total lease area</b>	<b>1.1081</b>

**Method of Mining**

Please refer Chapter – 4 mining

**12.02 Reasons for closure**

There is no proposal given for mine closure in these five years of the mining plan as the life of the mine is around 6 Years, however progressive mine closure plan is submitted along with this mine plan and the details are given in the **Plate No:10** (Progressive Mine Closure Plan).





**Statutory Obligations**

The mining plan is to be approved by District Geologist, Department of Mining & Geology, Thiruvananthapuram District, Kerala State where as the Environment Clearance is under process.

**12.03 Closure Plan Preparation:**

Lessee : 'Granite Building Stone Quarry' of

M/s. Adani Vizhinjam Port Private Limited.,  
Shri. Rajesh Kumar Jha,  
Chief Executive Officer,  
2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud,  
Thiruvananthapuram- 695 014,  
Ph No.: +91 9099005722

**Name and Address of the RQP:**

<b>C. Thambu Cherian</b> DMG/KERALA/RQP/17/2018
<b>Global Environment &amp; Mining Services</b> #212, Celestic Towers, Palm Avenue, Green Glen Layout, <b>Bengaluru-560103, Karnataka</b> email: gems.blr@globalminig.in Mob. No.: +91-8025432447
<u>H.O.</u> 3 <sup>rd</sup> Main Road, Basaveshwara Badawane <b>HOSPET – 583201, Bellary Dist. (Karnataka)</b>

a) **Executing Agency:** M/s. Adani Vizhinjam Port Private Limited.,

**b) MINE DESCRIPTION:****12.04 Geology:****Regional geology**

Please Refer Chapter 3 Geology & Reserves

**Local Geology:**

Please refer Chapter No 3 Geology & Reserves.

**12.05 Reserves**

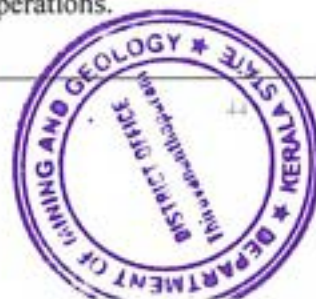
Please refer Chapter 3 Geology & Reserves

**12.06 Mining Method:**

Please Refer Chapter 4 Mining.

**12.07 Mineral Beneficiation:**

There is no mineral beneficiation involved in the quarry operations.



**12.08 REVIEW OF IMPLEMENTATION OF MINING PLAN**

c) Name of Mine: 'Granite Building Stone Quarry' of

M/s. Adani Vizhinjam Port Private Limited.,

**12.09 Particulars of the Approved Mining Plan/ Scheme**

It is under process. Mining plan is prepared for five years and submitted for approval.

**12.10 Date of commencement of Mining Operations.**

This mine is working on lease granted by Government of Kerala.

**12.11 Review of Compliance Position of Mining Plan**

Review of Compliance position of Salient features of Mining Plan on chapter wise basis bringing out marked deviation, if any, and justification / reasons thereof.

**1. Exploration:**

This is the first Mining plan. Hence it is not applicable

**2. Mine Development:**

This is the first Mining plan. Hence it is not applicable

**3. Mine Production:**

This is the first Mining plan. Hence it is not applicable

**4. Reclamation & Rehabilitation:**

This is the first Mining plan. Hence it is not applicable

**Waste Management**

This is the first Mining plan. Hence it is not applicable

**Quality of Air**

This is the first Mining plan. Hence it is not applicable

**Noise Level**

This is the first Mining plan. Hence it is not applicable

**Ground Vibrations**

This is the first Mining plan. Hence it is not applicable

**Quality of water:**

This is the first Mining plan. Hence it is not applicable



**3.4C Review of compliance of conditions and stipulations imposed, if any, while approving Mining Plan / Scheme. In case non-compliance, partial compliance justification reasons thereof may be furnished along with proposal for compliance in ensuring period.**

This is the first Mining plan. Hence it is not applicable

**3.4D Review of compliance of violations pointed out after inspections made under MCDR, 1988 during the last five years.**

This is the first Mining plan. Hence it is not applicable

**3.4E Any other points requiring attention in the interest of proper mine design Development, conservation and Ecology of the area.**

Nil

#### **12.4.0 Progressive mine closure Plan**

##### **12.4.1 Mined out land.**

This is a old working pit area under approved lease by Government of Kerala. The present land use, the land use at the end of 5 years of the mining plan and at the conceptual stage is given in the Table Number 12.2.

**Table No.12.2: Present land use, land use at the end of progressive stage and the ultimate land use pattern.**

Particulars	Land use pattern at present stage (Ha)	Land use pattern (end of progressive stage) (Ha)	Land use pattern at Conceptual stage (Ha)
Area for mining / mining activities	0.2545	0.8159	0.8159
Area for Roads	-	-	-
Area for Safety Barrier / Green belt	-	0.2922	0.2922
<b>Total</b>	<b>0.2545</b>	<b>1.1081</b>	<b>1.1081</b>
Area for dump	-	-	-
Unused area	0.8536	-	-
<b>Total Lease area</b>	<b>1.1081</b>	<b>1.1081</b>	<b>1.1081</b>

\* Road area inside the mine Lease is not shown separately. Since the material is transported on the benches the road area is therefore included in the mining area.

##### **12.4.2 Water quality management:**

There is no water course in the lease. To divert the rain water away from the mine to the natural course, a garland drain shall be made all around the lease as shown in the Environment Management Plan enclosed vide **Plate No: 9**. The water from garland drain shall be collected in the Silt Settling Tanks the overflow from the Silt Settling Tanks will be diverted to the Rain Water Harvesting Ponds after that the





clarified overflow from the Rain Water Harvesting Ponds will be released to natural water course.

#### **12.4.3 Air quality management:**

The air around the mine is clean and moderately dry. To maintain the same during mining the sprinkling of water shall be done on haulage road. The drilling and blasting, excavation and loading shall not be done during high wind.

#### **12.4.4 Waste Management:**

There is no generation of waste material (except the topsoil) from this mining operations during this five year of plan period.

#### **12.4.5 Topsoil Management**

Totally 5,427.20 tonnes topsoil is expected to generate from this mine. The topsoil shall be used for afforestation to develop the green belt in safety barrier area within the periphery of mining area.

#### **12.4.6 Tailing Dam Management**

Not Applicable

#### **12.4.7 Infrastructure.**

No infrastructure is proposed to develop inside the Mining lease area. The office and structures required for other service including statutory requirement shall be constructed outside the lease area, which shall be dismantled at conceptual stage of mining.

#### **12.4.8 Disposal of Machinery**

The question of disposal of mining machinery does not arise as the closure plan is a progressive in nature, and the life of the mine extends beyond the plan period.

#### **12.13 Safety & Security:**

For safety the lease hold areas shall be guarded by security personals.

#### **12.14 Disaster Management & Risk Assessment:**

As most of the safety aspects and benching system is proposed, no disaster is expected in this mining; however, as an emergency the location of the hospital, police station and fire brigade is given in the Table No 12.3



**Table No. 12.3: Location of Stations during Emergency**

Stations	Location of the station	Distance of station from Quarry
Hospital	Ancy Hospital, Venjaramoodu	4.90 Km
Police station	Venjaramoodu Police Station	5.02Km
Fire Station	Venjarumood	8.1 Km

In case of any eventuality the following person will be available for contact.

**Shri. Rajesh Kumar Jha,**  
Managing Director & CEO,  
M/s. Adani Vizhinjam Port Private Limited.,  
2nd Floor, Vipanchika Tower, Thycaud  
Thiruvananthapuram-695014.

### 12.15 Care and maintenance during temporary discontinuance:

The following specific measures shall be taken during temporary discontinuance,

- The pit shall be fenced
- Proper and adequate security at the entrance to the mine to prevent entry of unauthorized person with proper gates under lock.
- All the above will be examined by manager once in a week to ensure that they are in order.

### 12.7.1 Economic repercussions of closure of mine & manpower retrenchments:

In case of the closure of the mine the company shall plan for the voluntary retirement scheme.

### 12.7.2 Time Scheduling of Abandonment:

The life of the mine is around 6 years and as on now there is no schedule for abandonment of mine. However, the time scheduling for environment management measures are given in Table 12.4

**Table No. 12.4 Environment Management Schedule**

YEAR	I-Year	II-Year	III-Year	IV-Year	V-Year
Greenbelt					
Garland drain					
Afforestation					
Environmental Monitoring					
Water spraying on haul roads					

### Abandonment Cost

As of now the environment management cost includes the initial and capital cost and annual recurring cost.



The capital cost is given in the table No 12.5 and annual recurring cost is given in Table No 12.6

**Table No. 12.5 Initial/ Capital Investment for Environmental Protection**

Sl. No.	Particulars	No.	Cost (LakhRs.)
<b>I</b>	<b>Pollution Control</b>		
1.1	Water sprayer (Mobile)	1	05.00
	<b>Total</b>		<b>05.00</b>

**Table No. 12.6: Recurring Annual Cost for Environmental Protection**

Sl. No.	Particulars	No.	Cost (Lakh Rs.)
<b>I</b>	<b>Pollution Control</b>		
1.1	Water spraying		5.00
1.2	Green belt development	Avg. 400 plants	1.80
1.3	Personal protective equipment	40	0.80
1.4	Quarterly monitoring		2.00
	<b>Total</b>		<b>9.60</b>
2	Corporate Social Responsibility/ Corporate Environment Responsibility (Recurring)		<b>2.00</b>
	<b>Total</b>		<b>11.60</b>

The annual cost for environment protection / environmental improvement and CSR activities are envisaged as Rs. 11.60 lakhs and the specific environmental protection cost per tonne is nearly Rs 20.63/- per tonne of granite building stone.

#### 12.16 Financial Assurance:

At the end of these five years of the mining plan period totally 1.1081 Ha (2.7381 Acres) area shall be used for mining and green belt development activities. The financial assurance of Rs 1,00,000 per Ha shall be given as a bank guarantee to Directorate of Mining & Geology after confirmation. The detail breakup of the land is given in Table No 12.8.1 and the broken-up area is shown in Plate No. 10, Progressive Mine Closure Plan.





Table No. 12.8.1: Details of Broken up area at the end of progressive stage

Sl. No.	Head	Area Put On Use at start of plan (in H a)	Additional requirement during plan period (in Ha)	Total (in Ha)	The area considered as fully reclaimed & rehabilitated (in Ha)	Net area considered for calculation (in Ha)
1	Area under mining / mining activities	0.2545	0.5614	0.8159	-	0.8159
2	Safety Barrier/Green belt	-	0.2922	0.2922	-	0.2922
3	Overburden / dump/ tailing dump	-	-	-	-	-
4	Infrastructure (work shop, office, etc)	-	-	-	-	-
5	Roads	-	-	-	-	-
6	Storage of top soil	-	-	-	-	-
7	Mineral separation plant	-	-	-	-	-
8	Afforestation on dump	-	-	-	-	-
9	Others to specify	-	-	-	-	-
	<b>Total</b>	<b>0.2545</b>	<b>0.8536</b>	<b>1.1081</b>		<b>1.1081</b>
	<b>Virgin area</b>	<b>0.8536</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Lease area</b>	<b>1.1081</b>	<b>1.9565</b>	<b>1.1081</b>	<b>1.9565</b>	<b>1.1081</b>

**12.17 Certificate:**  
Enclosed

**12.18 Plans and Sections:**  
Plans and sections are enclosed.

**GLOBAL Environment & Mining Services**

  
**C. Thambu Cherian**  
DMG/KERALA/RQP/17/2018



# ANNEXURES



No. 5219/M3/2019

Directorate of Mining & Geology  
 Kesavadasapuram, Pattam Palace .P.O.,  
 Thiruvananthapuram - 4  
 Tel Fax : 0471 2447429  
 e-mail: [director.dir.dmg@kerala.gov.in](mailto:director.dir.dmg@kerala.gov.in)  
[www.dmg.kerala.gov.in](http://www.dmg.kerala.gov.in)  
 Date : 07-06-2019

From  
 The Director of Mining & Geology

To  
 ✓ M/s. Adani Vizhinjam Port Private Limited,  
 2<sup>nd</sup> Floor, Vipanchika Tower,  
 Thycaud, Thiruvananthapuram District - 695 014  
 (Registered Office at: Adani House, Near Mithakhali Six Roads,  
 Navrangpura, Ahmedabad, Gujrat State - 380 009)  
 (Represented by its Chief Executive Officer, Shri. Rajesh Kumar Jha)

Sir,

Sub:- Mines and Minerals - Minor Mineral - Granite (Building Stone) -  
 Application for quarrying lease under KMMC Rules 2015 - Letter of  
 Intent - forwarding of- reg.

- Ref:-
1. Your application for quarrying lease dated 06.02.2019.
  2. NOC No. B7-127329/18 dt. 13.07.2018 issued by District Collector, Thiruvananthapuram.
  3. Letter No. 362/DOT/ML/2019 dtd. 03/06/2019 of the Geologist, District Office, Thiruvananthapuram.
  4. Kerala Minor Mineral Concession Rules 2015.

Please refer to the references cited above . As per the reference 1<sup>st</sup> cited, you have applied for a quarrying lease for a period of 10 years from this office for the extraction of granite building stone from an area of **1.1081 Hectares** in **Re-Survey Block No. 29, Re - Survey Nos. 120/10 of Manickal Village of Nedumangad Taluk of Thiruvananthapuram District** [as shown in the Survey Map issued by Tahsildar, Nedumangad enclosed]. Vide reference cited 2 above, District Geologist, Thiruvananthapuram forwarded your application to this office with recommendations to issue Letter of Intent. On scrutiny of application and other documents received from the Geologist, it is seen that a quarrying lease can be granted to the precise area shown in the map under the provisions contained in the KMMC Rules 2015. However, for granting quarrying lease you have to produce following documents through District Geologist to the satisfaction of this office in accordance with the relevant statutes.

#### DOCUMENTS TO BE PRODUCED

1. Mining plan approved by the District Geologist as stipulated in the KMMC Rules 2015, for the precise area as per the survey map.





2. Environmental Clearance as stipulated in EIA Notification 2006 for the precise area.
3. Consent to operate quarry from the Kerala State Pollution Control Board for the precise area.
4. Explosive licence from the authorities concerned for appropriate quantity of explosives required for extraction of mineral as mentioned in the approved mining plan.
5. D & O Licence from the Local Self Government authorities concerned for operating quarry in the precise area.

It is further informed that the duration of lease as well as annual production of mineral will be decided based on the approved mining plan and documents submitted.

It is also informed that as per the provisions contained in the KMMC Rules 2015 this letter of intent shall be sufficient for the purpose of issuing necessary licenses/consents/Clearances/NOCs etc. by the other statutory authorities concerned. In the event of granting of quarrying lease you may also need to produce new Possession & Enjoyment Certificate at the time of grant of quarrying lease.

It is further informed that this letter of intent is valid for a period of one year from the date of issue. In case you have any valid reason for seeking extension of period of this LOI, the same may be obtained before the expiry of this LOI. Your application for Quarrying Lease shall deemed to have been rejected, if you fail to produce above mentioned documents before the expiry of LOI.

Yours faithfully

*[Signature]*  
02/06/2019

ADDITIONAL DIRECTOR OF MINING & GEOLOGY

Encl: Photocopy of Survey Map showing precise area

Copy to:-

1. The Member Secretary, SEIAA, Thampanoor Bus Terminal, Thiruvananthapuram.
2. The Chairman, SEIAA, Thampanoor Bus Terminal, Thiruvananthapuram.
3. The Deputy Chief Controller of Explosives, CSEZ, CGO Complex, Kakkanad, Ernakulam
4. Kerala State Pollution Control Board, District Office, Thiruvananthapuram District.
5. The Secretary, Manikkal Grama Panchayath, Thiruvananthapuram District
6. The Tahsildar, Nedumangad Taluk Office, Thiruvananthapuram District.

For kind attention of statutory authorities

[The statutory authorities while issuing licence/consents/NOCs based on this letter of intent may refer this letter of intent in the respective licence/consent/ clearance /NOC while issuing the same. The statutory authorities may refer the survey map and consider the extent of applied area, quantity of mineral proposed to extract and the period of lease applied for while issuing such documents. The authorities may note that the operation as per their licence shall start only after execution and registration of quarrying lease granted by this office. All the Survey Nos./Re-Survey numbers with Block No. included in the survey map submitted in this connection shall be included in all the aforesaid documents.]

7. The Geologist, District Office, Thiruvananthapuram (The Geologist shall forward all the above said documents to this office for grant of quarrying lease with recommendations).

*[Handwritten mark]*





GOVERNMENT OF KERALA

## DEPARTMENT OF MINING AND GEOLOGY

Directorate of Mining and Geology, Pattom Palace PO,  
Kesavadasapuram, Thiruvananthapuram-695004, Kerala  
www.dmg.kerala.gov.in

## FORM Q

**CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON TO PREPARE  
MINING PLANS FOR QUARRYING MINOR MINERALS IN KERALA**

(Issued under Rule 54 of the Kerala Minor Mineral Concession Rules, 2015)

**Shri. C. Thambu Cherian, S/o C.M. Cherian, Chamakkatt, Erayilkadavu Road, Kottayam District - 686 001**, having given satisfactory evidence of his qualification and experience is hereby granted **RECOGNITION** under Rule 54 of the Kerala Minor Mineral Concession Rules, 2015 as qualified person to prepare Mining Plans for quarrying minor minerals in Kerala.

**The registration number is DMG/KERALA/RQP/17/2018**

**This recognition is valid for a period of 10 years ending 26/09/2028**


Photograph of RQP

Signature of RQP



K. BIJU IAS

DIRECTOR OF MINING AND GEOLOGY

K. BIJU IAS

Director

Mining and Geology Department  
Kesavadasapuram, Pattom Palace, PO  
Thiruvananthapuram- 695004

Place: Thiruvananthapuram

Date: 27-09-2018







भारत सरकार



राजेश कुमार झा

Rajesh Kumar Jha

जन्म तिथि/ DOB: 03/11/1965

पुरुष / MALE



2712 6816 7724

मेरा आधार, मेरी पहचान

भारतीय विशिष्ट पहचान प्राधिकरण  
UNIQUE IDENTIFICATION AUTHORITY OF INDIA

पता:

Address:

आरमज: कुम्भा चंद्र झा,  
हाउस नं- एच 7 - एच 8,  
निशान्त विहार, आशियाना  
ट्रेड सेंटर के पास, जमशेदपुर,  
आदित्यपुर, सराकोला-  
खरसावाँ,  
झारखण्ड - 831013

S/O: Krishna Chandra Jha,  
House No- H 7 - H 8, Nishant  
Vihar, Near Aashiana Trade  
Centre, Jamshedpur, Adityapur,  
Seraikola-Kharsawan,  
Jharkhand - 831013

1947  
1800 300 1947

help@uidai.gov.in

www.uidai.gov.in

P.O. Box No. 1947,  
Bangalore-560 001





आयकर विभाग  
INCOME TAX DEPARTMENT



भारत सरकार  
GOVT. OF INDIA

RAJESH KUMAR JHA

KRISHNA CHANDRA JHA

03/11/1965

Permanent Account Number

AAXPJ8308B

  
Signature



3001/2014





आयकर विभाग  
INCOME TAX DEPARTMENT

भारत सरकार  
GOVT. OF INDIA

ADANI VIZHINJAM PORT PRIVATE  
LIMITED

27/07/2015

AANCA7444G

27/07/2015

This is only for the purpose of submitting  
to Mining & Geology dept for LOI  
application





GOVERNMENT OF INDIA  
MINISTRY OF CORPORATE AFFAIRS

Registrar of Companies, Ahmedabad  
RoC Bhavan , Opp Rupal Park Society , Behind Ankur Bus Stop , Naranpura

Certificate of Incorporation

[Pursuant to sub-section (2) of section 7 of the Companies Act, 2013 and rule 8 of the Companies (Incorporation) Rules, 2014]

I hereby certify that ADANI VIZHINJAM PORT PRIVATE LIMITED is incorporated on this Twenty Seventh day of July Two Thousand Fifteen under the Companies Act, 2013 and that the company is limited by shares.

The CIN of the company is U61200GJ2015PTC083954.

Given under my hand at Ahmedabad this Twenty Seventh day of July Two Thousand Fifteen.

Rathod Kamleshkumar Gangjibhai  
Assistant Registrar of Companies  
Gujarat

Mailing Address as per record available in Registrar of Companies office:

ADANI VIZHINJAM PORT PRIVATE LIMITED  
Adani House, Nr. Mithakhali Six Roads, Navrangpura,  
Ahmedabad - 380009,  
Gujarat, INDIA

ATTESTED

S.K. VIJAYA SANKAR B.A., LL.B.  
ADVOCATE & NOTARY  
Reg. No: 1/2020 Typm  
33, Padma Nagar, Fort  
Tiruvandrum-695 023, Kerala-India.  
Phone: 9387772429



Sl. No 4368  
R No 5177  
At P No 171  
At 6/2/19





THE COMPANIES ACT, 2013  
COMPANY LIMITED BY SHARES  
**MEMORANDUM OF ASSOCIATION**  
OF

**ADANI VIZHINJAM PORT PRIVATE LIMITED**

- I. The Name of the Company is "ADANI VIZHINJAM PORT PRIVATE LIMITED".
- II. The Registered Office of the Company will be situated in the State of Gujarat.
- III. The objects for which the Company is established are:

**[A] THE OBJECTS TO BE PURSUED BY THE COMPANY ON ITS INCORPORATION ARE:**

1. To construct, develop, maintain, build, equip, hire or otherwise deal with ports, shipyard, jetties, harbours, docks, ship breaking, ship repair, ship building at any port in India or elsewhere and to carry on business of inland and sea transport including goods, passengers and mail, shippers, ship agents, ship underwriters, ship managers, tug owners, barge owners, loading brokers, freight brokers, freight contractors, stevedores, warehouseman, wharfingers and building, assembling, fitting, constructing, repairing, servicing and managing ships, seagoing vessels for inland waterways and to carry on in India and in any part of the world the business and to construct, develop, erect, build, buy, sell, give or take on lease or license, repair, remodel, demolish, develop, improve, own, equip, operate and maintain, ports and port approaches, breakwaters for protection of port or on the fore shore of the port or port approaches with all such convenient arches, drains, landing places, hard jetties, floating barges or pontoons, stairs, fences, roads, railways, sidings, bridges, tunnels and approaches and widening, deepening and improving any portion of the port or port approaches, light houses, light ships, beacons, pilot boats or other appliances necessary for the safe navigation of the ports and the port approaches and to construct and establish, dry docks, shipways and boat basins and workshops to carry out repairs or overwhelming of vessels, tugs, boats, machinery or appliances.



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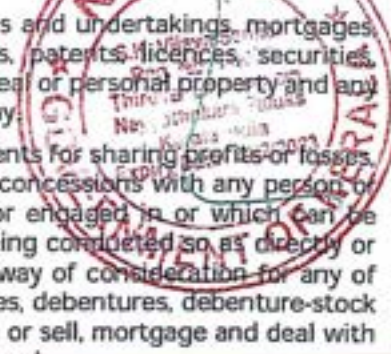
**[B] MATTERS WHICH ARE NECESSARY FOR FURTHERANCE OF THE OBJECTS SPECIFIED IN CLAUSE III [A] are:**

1. To construct, improve, maintain, develop, manage, carry out or control any wharfinders, fuel storage tanks, fire stations, electric workshops, stores, roadways and convenience which may seem to advance the business interest and contribute to or subsidise, assist or take part in the construction, improvement, maintenance, working, management, carving out, control thereof and to maintain, overhaul, repair, fit-out, refit, improve, insure, alter, sell, exchange or let out on hire or hire purchase or charter or otherwise deal with and dispose off any of the ships and container, Roll-on and Roll-off Vessels, manufacturing and processing vessels and aircrafts, helicopters, all kinds of off-shore drilling rigs, platforms, storage-floating and transport and such other facilities and other transport and conveyances or any of the engines or furnitures or equipments or stores on the ships, aircrafts or other transport and conveyances.
2. To acquire, build, construct, improve, develop, give or take in exchange or on lease, rent, occupy, allow, control, maintain, operate, run, sell dispose off carry out or later as may be necessary or convenient any leasehold or freehold lands, movable or immovable properties, including building jetty, workshops, warehouse, stores, easement or other rights, machineries, plant, work, stock-in-trade industrial colonies, conveniences together with all modern amenities and facilities such as housing, schools, hospitals, water supply, sanitation, townships and other facilities or properties which may seem calculated directly or indirectly to advance the Company's objects and interest either in consideration of a gross sum of a rent charged in cash or services.
3. To acquire and takeover any business or undertaking carried on, upon or in connection with / without any land or building which the Company may desire to acquire as aforesaid or become interested in and the whole or any of the assets and liabilities of such business or undertaking and to carry on the same or to dispose or remove or put an end thereto.
4. To acquire, purchase, start, run, erect and maintain lands, buildings, factories, foundries, workshops, mills, cold storage plants, equipments, machineries, plants and tools, industrial undertaking of any kind, warehouses, cellars, vaults, wagons, branch offices, depots and show-rooms for the business of the Company.
5. To form, promote, subsidise, organise and assist or aid in forming, promoting, subsidising, organising or aiding companies, syndicates and partnerships of all kinds for the purpose of acquiring and undertaking any properties and liabilities of this Company or for advancing directly the objects thereof which this Company may think expedient.
6. To acquire from and/or give to any person, firm or body corporate incorporated whether in India or elsewhere, technical information, know-how, processes, engineering, manufacturing and operating data, plants, lay outs and blue prints useful for the design, erection and operation of plant required for any of the business of Company and to acquire any grant or licenses and other rights and benefits in the foregoing matters and things.
7. To pay to promoters such remuneration and fees and otherwise recompensate them for their time and for the services rendered by them.
8. To invest any moneys of the Company not immediately required for the purpose of its business in such investments or securities as may be thought expedient including securities issued and/or guaranteed by Central or State Government, Corporations, Trusts and Financial Institutions.
9. To carry out in any part of the world all or any part of the Company's objects as principal, agent, factor, trustee, contractor either alone or in conjunction with any other Person, Firm, Association, Corporate Body, Municipality Province, State of Government or Colony or Dependency thereof.
10. To secure or discharge any debt or obligation of or binding on the Company in such manner as may be thought fit and in particular by mortgage, charges upon the undertaking and all or any of the assets and properties (present and future) and the uncalled capital of the Company or by the creation and issue on such terms as may be thought expedient of debentures, debenture-stock or other securities of any description or by the issue of shares credited as fully or partly paid up.



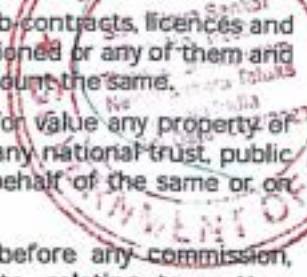
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11. To purchase or otherwise acquire, sell, dispose off, concerns and undertakings, mortgages, charges, annuities for certain period or on deferred basis, patents, licences, securities, concessions, policies, book debts and claims, any interest in real or personal property and any claims against such property or against any person or company.
  12. To amalgamate, enter into partnerships or into any arrangements for sharing profits or losses, union of interests, co-operation, joint ventures or reciprocal concessions with any person or company carrying on or engaged in or about to carry on or engaged in or which can be carried on in conjunction therewith or which is capable of being conducted so as directly or indirectly to benefit the Company and to give or accept by way of consideration for any of the acts or things aforesaid or properties acquired, any shares, debentures, debenture-stock or securities that may be agreed upon and to hold and retain or sell, mortgage and deal with any shares, debentures, debenture-stock or securities so received.
  13. To negotiate, enter into agreements and contracts or collaborate with foreign companies, firms and individuals for getting or supplying and procuring technical assistance, know-hows in the marketing, importing and exporting of any of the products.
  14. To become member of and to communicate with Chamber of Commerce and other mercantile and public bodies throughout the world and to advise on, concert, promote and support measures for the protection, advancement, growth of commerce and industry and for protection and welfare of persons engaged therein.
  15. To take or hold mortgages, liens and charges, to secure the payment of the purchase price or any unpaid balance of the purchase price of any part of the Company's property of whatsoever kind sold by the Company or any money due to the Company from the purchaser and others.
  16. To contract with lease holders, borrowers, lenders, annuitants and other for the establishment, accumulation, provisions and payment of sinking funds, renewal funds, redemption funds any other special funds and that either in consideration of lumpsum or of annual premium or otherwise and generally on such terms and conditions as may be arranged.
  17. To undertake and execute any trust or discretion the undertaking whereof may seem desirable and the distribution amongst the beneficiaries, pensioners or other persons entitled to thereof, any income, capital, annuity or other sums of moneys or other properties whether periodically or otherwise and whether in money or in specimen in furtherance of any trust discretion or other obligation or permission.
  18. To lend money to, or provide guarantee or security on behalf of any subsidiary or group company, and guarantee obligations of any subsidiary or group company, and the payment of interest on any stocks, shares and securities of any company, firm or person in any case in which such loan, guarantee or security may be considered likely directly or indirectly to further the objects of this Company or any of its subsidiaries or group companies, and generally to give any guarantee or security whatsoever which may be deemed likely, directly or indirectly, to any person to benefit the Company or its members.
  19. To train and get trained to and/or pay to training for the employees both present and future, for and in connection with the business of the Company.
  20. To hold, administer, sell, realise, invest, dispose off the moneys and properties, both real and personal and to carry on, sell, realise, dispose off and deal with any estate of which the Company is executor or administrator or in any trust of which the Company is the Trustee or which the Company is administrator or in an trust of which the Company is trustee or administrator, receiver, liquidator or agent.
  21. To make deposit, enter into recognised bonds and otherwise give security for the execution of the offices and performance of the duties of executors, administrators and trustees, receivers, liquidators and agents.
  22. To take such steps as may be necessary to give the Company the same rights and privileges in any part of the world as are possessed by local companies or partnership of a similar nature.





- 
23. To apply for tender, purchase or otherwise acquire any contracts, sub-contracts, licences and concessions for or in relation to the objects or business herein mentioned or any of them and to undertake, execute, carry out, dispose off or otherwise turn to account the same.
  24. To dedicate present or otherwise dispose off either voluntarily or for value any property of the Company deemed to be of national, public or local interest to any national trust, public body, museum, corporation or authority or any trustees for or on behalf of the same or on behalf of the public.
  25. To promote, assist or take part and appear or lead evidences before any commission, investigation, inquiry, trial or hearing, whether public or private, relating to matters connected with any trade, business or industry.
  26. To promote co-operation, hold conferences, organise and participate in meetings, maintain bureau, carry on correspondence, arrange discussions, symposiums and debates, prepare statements, reports and articles relating to any and all matters of interest to the Company.
  27. To acquire by purchase, lease, assignment or otherwise, lands, tenements, buildings, basements, rights and advantages of any kind whatsoever and to resell, mortgage and let on lease the same.
  28. To subject all or any of the works, contracts from time to time and upon such terms and conditions as may be thought expedient.
  29. To form, manage, join or subscribe to any syndicate, pool or cartel for the business of the Company.
  30. Subject to the provisions of the Companies Act, 2013 to distribute among the members, in specie, any property of the Company or any proceeds of sale or disposal of any property in the event of winding up.
  31. To enter into any arrangement with any Government or authority, supreme, municipal, local or otherwise or any person or company that may seem conducive to the Company's objects or any of them and to obtain from any such Government, authority, person or company any rights, privileges, charters, licences and concession which the Company may think fit and desirable to obtain and to carry out, exercise and comply therewith.
  32. To apply for, promote and obtain any act, charter, order, regulation, privilege, concession, licence or authorization of any Government, State or municipality or any authority or any corporation or any Public Body which may be empowered to grant for enabling the Company to carry on its objects into effect or for extending any of powers of the Company or for affecting any modification of the Company's constitution or for any other purpose which may seem expedient and to oppose any bills, proceedings, applications which may seem calculated directly or indirectly to prejudice the Company's interest and to appropriate any of the Company's shares, debentures, debenture-stock or other securities and assets to defray the necessary costs, charges and expenses thereof.
  33. To apply for, purchase or otherwise acquire, use, protect and renew in any part of the world any patents, patent rights, brevets, d'invention, trademarks, designs, licences, copyrights, concessions and the like conferring any exclusive or non-exclusive or limited right to their use or any secret or other information as to any invention which may seem capable of being used for any of the purposes of the Company or acquisition of which may seem calculated directly or indirectly to benefit the Company and to use, exercise develop or grant licences in respect of or otherwise turn to account the property, rights or information so acquired and to expend money in experimenting upon, testing or improving any such patents, inventions or rights.
  34. To establish, provide, maintain, conduct or otherwise subsidise, assist research laboratories and experimental workshops for scientific and technical researches and experiments and to undertake and carry on the scientific and technical research, experiments and tests of all kinds and to promote studies and research, both scientific and technical, investigations and invention by providing, subsidising, endowing or assisting laboratories, workshops, libraries, the remuneration of scientific or technical professors or teachers and by providing for the award of scholarships, prizes and grant to students or otherwise and generally to encourage, promote and reward studies, researches, investigations, experiments, tests and inventions of

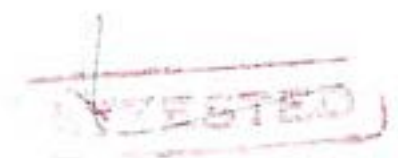


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any kind that may be considered likely to assist any of the businesses which the Company is authorised to carry on.

35. To make donations to such persons or institutions either of cash or any other assets as may be thought directly or indirectly conducive to any of Company's objects or otherwise and in particular to remunerate any person or corporation introducing business to this Company and also to subscribe, contribute or otherwise assist or guarantee money for charitable, scientific, religious or benevolent, national, public, cultural, educational or other institutions or objects or any exhibitions for any public, general or other objects.
36. To establish aid, support or / and in the establishment and support of association, institutions, funds, trusts, private or public, for the benefit of its employees or ex-employees, Directors, ex-Directors of the Company or its connections in business and for persons having dealings with the company or the dependents, relatives or connections of such persons and in particular friendly or other benefit societies and grant pensions, allowances, gratuities and bonuses either by way of annual payment or lumpsum and to make payment towards insurance and to form and contribute to provident and other benefit funds for such persons and to provided for the welfare of Directors, ex-Directors and employees and ex-employees of the company and the wives, widows and families or the dependents or connections of such persons by building or contributing to the building of houses, dwellings or chawls or by grant of moneys, pensions, allowances, bonuses or other payments and to provide or subscribe or contribute towards places of instructions and recreations, hospitals, dispensaries, holiday-homes, medical and other attendance and other assistance as the company shall think fit.
37. To refer or agree to refer any claims, demands, disputes or any other questions by or against the Company or in which the Company is interested or concerned and whether between the Company and the member or members or his or their representatives or between the Company and third parties to arbitration in India or any places outside India and to observe and perform awards made thereon and to do all acts, deeds, matters and things to carry out or enforce the awards in accordance with the provisions of India Arbitration Act.
38. To pay all preliminary expenses of any company promoted by the Company or any company in which the Company is or may contemplate being interested and preliminary expenses may include all or any part of the costs and expenses of owners of any business or property acquired by the Company.
39. To enter into joint sector arrangements with any person, body or corporate whether in India or abroad for the business of the Company.
40. To pay, out of the funds of the Company, all expenses which the Company may lawfully pay with respect to the promotion, formation and registration of the Company or the issue of capital including brokerage and commission for obtaining applications for taking, placing or underwriting of shares, debentures, debenture-stocks or other securities of the Company.
41. To pay for any rights or properties acquired by the Company and to pay or to remunerate any person or company for services rendered or to be rendered in placing or assisting to place or guaranteeing the placing of shares in Company's capital or any debentures, debenture-stocks or other securities of the Company or in or about the formation or promotion of the company or acquisition of properties by the Company for the purpose of the Company whether by cash payment or by the allotment of shares, debentures, debenture-stocks or other securities of the Company credited as paid-up in full or in part or otherwise as the case may be.
42. To open current or fixed accounts with any bank, bankers, shroff or merchants and to pay into and draw money from such accounts and to draw, make endorse, discount and execute all types of negotiable instruments.
43. To insure the whole or any part of the property and personnels of the Company either full or partially, to protect and indemnify any part or portion thereof either on mutual, principal or otherwise.
44. To employ experts to investigate and examine into conditions value, character and circumstances of any business, concerns and undertakings having similar objects and generally of any assets properties or rights.
45. To carry on any branch of a business whether in India or outside India which this Company is authorised to carry on by means or through the agency of any subsidiary company or





- companies and to enter into any arrangement with such subsidiary company for taking the profits and bearing the losses of any business or branch so carried on or for finance any such subsidiary, guaranteeing its liabilities or to make any other arrangement which seem desirable with reference to any business or branch so carried on including the power and provision at any time either temporarily or permanently to close any such branch or business.
46. To take part in the management, supervision, conduct and control of the business or operations of any company or undertaking having similar objects and for that purpose to appoint and remunerate the Directors, trustees, accountants or other experts, personnel or agent for any of such operations or purposes.
47. To purchase, take on lease or exchange, hire or otherwise, acquire and dispose off any immovable or movable properties, real or personal of all kinds and of any rights or privileges which the Company may think necessary or convenient for the purpose of its business and either to retain the properties so acquired for the purpose of the Company's business and turn the same to account as may seem expedient.
48. To accept as consideration for or in lien of the whole or any part of the Company's properties either land or cash or Government security or securities guaranteed by Government or shares in joint stock companies or partly the one and partly the other and such other properties or securities as may be determined by the Company and to take back or acquire the property so disposed off by repurchasing or taking lease the same at such price and on such terms and conditions as may be agreed upon by the Company.
49. To let on lease, or license, or on hire purchase or to lend or any properties belonging to the Company and to finance for the purpose of any article or articles whether made by the Company or not by way of loans or by hire-purchase system.
50. To sell, purchase, mortgage, grants, easements and other rights over and in any other manner deal with the undertakings, properties, assets, both movable and immovable, rights, effects of the Company or any part thereof whether real or personal for such consideration as the Company may think fit and in particular for shares, debentures, debenture-stock, securities of any other company whether or not having objects altogether or in part similar to those of the Company and to make advances upon the security of land and/or buildings and/or other properties movable and/or any interest therein.
51. To vest any movable or immovable properties, rights or interest acquired by or belonging to the Company in any person or company on behalf of or for the benefit of the Company and with or without any declared trust in favour of the Company.
52. To undertake and execute any contracts for works for the business of the Company.
53. To create any depreciation fund, reserve fund, sinking fund, insurance fund or any other special fund whether for depreciation or for repairing, improving, extending or maintaining any of the properties of the Company or for redemption of debentures or redeemable preference shares or any other purpose whatsoever conducive to the interest of the Company.
54. To accept, donations, gifts with such conditions, restrictions, obligations, stipulations and liabilities provided that such receipts are not derogative to any objects of the Company.
55. To alienate, transfer, gift, donate, settle any property of the Company with or without consideration to any person including any trust whether public or private, discretionary or specific either by revocable or irrevocable transfer or settlement and upon such terms and conditions as the Company may deem fit.
56. To explore, examine, investigation, test, make, experiment, obtain report, opinion of experts, certificates, analysis, surveys, plans, descriptions and information in relation to any property or right which the Company may acquire or become interested in or may propose to acquire or with the view of discovering properties or rights which company may acquire or become interested in and to engage, employ, pay fees to retain the services of and send to any part or the world agents, explorers, technical experts, engineers, lawyers and counsels.
57. To adopt such means of making known the business/activities of the Company as may seem expedient and in particular by advertising in the press, by circulars, by purchase and exhibition of works of art or interest, by publications of books and periodicals and by granting prizes, rewards and donations.



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58. To undertake, carry out, promote or sponsor, contribute or assist in any activity project for rural development including any programme for promoting the social and economic welfare of or the upliftment of the people in rural areas irrespective whether the Company has any business dealings in such areas or not and to incur any expenditure or use any of the assets and facilities of the Company on any programme or project or activity or rural development and to assist execution and promotion thereof either directly or in association with any other company or person or organisation or through an independent agency or in any manner as the Company may deem fit in order to implement any of the projects or programmes or activities of rural development, to transfer without consideration or at such fair or concessional value and divert the ownership of the properties of the Company to or in favour of any public or local body, authority, Central or State Government or any public institution or trust or fund.
59. To raise or borrow money from time to time for any of the purposes and objects of the Company by receiving advances of any sum or sums with or without security upon such terms as the Directors may deem expedient and in particular by taking deposits from or open current accounts with any individual or firms including the agents of the Company, whether with or without giving the security or by mortgaging or selling or receiving advances on the sale of any lands, buildings, machineries, goods or other properties of the Company or by the issue of the debentures or debenture-stocks, perpetual or otherwise, charged upon all or any of Company's properties (both present and future) including its uncalled capital or by such other means as Directors may in their absolute discretion deem expedient.
60. Subject to the Companies Act, 2013 and rules made thereunder and directions issued by Reserve Bank of India, to borrow, raise, or secure the payment of money to or receive money and deposit as time deposit or otherwise at interest for any purpose of the Company and at such time or times and in such manner as may be thought fit and in particular by the creation and issue of the debentures or debenture-stock, bonds, shares credited as fully or partly paid up, obligations, mortgages, charges and securities of all kinds, either perpetual or otherwise either redeemable annuities in as and by way of securities for any such money so borrowed, raised or received or of any such debentures, debenture-stock, bonds, obligations, mortgage, charges and securities of all kinds, either so issued to mortgage, pledge or charge the undertaking or whole or any part of the properties, rights, assets or revenue and profits of the Company, present and future, including its uncalled capital or otherwise howsoever by trust, special assignment or otherwise or to transfer or convey the same absolutely or in trust and give the lenders powers, as may seem expedient and to purchase, redeem or pay off any such securities. The Company shall not carry on business of Banking as defined by the Banking Regulation Act, 1949.
61. To promote or join in the promotion of any company or companies including subsidiary companies (wholly owned or partly owned) for the purpose of acquiring all or any of the properties, rights and liabilities of the Company or for any other purpose which may seem directly or indirectly calculated to benefit the Company and to underwrite shares and securities therein.
62. To indemnify, members, officers, Directors, agents and employees of the Company against proceedings, cost, damages, claims and demands in respect of anything done or ordered to be done by them and in the interest of the Company of any loss, damage or misfortune whatsoever which shall happen in the execution of the duties of their offices or in relation thereto.
63. Subject to the provisions of the Act, the Company shall have power to borrow any sum or sums of money for the purpose of the Company on such other terms and conditions and from such person or persons, firms, bank or any financial, industrial, institutions or any Government or Semi-Government Corporation as the Company may deem fit.
64. To provide for the welfare of Directors, employees, or ex-employees of the Company and the wives, widows and families of the dependents or connections of such persons by building or contributing for the building, houses, dwelling or quarters, or by grants of money, pensions, gratuities, allowance, bonus, profit sharing bonus or benefits or other payments or by creating and from time to time subscribing to contributing to provident and other associations, institutions, funds, profit sharing or other scheme or trust and hospitals and dispensaries, medical and other attendants, and other assistance as the Company shall think fit.

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65. To undertake and/or direct all types of constructions and the maintenance of or/and acquire by purchase, lease, exchange, hire or otherwise, lands, properties, buildings and estates of any tenure or any interest therein, to sell, lease let, mortgage or otherwise dispose off the same and to purchase, construct and sell or for any person free hold or lease hold lands, house properties, buildings, offices, factories, workshops, godowns farm houses, farm and any kind of landed properties or any share/interest therein and to carry on the business of land and estate agents on commission or otherwise without commission.
66. To act as promoters and developers of lands, commercial buildings, offices or other buildings in furtherance of the objects and for the purpose to purchase, take on lease acquire, hold, develop, prepare building sites, construct, reconstruct, repair maintain, pull down alter, improve, decrease, furnish, give on hire, purchase or on installments or deal in any lands, commercial buildings, offices, works and sanitary conveniences of all kinds and to lay out roads, drainage pipes, water pipes and electric installations and to set apart lands for pleasure, gardens and recreation grounds or improve the land or any part thereof.
67. To establish, maintain and operate shipping, air transport and road transport services and all ancillary services and for these purposes as or an independent undertaking to purchase, take in exchange, charter, hire, build construct or otherwise acquire and to own, work, manage and trade with steam, sailing, motor and other ships, trawlers, drifters, tugs and vessels, aircraft and motor and other vehicles with all necessary and convenient equipments, engines, tackle, gears, furniture and stores and to maintain, repair, fit out, refit, improve, insure, alter, sell, exchange or let out on hire or hire-purchase or charter or otherwise deal with and dispose off any of the ships, vessels, aircrafts and vehicles or any of the engines, tackles, gears, furniture, equipments and stores.
68. To establish the business of warehousing in all its aspects in India and elsewhere.
69. To purchase or acquire container stacking cranes, Mobile Container Cranes, Van Movers, Trailers, Heavy Forklift Trucks, barges, Ships, Wooden Crafts and Pallets, Portainers, Transtainers, Straddle carries and such other handling equipment and retain them as service in Docks, Container Freight and on roads.
70. To purchase, take on exchange or on lease or on rent, occupy, or otherwise acquire lands, warehouse, godowns and to erect, construct, build and establish Cold Storage Plants, Warehouses, godowns, Container Terminals and container freight stations or to enter into contracts with Government Bodies, to construct such container freight stations or terminals as required by them.
71. To manufacture and repair containers, to purchase or acquire on lease or otherwise containers and give them on lease or on rent.
72. To make available the warehousing facilities including cold storage facilities for stuffing and destuffing the cargo into the containers.
73. To erect or build container freight station or container terminals semi or fully automated.
74. To study, advice planning, management and administration of terminals, port operating companies, handling of general and RO/RO-LO/LO cargo, handling of bulk goods, warehousing, handling of containers, trucking of containers, collecting and disposal of oily residues, recycling of special wastes.
75. To offer facilities and services for RO/RO handling such as despatch of all sizes of vessels, trailer handling, cargo lashing.
76. To offer facilities and services for port lighterage and barge transport for conventional and bulk cargo, container transport, heavy lifts and specialised transports, push boats and tug services, barge rental, storage in lighters.
77. To offer facilities and services for inland waterway transports, such as push boat, seabee and lash transports, bulk goods transports, forwarding storage.
78. To offer facilities and services for rank transportation in port and inland waterway push boat transports of mineral and vegetable oils, chemicals and other liquids, bundering, oily residues, ballast and tank wash water, transit storage of all types of oil.



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- IV. The liability of the members is limited and this liability is limited to the amount unpaid, if any, on the shares held by them.
- V. The Authorised Share Capital of the Company is Rs. 5,00,000/- [Rupees Five Lac Only] divided into 50,000 [Fifty Thousand] Equity Shares of Rs.10/- [Rupees Ten Only] each.



*[Handwritten signature]*



We, the several persons, whose name and addresses are subscribed are desirous of being formed into a Company in pursuance of this Memorandum of Association and we respectively agree to take the respective number of shares in the capital of the Company set opposite our respective names:

Photo	Sr. No.	Name, Addresses, Descriptions, Occupation and Signature of the subscribers	Number of Equity Shares taken by each subscriber	Name, Address, Description and Occupation of the Common Witness
	1	For and on behalf of M/s Adani Ports and Special Economic Zone Limited (CIN L63090GJ1998PLC034182) having its registered office at Adani House, Nr. Mithakhali Six Roads, Navrangpura, Ahmedabad - 380009 through its authorised person vide Board Resolution passed on 1st May, 2015. Dipti Shah W/o Yogesh Shah residing at 601, Shalraj Tower, Nehru Park, Vastrapur, Ahmedabad-380015 Occupation: Service Sd/-	49,940 (Forty Nine Thousand Nine Hundred Forty only)	Common witness for all 7 subscribers I, witness to subscribers who have subscribed and signed in my presence. Further, I have verified his/her/their identify details for their identification and satisfied myself of their identification particulars as filled in  Hardik Sanghvi S/o. Shri Harshadkumar Sanghvi residing at 15, Parshwanathnagar Society, Nr. Police Chowki, Naranpura Char Rasta, Ahmedabad-380013, Occupation: Service Company Secretary FCS No. 7247 Sd/-
	2	Malay Mahadevia [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Dr. Ramesh Mahadevia residing at 12-B, Gyankunj Society, Opp. St. Xavier's College, Navrangpura, Ahmedabad - 380009, Occupation: Service Sd/-	10 (Ten Only)	
	3	Ravi Bhamidipaty [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Srirama Murthy Bhamidipaty residing at 'Amrut' 26, Amrashri Bunglows, Opp. Chimanbhai Patel Institute, Bh. Shapath 4, Prahaladnagar, Ahmedabad-380058 Occupation: Service Sd/-	10 (Ten Only)	
	4	Azad Kumar Somani [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Jwala Prasad Somani residing at 84, Star Apartments, Karnavatipagarkpa Bazar, Ahmedabad-380001. Occupation: Service Sd/-	10 (Ten Only)	
	5	Manoj Kumar Chanduka [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Biswanath Lal Chanduka residing at B-401, Panchamrut Apartments, Opp. Nehru Foundation, Bodakdev, Ahmedabad-380054. Occupation: Service Sd/-	10 (Ten Only)	
	6	Anish Ashokkumar Shah [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Ashokkumar Amrutlal Shah residing at B-12, Keshav Apartments, Near Memnagar Talavdi, Memnagar, Ahmedabad-380052. Occupation: Service Sd/-	10 (Ten Only)	
	7	Kamlesh Bhagia [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Prabhudas Bhagia residing at A-203, Samarth Residency, Nr. P. R. Patel School, D'cabin, Kaligam, Sabarmati, Ahmedabad-380019. Occupation: Service Sd/-	10 (Ten Only)	
Total:			50,000 (Fifty Thousand)	

Place: Ahmedabad

Dated: 22.07.2015





THE COMPANIES ACT, 2013  
[COMPANY LIMITED BY SHARES]

ARTICLES OF ASSOCIATION  
OF  
ADANI VIZHINJAM PORT PRIVATE LIMITED

PRELIMINARY AND INTERPRETATION

1. [1] The Regulations contained in Table "F" in Schedule I of the Companies Act, 2013 shall not apply to the Company, except in so far as the same are repeated, contained or expressly made applicable in these Articles or by the said Act.

- [2] (a) The marginal notes used in these Articles shall not affect the construction thereof.

- (b) In the interpretation of these Articles, the following expressions shall have the following meanings, unless repugnant to the subject or context

"Act" means the Companies Act, 2013 or any statutory modification or re-enactment thereof for the time being in force and the Companies Act 1956, so far as may be applicable.

"Articles" means these articles of association of the Company or as altered from time to time.

"Board of Directors" or "Board" means collective body of Directors of the Company.

"Company" means "ADANI VIZHINJAM PORT PRIVATE LIMITED".

"Depository" means and includes a Company as defined in the Depositories Act 1996.

"Rules" means the applicable rule for the time being in force as prescribed in relevant sections of the Act.

"Seal" means Common Seal of the Company.

"Secretarial Standards" means standards provided by the Institute of Companies Secretaries of India.

"Securities" means the securities as defined in clause (h) of Section 2 of the Securities Contracts (Regulation) Act 1956.





- (c) Words importing the masculine gender also include, where the context requires or admits, the feminine and neuter gender.
- (d) Words importing the singular number also include, where the context requires or admits, the plural number and vice-versa.
- (e) Unless the context otherwise requires, words or expression contained in these Articles shall bear the same meaning as in the Act or the Rules, as the case may be.



#### PRIVATE COMPANY

2. The Company is a Private Company Limited by Shares within the meaning of Section 2(68) of the Act, and accordingly.
- (a) Restricts the right to transfer its shares, in the manner and to the extent as hereinafter provided;
- (b) Limits the number of its members to 200 [Two Hundred] but not including :
- (i) Persons who are in the employment of the Company.
- (ii) Persons who, having been formerly in the employment of the Company, were members of the Company while in that employment and have continued to be the members after the employment ceased; provided that where two or more persons hold one or more shares in the Company jointly, they shall, for the purpose of this Article, be treated as a single member.
- (c) Prohibits any invitation to the public to subscribe for any securities of the Company.
- (d) The Company is having a minimum paid up share capital of Rs. 1,00,000/- (Rupees One Lac only) or such higher amount of capital as may be prescribed.

#### SHARE CAPITAL AND VARIATION OF RIGHTS

3. Subject to the provisions of the Act and these Articles, the shares in the capital of the company shall be under the control of the Directors who may issue, allot or otherwise dispose of the same or any of them to such persons, in such proportion and on such terms and conditions and either at par or at a premium or at consideration otherwise than in cash and at such time as they may from time to time think fit. The Company may issue equity with voting rights and/or with differential rights as to dividend, voting or otherwise in accordance with the Rules and preference shares.
4. (i) Every person whose name is entered as a member in the register of members shall be entitled to receive within two months after allotment or within one month after the application for the registration of transfer or transmission or within such other period as the conditions of issue provide,-



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- (a) one certificate for all his shares without payment of any charges; or  
(b) several certificates, each for one or more of his shares, upon payment of such sum as may be prescribed for each certificate after the first.
- (ii) Every certificate shall be under the seal and shall specify the shares to which it relates and the amount paid-up thereon.
- (iii) In respect of any share or shares held jointly by several persons, the company shall not be bound to issue more than one certificate, and delivery of a certificate for a share to one of several joint holders shall be sufficient delivery to all such holders.
5. Every holder of or subscriber to Securities of the Company shall have the option to receive security certificates or to hold the Securities with a depository. Such a person who is the beneficial owner of the Securities can at any time opt out of a Depository, if permitted, by the law, in respect of any Securities in the manner provided by the Depositories Act, 1996 and the Company shall, in the manner and within the time prescribed, issue to the beneficial owner the required Certificates for the Securities.
6. (i) If any share certificate be worn out, defaced, mutilated or torn or if there be no further space on the back for endorsement of transfer, then upon production and surrender thereof to the company, a new certificate may be issued in lieu thereof, and if any certificate is lost or destroyed then upon proof thereof to the satisfaction of the company and on execution of indemnity or such other documents as may be prescribed by the Board, a new certificate in lieu thereof shall be given. Every certificate under this Article shall be issued on payment of fees for each certificate as may be fixed by the Board.
- (ii) The provisions of the foregoing article relating to issue of certificates shall mutatis mutandis apply to debentures or other securities of the company.
7. Except as required by law, no person shall be recognised by the company as holding any share upon any trust, and the company shall not be bound by, or be compelled in any way to recognise (even when having notice thereof) any equitable, contingent, future or partial interest in any share, or any interest in any fractional part of a share, or (except only as by these regulations or by law otherwise provided) any other rights in respect of any share except an absolute right to the entirety thereof in the registered holder.
8. (i) The company may exercise the powers of paying commissions conferred under the Act, provided that the rate per cent or the amount of the commission paid or agreed to be paid shall be disclosed in the manner required under the Act and rules made thereunder.
- (ii) The rate or amount of the commission shall not exceed the rate or amount prescribed in rules made under the Act.
- (iii) The commission may be satisfied by the payment of cash or the allotment of fully or partly paid shares or partly in the one way and partly in the other.



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9. (i) If at any time the share capital is divided into different classes of shares, the rights attached to any class (unless otherwise provided by the terms of issue of the shares of that class) may, subject to the provisions of the Act, and whether or not the company is being wound up, be varied with the consent in writing of the holders of three-fourths of the issued shares of that class, or with the sanction of a special resolution passed at a separate meeting of the holders of the shares of that class.
- (ii) To every such separate meeting, the provisions of these regulations relating to general meetings shall mutatis mutandis apply.
10. The rights conferred upon the holders of the shares of any class issued with preferred or other rights shall not, unless otherwise expressly provided by the terms of issue of the shares of that class, be deemed to be varied by the creation or issue of further shares ranking *pari passu* therewith.
11. Subject to the provisions of the Act, any preference shares may be issued on the terms that they are to be redeemed or converted into equity shares on such terms and in such manner as the company before the issue of the shares may, determine.
12. The Board or the Company as the case may be, may, by way of right issue or preferential offer or private placement or any other manner, subject to and in accordance with Act and the Rules, issue further securities to;
- (a) persons who, at the date of the offer, are holders of equity shares of the Company. Such offer shall be deemed to include a right exercisable by the person concerned to renounce the shares offered to him or any of them in favor of other person or;
  - (b) employees under the employees' stock option or;
  - (c) any person whether or not those persons include the persons referred to in clause (a) or clause (b) above;

#### LIEN

13. (i) The company shall have a first and paramount lien-
- (a) on every share (not being a fully paid share), for all monies (whether presently payable or not) called, or payable at a fixed time, in respect of that share; and
  - (b) on all shares (not being fully paid shares) standing registered in the name of a single person, for all monies presently payable by him or his estate to the company:
- Provided that the Board of directors may at any time declare any share to be wholly or in part exempt from the provisions of this clause.
- (ii) The company's lien, if any, on a share shall extend to all dividends payable and bonuses declared from time to time in respect of such shares.



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14. The company may sell, in such manner as the Board thinks fit, any shares on which the company has a lien:

Provided that no sale shall be made-

- (a) unless a sum in respect of which the lien exists is presently payable; or
  - (b) until the expiration of fourteen days after a notice in writing stating and demanding payment of such part of the amount in respect of which the lien exists as is presently payable, has been given to the registered holder for the time being of the share or the person entitled thereto by reason of his death or insolvency.
15. (i) To give effect to any such sale, the Board may authorise some person to transfer the shares sold to the purchaser thereof.
- (ii) The purchaser shall be registered as the holder of the shares comprised in any such transfer.
- (iii) The purchaser shall not be bound to see to the application of the purchase money, nor shall his title to the shares be affected by any irregularity or invalidity in the proceedings in reference to the sale.
16. (i) The proceeds of the sale shall be received by the company and applied in payment of such part of the amount in respect of which the lien exists as is presently payable.
- (ii) The residue, if any, shall, subject to a like lien for sums not presently payable as existed upon the shares before the sale, be paid to the person entitled to the shares at the date of the sale.

The provisions of these Articles relating to Lien shall mutatis mutandis apply to any other Securities including debentures of the Company.

#### CALLS ON SHARES

17. (i) The Board may, from time to time, make calls upon the members in respect of any monies unpaid on their shares (whether on account of the nominal value of the shares or by way of premium) and not by the conditions of allotment thereof made payable at fixed times:

Provided that no call shall exceed one fourth of the nominal value of the share or be payable at less than one month from the date fixed for the payment of the last preceding call.

- (ii) Each member shall, subject to receiving at least fourteen days' notice specifying the time or times and place of payment, pay to the company, at the time or times and place so specified, the amount called on his shares.
  - (iii) A call may be revoked or postponed at the discretion of the Board.
18. A call shall be deemed to have been made at the time when the resolution of the Board authorising the call was passed and may be required to be paid by installments.



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19. The joint holders of a share shall be jointly and severally liable to pay all calls in respect thereof.
20. (i) If a sum called in respect of a share is not paid before or on the day appointed for payment thereof, the person from whom the sum is due shall pay interest thereon from the day appointed for payment thereof to the time of actual payment at ten per cent per annum or at such lower rate, if any, as the Board may determine.
- (ii) The Board shall be at liberty to waive payment of any such interest wholly or in part.
21. (i) Any sum which by the terms of issue of a share becomes payable on allotment or at any fixed date, whether on account of the nominal value of the share or by way of premium, shall, for the purposes of these regulations, be deemed to be a call duly made and payable on the date on which by the terms of issue such sum becomes payable.
- (ii) In case of non-payment of such sum, all the relevant provisions of these regulations as to payment of interest and expenses, forfeiture or otherwise shall apply as if such sum had become payable by virtue of a call duly made and notified.
22. The Board-
- (a) may, if it thinks fit, receive from any member willing to advance the same, all or any part of the monies uncalled and unpaid upon any shares held by him; and
- (b) upon all or any of the monies so advanced, may (until the same would, but for such advance, become presently payable) pay interest at such rate not exceeding, unless the company in general meeting shall otherwise direct, twelve per cent per annum, as may be agreed upon between the Board and the member paying the sum in advance.

#### TRANSFER OF SHARES

23. (i) The instrument of transfer of any share in the company shall be executed by or on behalf of both the transferor and transferee.
- (ii) The transferor shall be deemed to remain a holder of the share until the name of the transferee is entered in the register of members in respect thereof.
24. The Board may, subject to the right of appeal conferred by the Act decline to register-
- (a) the transfer of a share, not being a fully paid share, to a person of whom they do not approve; or
- (b) any transfer of shares on which the company has a lien.



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25. The Board may decline to recognise any instrument of transfer unless—
- (a) the instrument of transfer is in the form as prescribed in rules made under the Act;
  - (b) the instrument of transfer is accompanied by the certificate of the shares to which it relates, and such other evidence as the Board may reasonably require to show the right of the transferor to make the transfer; and

26. (c) the instrument of transfer is in respect of only one class of shares. On giving not less than seven days' previous notice in accordance with the Act and rules made there under, the registration of transfers may be suspended at such times and for such periods as the Board may from time to time determine:

Provided that such registration shall not be suspended for more than thirty days at any one time or for more than forty-five days in the aggregate in any year.

27. The provision of these Articles relating to transfer of shares shall mutatis mutandis apply to any other securities including debentures of the Company.

#### TRANSMISSION OF SHARES

28. (i) On the death of a member, the survivor or survivors where the member was a joint holder, and his nominee or nominees or legal representatives where he was a sole holder, shall be the only persons recognised by the company as having any title to his interest in the shares.
- (ii) Nothing in clause (i) shall release the estate of a deceased joint holder from any liability in respect of any share which had been jointly held by him with other persons.
29. (i) Any person becoming entitled to a share in consequence of the death or insolvency of a member may, upon such evidence being produced as may from time to time properly be required by the Board and subject as hereinafter provided, elect, either—
- (a) to be registered himself as holder of the share; or
  - (b) to make such transfer of the share as the deceased or insolvent member could have made.
- (ii) The Board shall, in either case, have the same right to decline or suspend registration as it would have had, if the deceased or insolvent member had transferred the share before his death or insolvency.
30. (i) If the person so becoming entitled shall elect to be registered as holder of the share himself, he shall deliver or send to the company a notice in writing signed by him stating that he so elects.





- (ii) If the person aforesaid shall elect to transfer the share, he shall testify his election by executing a transfer of the share.
- (iii) All the limitations, restrictions and provisions of these regulations relating to the right to transfer and the registration of transfers of shares shall be applicable to any such notice or transfer as aforesaid as if the death or insolvency of the member had not occurred and the notice or transfer were a transfer signed by that member.



31. A person becoming entitled to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share, except that he shall not, before being registered as a member in respect of the share, be entitled in respect of it to exercise any right conferred by membership in relation to meetings of the company:

Provided that the Board may, at any time, give notice requiring any such person to elect either to be registered himself or to transfer the share, and if the notice is not complied with within ninety days, the Board may thereafter withhold payment of all dividends, bonuses or other monies payable in respect of the share, until the requirements of the notice have been complied with.

32. The Company shall incur no liability or responsibility whatsoever in consequence of its registering or giving effect to any transfer of shares made or purporting to be made by any apparent legal owner thereof (as shown or appearing in the Register of Members) to the prejudice of persons having or claiming any equitable right, title or interest to or in the said shares, notwithstanding that the company may have had notice of such equitable right, title or interest or notice prohibiting registration of such transfer and may have entered such notice referred thereto in any book of the company and the company shall not be bound or required to regard or attend or give effect to any notice which may be given to it of any equitable right, title or interest or be under any liability whatsoever for refusing or neglecting so to do, though it may have been entered or referred to in some book of the company, but the company shall nevertheless be at liberty to regard and attend to any such notice and give effect thereto if the Directors shall so think fit.

#### FOREFEITURE OF SHARES

33. If a member fails to pay any call, or installment of a call, on the day appointed for payment thereof, the Board may, at any time thereafter during such time as any part of the call or installment remains unpaid, serve a notice on him requiring payment of so much of the call or installment as is unpaid, together with any interest which may have accrued.
34. The notice aforesaid shall-
- (a) name a further day (not being earlier than the expiry of fourteen days from the date of service of the notice) on or before which the payment required by the notice is to be made; and







- (b) state that, in the event of non-payment on or before the day so named, the shares in respect of which the call was made shall be liable to be forfeited.
35. If the requirements of any such notice as aforesaid are not complied with, any share in respect of which the notice has been given may, at any time thereafter, before the payment required by the notice has been made, be forfeited by a resolution of the Board to that effect.
36. (i) A forfeited share may be sold or otherwise disposed of on such terms and in such manner as the Board thinks fit.
- (ii) At any time before a sale or disposal as aforesaid, the Board may cancel the forfeiture on such terms as it thinks fit.
37. (i) A person whose shares have been forfeited shall cease to be a member in respect of the forfeited shares, but shall, notwithstanding the forfeiture, remain liable to pay to the company all monies which, at the date of forfeiture, were presently payable by him to the company in respect of the shares.
- (ii) The liability of such person shall cease if and when the company shall have received payment in full of all such monies in respect of the shares.
38. (i) A duly verified declaration in writing that the declarant is a director, the manager or the secretary, of the company, and that a share in the company has been duly forfeited on a date stated in the declaration, shall be conclusive evidence of the facts therein stated as against all persons claiming to be entitled to the share;
- (ii) The company may receive the consideration, if any, given for the share on any sale or disposal thereof and may execute a transfer of the share in favour of the person to whom the share is sold or disposed of;
- (iii) The transferee shall thereupon be registered as the holder of the share; and
- (iv) The transferee shall not be bound to see to the application of the purchase money, if any, nor shall his title to the share be affected by any irregularity or invalidity in the proceedings in reference to the forfeiture, sale or disposal of the share.
39. The provisions of these regulations as to forfeiture shall apply in the case of non payment of any sum which, by the terms of issue of a share, becomes payable at a fixed time, whether on account of the nominal value of the share or by way of premium, as if the same had been payable by virtue of a call duly made and notified.

#### ALTERATION OF CAPITAL

40. Subject to provisions of the Act the company may, from time to time, increase the share capital by such sum, to be divided into shares of such amount, as may be specified in the resolution.



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41. Subject to the provisions of the Act, the company may, from time to time,-
- (a) consolidate and divide all or any of its share capital into shares of larger amount than its existing shares;
  - (b) convert all or any of its fully paid-up shares into stock, and reconvert that stock into fully paid-up shares of any denomination;
  - (c) sub-divide its existing shares or any of them into shares of smaller amount than is fixed by the memorandum;
  - (d) cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person.

42. Where shares are converted into stock,-

- (a) the holders of stock may transfer the same or any part thereof in the same manner as, and subject to the same regulations under which, the shares from which the stock arose might before the conversion have been transferred, or as near thereto as circumstances admit;

Provided that the Board may, from time to time, fix the minimum amount of stock transferable, so, however, that such minimum shall not exceed the nominal amount of the shares from which the stock arose.

- (b) the holders of stock shall, according to the amount of stock held by them, have the same rights, privileges and advantages as regards dividends, voting at meetings of the company, and other matters, as if they held the shares from which the stock arose; but no such privilege or advantage (except participation in the dividends and profits of the company and in the assets on winding up) shall be conferred by an amount of stock which would not, if existing in shares, have conferred that privilege or advantage.
- (c) such of the regulations of the company as are applicable to paid-up shares shall apply to stock and the words "share" and "shareholder" in those regulations shall include "stock" and "stock-holder" respectively.

43. The company may, subject to provisions of the Act, reduce in any manner and with, and subject to, any incident authorised and consent required by law,-

- (a) its share capital;
- (b) any capital redemption reserve account; or
- (c) any share premium account.
- (d) any other reserve in the nature of share capital

#### CAPITALISATION OF PROFITS

44. (i) The company in general meeting may, upon the recommendation of the Board, resolve-







- (a) that it is desirable to capitalise any part of the amount for the time being standing to the credit of any of the company's reserve accounts, or to the credit of the profit and loss account, or otherwise available for distribution; and
  - (b) that such sum be accordingly set free for distribution in the manner specified in clause (ii) amongst the members who would have been entitled thereto, if distributed by way of dividend and in the same proportions.
- (ii) The sum aforesaid shall not be paid in cash but shall be applied, subject to the provision contained in clause (iii), either in or towards-
- (a) paying up any amounts for the time being unpaid on any shares held by such members respectively;
  - (b) paying up in full, unissued shares of the company to be allotted and distributed, credited as fully paid-up, to and amongst such members in the proportions aforesaid;
  - (c) partly in the way specified in sub-clause (a) and partly in that specified in sub-clause (b);
  - (d) A securities premium account and a capital redemption reserve account may, for the purposes of this regulation, be applied in the paying up of unissued shares to be issued to members of the company as fully paid bonus shares;
  - (e) The Board shall give effect to the resolution passed by the company in pursuance of this regulation.
45. (i) Whenever such a resolution as aforesaid shall have been passed, the Board shall-
- (a) make all appropriations and applications of the undivided profits resolved to be capitalised thereby, and all allotments and issues of fully paid shares if any; and
  - (b) generally do all acts and things required to give effect thereto.
- (ii) The Board shall have power-
- (a) to make such provisions, by the issue of fractional certificates or by payment in cash or otherwise as it thinks fit, for the case of shares becoming distributable in fractions; and
  - (b) to authorise any person to enter, on behalf of all the members entitled thereto, into an agreement with the company providing for the allotment to them respectively, credited as fully paid-up, of any further shares to which they may be entitled upon such capitalisation, or as the case may require, for the payment by the company on their behalf, by the



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application thereto of their respective proportions of profits resolved to be capitalised, of the amount or any part of the amounts remaining unpaid on their existing shares;

- (iii) Any agreement made under such authority shall be effective and binding on such members.

#### BUY-BACK OF SHARES

46. Notwithstanding anything contained in these articles but subject to the provisions of the Act or any other law for the time being in force, the company may purchase its own shares or other specified securities.

#### GENERAL MEETINGS

47. All General Meetings other than Annual General Meeting shall be called Extra ordinary General Meeting.  
48. The Board may, whenever it thinks fit, call an Extra ordinary General Meeting.

#### PROCEEDINGS AT GENERAL MEETINGS

49. (i) No business shall be transacted at any general meeting unless a quorum of members is present at the time when the meeting proceeds to business.  
(ii) Save as otherwise provided herein, the quorum for the general meetings shall be as provided in the Act.
50. The chairperson, if any, of the Board shall preside as Chairperson at every general meeting of the company.
51. If there is no such Chairperson, or if he is not present within fifteen minutes after the time appointed for holding the meeting, or is unwilling to act as chairperson of the meeting, the directors present shall elect one of their members to be Chairperson of the meeting.
52. If at any meeting no director is willing to act as Chairperson or if no director is present within fifteen minutes after the time appointed for holding the meeting, the members present shall choose one of their members to be Chairperson of the meeting.
53. On any business at any general meeting in the case of an equality of votes, whether on a show of hands, electronically or on a poll, the Chairman of the meeting shall have second or casting vote.

#### ADJOURNMENT OF MEETING

54. (i) The Chairperson may, suomoto and, in the absence of quorum shall adjourn the meeting from time to time and from place to place.  
(ii) No business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place.



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- (iii) When a meeting is adjourned for thirty days or more, notice of the adjourned meeting shall be given as in the case of an original meeting.
- (iv) Save as aforesaid, and as provided in the Act, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.



#### VOTING RIGHTS

55. Subject to any rights or restrictions for the time being attached to any class or classes of shares,-
- (a) on a show of hands, every member present in person shall have one vote; and
- (b) on a poll or through voting by electronic means, the voting rights of members shall be in proportion to his share in the paid-up equity share capital of the company.
56. A member may exercise his vote at a meeting by electronic means in accordance with the Act and shall vote only once.
57. (i) In the case of joint holders, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders.
- (ii) For this purpose, seniority shall be determined by the order in which the names stand in the register of members.
58. A member of unsound mind, or in respect of whom an order has been made by any court having jurisdiction in lunacy, may vote, whether on a show of hands or on a poll or through voting by electronic means, by his nominee or other legal guardian, and any such nominee or guardian may, on a poll, vote by proxy.
59. Any business other than that upon which a poll has been demanded may be proceeded with, pending the taking of the poll.
60. No member shall be entitled to vote at any general meeting unless all calls or other sums presently payable by him in respect of shares in the company have been paid.
61. (i) No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered, and every vote not disallowed at such meeting shall be valid for all purposes.
- (ii) Any such objection made in due time shall be referred to the Chairperson of the meeting, whose decision shall be final and conclusive.



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## PROXY

62. The instrument appointing a proxy and the power-of-attorney or other authority, if any, under which it is signed or a notarised copy of that power or authority, shall be deposited at the registered office of the company not less than 48 hours before the time for holding the meeting or adjourned meeting at which the person named in the instrument proposes to vote, or in the case of a poll, not less than 24 hours before the time appointed for taking of the poll; and in default the instrument of proxy shall not be treated as valid.
63. An instrument appointing a proxy shall be in the form as prescribed in the rules made under the Act.
64. A vote given in accordance with the terms of an instrument of proxy shall be valid, notwithstanding the previous death or insanity of the principal or the revocation of the proxy or of the authority under which the proxy was executed, or the transfer of the shares in respect of which the proxy is given:

Provided that no intimation in writing of such death, insanity, revocation or transfer shall have been received by the company at its office before the commencement of the meeting or adjourned meeting at which the proxy is used.

## BOARD OF DIRECTORS

65. (i) Until otherwise determined by a General Meeting of the Company and subject to the provisions of the Act, the number of Directors shall not be less than three nor more than fifteen.
- (ii) The first Directors of the Company are:
1. Sudipta Bhattacharya (DIN: 06817333)
  2. Karan Adani (DIN: 03088095)
  3. Santosh Kumar Mohapatra (DIN: 00284280)
66. Subject to provisions of the Act, the Board shall have the power to determine the directors whose period of office is or is not liable to determination by retirement of directors by rotation.
67. The same individual may, at the same time, be appointed as Chairman as well as Managing Director or Chief Executive Officer of the Company.
68. (i) The remuneration of the directors shall, in so far as it consists of a monthly payment, be deemed to accrue from day-to-day.
- (ii) In addition to the remuneration payable to them in pursuance of the Act, the directors may be paid all travelling, hotel and other expenses properly incurred by them-
- (a) in attending and returning from meetings of the Board of Directors or any committee thereof or general meetings of the company; or
  - (b) in connection with the business of the company





69. The company may exercise the powers conferred on it by the Act with regard to the keeping of a foreign register; and the Board may (subject to the provisions of under the Act) make and vary such regulations as it may think fit respecting the keeping of any such register.
70. All cheques, promissory notes, drafts, hundis, bills of exchange and other negotiable instruments, and all receipts for monies paid to the company, shall be signed, drawn, accepted, endorsed or otherwise executed, as the case may be, by such person and in such manner as the Board shall from time to time by resolution determine.
71. Every director present at any meeting of the Board or of a committee thereof shall sign against his name in a book to be kept for that purpose.
72. (i) Subject to the provisions of the Act, the Board shall have power at any time, and from time to time, to appoint a person as an Additional Director, provided the number of the Directors and Additional Directors together shall not at any time exceed the maximum strength fixed for the Board by the articles.
- (ii) Such person shall hold office only up to the date of the next Annual General Meeting of the company but shall be eligible for appointment by the company as a Director at that meeting subject to the provisions of the Act.
73. (i) The Board may appoint an Alternate Director to act for a Director (herein after in this Article called "the Original Director") during his absence for a period not less than three months from India. No person shall be appointed as an Alternate Director for an Independent Director unless he is qualified to be appointed as an Independent Director under the provisions of the Act.
- (ii) An Alternate Director shall not hold office for a period longer than that permissible to the Original Director in whose place he has been appointed and shall vacate the office if and when Original Director returns to India.
- (iii) If the term of office of the Original Director is determined before he return to India the automatic reappointment of retiring directors in default of another appointment shall apply to the Original Director and not the Alternate Director.
74. (i) If the office of any director appointed by the Company in general meeting is vacated before his term of office expires in the normal course, the resulting casual vacancy may, be filled by the Board of Directors at a meeting of the Board.
- (ii) The Director so appointed shall hold office only upto the date till which the Director in whose place he is appointed would have held office if it had not been vacated.

#### NOMINEE DIRECTOR

75. Notwithstanding anything to the contrary contained in these Articles, so long as any moneys shall be owing by the Company to the any financial institutions, corporations, banks or such other financing entities, or so long as



any of the aforesaid banks, financial institutions or such other financing entities hold any shares/debentures in the Company as a result of subscription or so long as any guarantee given by any of the aforesaid financial institutions or such other financing entities in respect of any financial obligation or commitment of the Company remains outstanding, then in that event any of the said financial institutions or such other financing entities shall, subject to an agreement in that behalf between it and the Company, have a right but not an obligation, to appoint one or more persons as Director(s) on the Board of Director as their nominee on the Board of Company. The aforesaid financial institutions or such other financing entities may at any time and from time to time remove the Nominee Director appointed by it and may in the event of such removal and also in case of the Nominee Director ceasing to hold office for any reason whatsoever including resignation or death, appoint other or others to fill up the vacancy. Such appointment or removal shall be made in writing by the relevant corporation and shall be delivered to the Company and the Company shall have no power to remove the Nominee Director from office. Each such Nominee Director shall be entitled to attend all General Meetings, Board Meetings and meetings of the Committee of which he is a member and he and the financial institutions or such other financing entities appointing him shall also be entitled to receive notice of all such meetings.

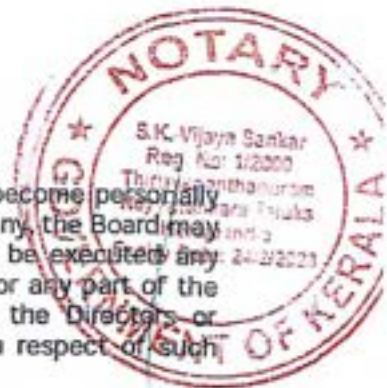
#### MANAGEMENT UNDER GENERAL CONTROL OF DIRECTORS

76. (i) The general control, management and supervision of the Company shall vest in the Board and the Board may exercise all such powers and do all such acts and things as the Company is by its Memorandum of Association or otherwise authorised except as are required to be exercised or done by the Company in General Meeting, but subject nevertheless to the provisions of the Act, and of these presents and to any regulations not being inconsistent with these presents from time to time made by the Company in General Meeting, provided that no such regulation shall invalidate any prior acts of the Directors which would have been valid if such regulation had not been made.
- (ii) Subject to the provisions of the Act, the Director may borrow, raise and secure the payment of such sum or sums in such manner and upon such terms and conditions in all respects as they may think fit and in particular by the issue of bonds, perpetual or redeemable, debenture or debenture-stock or any mortgage or charge or other security on the undertaking of the whole of any part of the property of the Company (both present and future) including its uncalled capital for the time being.
- (iii) Subject to the provisions of the Act, the Company may enter into any contract, arrangement or agreement in which a Director or Directors of the Company are, in any manner, interested.
- (iv) A Director, Managing Director, officer or employee of the Company may be or become a Director, of any company promoted by the Company or in which it may be interested as a vendor, member or otherwise, and no such Director shall be accountable for any benefits received as Director or member of such company except to the extent and under the circumstances as may be provided in the Act.





- (v) If the Directors or any of them or any other person, shall become personally liable for the payment of sum primarily due from the Company, the Board may subject to the provisions of the Act execute or cause to be executed any mortgage, charge or security over or affecting the whole or any part of the assets of the Company by way of indemnity to secure the Directors or persons so becoming liable as aforesaid from any loss in respect of such liability.
- (vi) A Director may resign from his office upon giving notice in writing to the Company.



#### PROCEEDINGS OF THE BOARD

77. (i) The Board of Directors may meet for the conduct of business, adjourn and otherwise regulate its meetings, as it thinks fit.
- (ii) A Director may, and the manager or secretary on the requisition of a director shall, at any time, summon a meeting of the Board.
78. (i) Save as otherwise expressly provided in the Act, questions arising at any meeting of the Board shall be decided by a majority of votes.
- (ii) In case of an equality of votes, the Chairperson of the Board shall have a second or casting vote.
79. The continuing Directors may act notwithstanding any vacancy in the Board; but, if and so long as their number is reduced below the quorum fixed by the Act for a meeting of the Board, the continuing directors or director may act for the purpose of increasing the number of directors to that fixed for the quorum, or of summoning a general meeting of the company, but for no other purpose.
80. (i) The Board may elect a Chairperson of its meetings and determine the period for which he is to hold office.
- (ii) If no such Chairperson is elected, or if at any meeting the Chairperson is not present within five minutes after the time appointed for holding the meeting, the directors present may choose one of their number to be Chairperson of the meeting.
81. (i) The Board may, subject to the provisions of the Act, delegate any of its powers to committees consisting of such member or members of its body as it thinks fit.
- (ii) Any committee so formed shall, in the exercise of the powers so delegated, conform to any regulations that may be imposed on it by the Board.
82. (i) A committee may elect a Chairperson of its meetings.
- (ii) If no such Chairperson is elected, or if at any meeting the Chairperson is not present within five minutes after the time appointed for holding the meeting,





the members present may choose one of their members to be Chairperson of the meeting.

83. (i) A committee may meet and adjourn as it thinks fit.
- (ii) Questions arising at any meeting of a committee shall be determined by a majority of votes of the members present, and in case of an equality of votes, the Chairperson shall have a second or casting vote.
84. All acts done in any meeting of the Board or of a committee thereof or by any person acting as a Director, shall, notwithstanding that it may be afterwards discovered that there was some defect in the appointment of any one or more of such Directors or of any person acting as aforesaid, or that they or any of them were disqualified, be as valid as if every such Director or such person had been duly appointed and was qualified to be a Director.
85. Save as otherwise expressly provided in the Act, a resolution in writing, signed by all the members of the Board or of a committee thereof, whether manually or electronically, for the time being entitled to receive notice of a meeting of the Board or committee, shall be valid and effective as if it had been passed at a meeting of the Board or committee, duly convened and held.

#### MANAGING DIRECTORS

86. (i) Subject to the provisions of the Act and of these Articles the Board shall have power to appoint from time to time any of its members as Managing Director or Managing Directors and/or Whole Time Directors of the Company for a fixed term not exceeding five years at a time and upon such terms and conditions, including liability to retire by rotation, as the Board thinks fit, and the Board may by resolution vest in such Managing Director or Managing Directors/Whole Time Director(s), such of the power hereby vested in the Board generally as it thinks fit, and such powers may be made exercisable for such period or periods, and upon such condition and subject to such restriction as it may determine, the remuneration of such Directors may be way of monthly remuneration and/ or fee for each meeting and/or participation in profits, or by any or all of those modes, or of any other mode not expressly prohibited by the Act.
- (ii) The Directors may whenever they appoint more than one Managing Director, designate one or more of them as "Joint Managing Director" or "Joint Managing Directors" or "Deputy Managing Directors" as the case may be.
- (iii) Subject to the provisions of the Act, the appointment and payment of remuneration to the above Director shall be subject to approval of the members in the General Meeting and of the Central Government, if required.

#### CHIEF EXECUTIVE OFFICER, MANAGER, COMPANY SECRETARY OR CHIEF FINANCIAL OFFICER

87. Subject to the provisions of the Act,-
- (i) A Chief Executive Officer, Manager, Company Secretary or Chief Financial Officer may be appointed by the Board for such term, at such



remuneration and upon such conditions as it may think fit, and any chief executive officer, manager, company secretary or chief financial officer so appointed may be removed by means of a resolution of the Board;

- (ii) A Director may be appointed as Chief Executive Officer, Manager, Company Secretary or Chief Financial Officer.

A provision of the Act or these regulations requiring or authorizing a thing to be done by or to a Director and Chief Executive Officer, Manager, Company Secretary or Chief Financial Officer shall not be satisfied by its being done by or to the same person acting both as Director and as, or in place of, Chief Executive officer, Manager, Company secretary or Chief Financial Officer.

#### THE SEAL

88. (i) The Board shall provide for the safe custody of the seal.
- (ii) The seal of the company shall not be affixed to any instrument except by the authority of a resolution of the Board or of a committee of the Board authorised by it in that behalf, and except in the presence of at least one Director or of the Manager or secretary or such other person as the Board or Committee may appoint for the purpose; and the Director or Manager or Secretary or other person aforesaid shall sign every instrument to which the seal of the company is so affixed in his /her presence.

#### DIVIDENDS AND RESERVE

89. The company in general meeting may declare dividends, but no dividend shall exceed the amount recommended by the Board, but the Company in a general meeting may declare a lesser dividend.
90. Subject to the provisions of the Act, the Board may from time to time pay to the members such interim dividends of such amount on such class of shares as appear to it to be justified by the profits of the company.
91. (i) The Board may, before recommending any dividend, set aside out of the profits of the company such sums as it thinks fit as a reserve or reserves which shall, at the discretion of the Board, be applicable for any purpose to which the profits of the company may be properly applied, including provision for meeting contingencies or for equalising dividends; and pending such application, may, at the like discretion, either be employed in the business of the company or be invested in such investments (other than shares of the company) as the Board may, from time to time, think fit.
- (ii) The Board may also carry forward any profits which it may consider necessary not to divide, without setting them aside as a reserve.
92. (i) Subject to the rights of persons, if any, entitled to shares with special rights as to dividends, all dividends shall be declared and paid according to the amounts paid or credited as paid on the shares in respect whereof the



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dividend is paid, but if and so long as nothing is paid upon any of the shares in the company, dividends may be declared and paid according to the amounts of the shares.



- (ii) No amount paid or credited as paid on a share in advance of calls shall be treated for the purposes of this Article as paid on the share.
  - (iii) All dividends shall be apportioned and paid proportionately to the amounts paid or credited as paid on the shares during any portion or portions of the period in respect of which the dividend is paid; but if any share is issued on terms providing that it shall rank for dividend as from a particular date such share shall rank for dividend accordingly.
93. The Board may deduct from any dividend payable to any member all sums of money, if any, presently payable by him to the company on account of calls or otherwise in relation to the shares of the company.
94. (i) Any dividend, interest or other monies payable in cash in respect of shares may be paid by electronic mode or by cheque or warrant sent through the post directed to the registered address of the holder or, in the case of joint holders, to the registered address of that one of the joint holders who is first named on the register of members, or to such person and to such address as the holder or joint holders may in writing direct.
- (ii) Every such cheque or warrant shall be made payable to the order of the person to whom it is sent.
- (iii) Payment in any way whatsoever shall be made at the risk of the person entitled to the money paid or to be paid. The Company will not be responsible for any payment which is lost or delayed. The Company will be deemed to having made a payment and received a good discharge for it if a payment using any of the foregoing permissible means is made.
95. Any one of two or more joint holders of a share may give effective receipts for any dividends, bonuses or other monies payable in respect of such share.
96. Notice of any dividend that may have been declared shall be given to the persons entitled to share therein in the manner mentioned in the Act.
97. The waiver in whole or in part of any dividend on any share by any document shall be effective only if such document is signed by the member (or the person entitled to the share in consequence of death or bankruptcy of the holder) and delivered to the Company and if or to the extent that the same is accepted as such or acted upon by the Board.
98. No dividend shall bear interest against the company.

#### ACCOUNTS

99. (i) The books of accounts and books and papers of the Company, or any of them, shall be open to the inspection of Directors in accordance with the applicable



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provisions of the Act and the Rules.

- (ii) No member (not being a director) shall have any right of inspecting any account or book or document of the company except as conferred by law or authorised by the Board or by the company in general meeting.

#### WINDING UP

100. Subject to the applicable provisions of the Act and rules made thereunder-

- (i) If the company shall be wound up, the liquidator may, with the sanction of a special resolution of the company and any other sanction required by the Act, divide amongst the members, in specie or kind, the whole or any part of the assets of the company, whether they shall consist of property of the same kind or not.
- (ii) For the purpose aforesaid, the liquidator may set such value as he deems fair upon any property to be divided as aforesaid and may determine how such division shall be carried out as between the members or different classes of members.
- (iii) The liquidator may, with the like sanction, vest the whole or any part of such assets in trustees upon such trusts for the benefit of the contributories if he considers necessary, but so that no member shall be compelled to accept any shares or other securities whereon there is any liability.

#### INDEMNITY








101. Every officer of the company shall be indemnified out of the assets of the company against any liability incurred by him in defending any proceedings, whether civil or criminal, in which judgment is given in his favour or in which he is acquitted or in which relief is granted to him by the court or the Tribunal.

#### GENERAL POWER

102. Wherever in the Act, it has been provided that the Company shall have any right, privilege or authority or that the Company could carry out any transaction only if the Company is authorised by its Articles, then in that case this Article authorises and empowers the Company to have such rights, privileges or authorities and to carry such transactions as have been permitted by the Act, without there being any specific Article in that behalf herein provided.



We, the several persons, whose name and addresses are subscribed are desirous of being formed into a Company in pursuance of this Articles of Association:

Photo	Sr. No.	Name, addresses, descriptions, occupation and signatures of the subscribers	Signature, names, addresses, descriptions and occupation of witnesses
	1	For and on behalf of M/s Adani Ports and Special Economic Zone Limited (CIN L63090GJ1998PLC034182) having its registered office at Adani House, Nr. Mithakhali Six Roads, Navrangpura, Ahmedabad - 380009 through its authorised person vide Board Resolution passed on 1 <sup>st</sup> May, 2015. <b>Dipti Shah</b> W/o Yogesh Shah residing at 601, Shaliraj Tower, Nehru Park, Vastrapur, Ahmedabad-380015 Occupation: Service Sd/-	Common witness for all 7 subscribers I, witness to subscribers who have subscribed and signed in my presence. Further, I have verified his/her/their identify details for their identification and satisfied myself of their identification particulars as filled in  Hardik Sanghvi S/o. Shri Harshadkumar Sanghvi residing at 15, Parshwanathnagar Society, Nr. Police Chowki, Naranpura Char Rasta, Ahmedabad-380013, Occupation: Service Company Secretary FCS No. 7247 Sd/-
	2	<b>Malay Mahadevia</b> [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Dr. Ramesh Mahadevia residing at 12-B, Gyankunj Society, Opp. St. Xavier's College, Navrangpura, Ahmedabad - 380009. Occupation: Service Sd/-	
	3	<b>Ravi Bhamidipaty</b> [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Srirama Murthy Bhamidipaty residing at 'Amrut' 26, Amreshrith Bunglows, Opp. Chimanbhai Patel Institute, Bh. Shapath 4, Prahaladnagar, Ahmedabad-380058 Occupation: Service Sd/-	
	4	<b>Azad Kumar Somani</b> [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Jwala Prasad Somani residing at 84, Star Apartments, Karnavatipagarkpa Bazar, Ahmedabad-380001. Occupation: Service Sd/-	
	5	<b>Manoj Kumar Chanduka</b> [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Biswanath Lal Chanduka residing at B-401, Panchamrut Apartments, Opp. Nehru Foundation, Bodakdev, Ahmedabad-380054. Occupation: Service Sd/-	
	6	<b>Anish Ashokkumar Shah</b> [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Ashokkumar Amrutlal Shah residing at B-12, Keshav Apartments, Near Memnagar Talavdi, Memnagar, Ahmedabad-380052. Occupation: Service Sd/-	
	7	<b>Kamlesh Bhagia</b> [As nominee of Adani Ports and Special Economic Zone Ltd.] S/o Shri Prabhudas Bhagia residing at A-203, Samarth Residency, Nr. P. R. Patel School, D'cabin, Kaligam, Sabarmati, Ahmedabad-380019. Occupation: Service Sd/-	

Place: Ahmedabad

Dated: 22.07.2015

**ATTESTED**



**VIJAYA SANKAR B.A.; LL.B**  
ADVOCATE & NOTARY  
Reg. No: 1/2000 Tvpnm  
33, Padma Nagar, Fort  
Trivandrum-695 023, Kerala-India  
Phone: 93377724...



No :

**അപേക്ഷാ സ്ഥലം ഫീൽഡിൽ പ്രത്യേകം അടയാളപ്പെടുത്തിയിരിക്കുന്നു  
എന്ന വില്ലേജ് ഓഫീസറുടെ സർട്ടിഫിക്കറ്റ്**  
(Demarcation Certificate)

ശ്രീ/ശ്രീമതി CEO അടയാളപ്പെടുത്തിയിരിക്കുന്നു  
അപേക്ഷാ സ്ഥലം

(പേരും വിലാസവും രേഖപ്പെടുത്തുക) എന്നയാളുടെ .....

സ്ഥാപനത്തിന്റെ / കമ്പനിയുടെ മാനേജിംഗ് പാർട്ണറുടെ / മാനേജിംഗ് ഡയറക്ടറുടെ  
പേരിൽ ..... സബ് രജിസ്ട്രാഫീസിൽ ..... നമ്പറിൽ രജിസ്റ്റർ ചെയ്ത

ആധാര പ്രകാരം ..... താലൂക്കിൽ ..... വില്ലേജിൽ ..... 29/10

സർവ്വേ നമ്പർ പ്രകാരമുള്ള DL 2940 ഹെക്ടർ സർക്കാർ ഭൂമി (കുടുതൽ സർവ്വേ  
നമ്പറുകൾ എഴുതാനുണ്ടെങ്കിൽ താഴെ പട്ടികയിൽ വിവരിച്ചിട്ടുള്ള ഭൂമി എന്നു രേഖപ്പെ  
ടുത്തി വിവരങ്ങൾ രേഖപ്പെടുത്താനുണ്ടെങ്കിൽ താഴെ പട്ടികയിൽ കൊടുക്കുക). ഭൂമിയിൽ  
കാറീയിങ് ലിസിനായി അപേക്ഷിക്കാൻ ഉദ്ദേശിച്ചിരിക്കുന്ന DL 1081 H ഭൂമി പ്രത്യേകം  
അളന്ന് / വേർതിരിച്ച് ആയതിന്റെ അതിർത്തികളിൽ കോൺക്രീറ്റ് / അങ്കിട്ട് / അയോൺ  
പില്ലറുകൾ സ്ഥാപിച്ച് പ്രത്യേകം വേർതിരിച്ചിട്ടുണ്ടെന്ന് സാക്ഷ്യപ്പെടുത്തുന്നു.

ഈ സർട്ടിഫിക്കറ്റ് മൈനിംഗ് & ജിയോളജി, തിരുവനന്തപുരം ഹാജരാക്കുവാൻ മാത്രം.



M. K. Anilkumar  
29/10

M. K. ANILKUMAR  
SILDAR & EXECUTIVE MAGISTRATE  
NEDUMANGAD.



No :

അപേക്ഷാ സ്ഥലം ഫീൽഡിൽ പ്രത്യേകം അടയാളപ്പെടുത്തിയിരിക്കുന്നു  
എന്ന വില്ലേജ് ഓഫീസറുടെ സർട്ടിഫിക്കറ്റ്

(Demarcation Certificate)

ശ്രീ/ശ്രീമതി CEO അമ്മാരി വിഴിഞ്ഞം പോർട്ടിലുള്ള  
അരുവേഴിപ്പാലം

(പ്രേരും വിലാസവും രേഖപ്പെടുത്തുക) എന്നയാളുടെ

സ്ഥാപനത്തിന്റെ / കമ്പനിയുടെ മാനേജിംഗ് പാർട്ണറുടെ / മാനേജിംഗ് ഡയറക്ടറുടെ

പേരിൽ സബ്ജെക്ട് പ്രദേശത്ത് നമ്പറിൽ ജെസ്റ്റർ ചെയ്ത

~~അഡ്മിഷൻ~~ 9750815 താലൂക്കിൽ കുന്നിമുക്ക് വില്ലേജിൽ ഭൂമി 29, 120/10

സർവ്വേ നമ്പർ പ്രകാരമുള്ള 01.2940 ഹെക്ടർ സർക്കാർ ഭൂമി (കൂടുതൽ സർവ്വേ

നമ്പറുകൾ എഴുതാനുണ്ടെങ്കിൽ താഴെ പട്ടികയിൽ വിവരിച്ചിട്ടുള്ള ഭൂമി എന്നു രേഖപ്പെ

ടുത്തി വിവരങ്ങൾ രേഖപ്പെടുത്താനുണ്ടെങ്കിൽ താഴെ പട്ടികയിൽ കൊടുക്കുക). ഭൂമിയിൽ

കാറീയിൻ ലീസിനായി അപേക്ഷിക്കാൻ ഉദ്ദേശിച്ചിരിക്കുന്ന 01.1081 ഭൂമി പ്രത്യേകം

അളന്ന് / വേർതിരിച്ച് ആയതിന്റെ അതിർത്തികളിൽ കോൺക്രീറ്റ് / കരിങ്കല്ല് / അയോൺ

പില്ലറുകൾ സ്ഥാപിച്ച് പ്രത്യേകം വേർതിരിച്ചിട്ടുണ്ടെന്ന് സാക്ഷ്യപ്പെടുത്തുന്നു.

ഈ സർട്ടിഫിക്കറ്റ് മൈനിംഗ് & ജിയോളജി, തിരുവനന്തപുരം ഹാജരാക്കുവാൻ മാത്രം



Amma  
വില്ലേജ് ഓഫീസർ  
മാണിക്കാൽ



No :

നോൺ അസൈൻമെന്റ് സർട്ടിഫിക്കറ്റ്

CEO പറവൂർ വിഭാഗം പൊതു വിഭാഗം  
ശ്രീ/ശ്രീമതി പ്രൊഫ. എസ്. സി. സി. സി.  
(പ്രൊഫ. വിഭാഗം അനുബന്ധം) എന്നയാളുടെ സംസ്ഥാന  
നിയമനിയമ / കമ്പനിയുടെ മാനേജിംഗ് പാർട്ണറുടെ / മാനേജിംഗ് പാർട്ണറുടെ പേരിൽ  
സംസ്ഥാനത്തിൽ നിയമനിയമ നിയമനിയമത്തിൽ  
പേര് എസ്. സി. സി. സി. താലൂക്കിൽ പറവൂർ വില്ലേജ്  
ജില്ല 29  
ജിൽ 120/10 സർവ്വേ നമ്പർ പ്രകാരമുള്ള 01.2940 ഹെക്ടർ  
സർക്കാർ ഭൂമി (താഴെ പട്ടികയിൽ വിവരിച്ചിട്ടുള്ള ഭൂമി - കൂടുതൽ വിവരങ്ങൾ രേഖപ്പെടുത്താനുണ്ടെങ്കിൽ താഴെ പട്ടികയിൽ കൊടുക്കുക). റവന്യൂ വകുപ്പ് മറ്റു പ്രത്യേക ആവശ്യങ്ങൾക്ക് പതിച്ചുകൊടുത്തതല്ലെന്നും റിസർവ് വനത്തിൽ ഉൾപ്പെടുന്നതല്ലെന്നും ടി വകകളിന്മേൽ കോടതി / ബാങ്ക് അറ്റാച്ച്മെന്റ് ഇല്ലായെന്നും ടി ഭൂമി ആദിവാസി വിഭാഗങ്ങളിൽ അവകാശപ്പെട്ടതല്ലായെന്നും ടി ഭൂമിയുടെ മീറ്റർ പരിധിയിൽ / സമീപത്തുള്ള ആദിവാസി സെറ്റിൽമെന്റുകൾ ഇല്ലായെന്നും സാക്ഷ്യപ്പെടുത്തുന്നു.

ഈ സർട്ടിഫിക്കറ്റ് മൈനിംഗ് & ജിയോളജി, തിരുവനന്തപുരം ഹാജരാക്കുവാൻ മാത്രം



Handwritten signature  
12/12/19  
എ.എ.എ.എ.





നം. ബീ7 127329/18

കളക്ടറേറ്റ്, സിവിൽ സ്റ്റേഷൻ,  
കടപ്പനക്കുന്ന്, തിരുവനന്തപുരം,  
തീയതി : 13-07-2018.

നിരാക്ഷേപ സാക്ഷ്യപത്രം.

വിഴിഞ്ഞം തുറമുഖ നിർമ്മാണത്തിന് ആവശ്യമായ പാറയും പാറ ഉല്പന്നങ്ങളും ലഭ്യമാക്കുവാൻ സാഹചര്യത്തിൽ തിരുവനന്തപുരം ജില്ലയിൽ നെടുമങ്ങാട് താലൂക്കിൽ മാണിക്കൽ വില്ലേജിൽ ബ്ലോക്ക് നമ്പർ 29-ൽ റീസർവ്വെ 120/10-ൽ ഉൾപ്പെട്ട സർക്കാർ പാറ ലിസിന് എടുത്ത് ഖനനം ചെയ്യുന്നതിന് NOC അനുവദിക്കുന്നതിലേയ്ക്കായി അദാനി വിഴിഞ്ഞം പോർട്ട് പ്രൈവറ്റ് ലിമിറ്റഡ് കമ്പനി 24-04-2018-ൽ AVPPL/Gok/2018-19/399 നമ്പർ കത്ത് പ്രകാരം അപേക്ഷ സമർപ്പിച്ചിട്ടുള്ളതാണ്. അപേക്ഷയിന്മേൽ നെടുമങ്ങാട് തഹസീൽദാർ അന്വേഷണം നടത്തി റിപ്പോർട്ട് സമർപ്പിച്ചിട്ടുണ്ട്. പ്രസ്തുത റിപ്പോർട്ട് പ്രകാരവും ഡെപ്യൂട്ടി കളക്ടർ(എൽ.ആർ.)ന്റെ നേതൃത്വത്തിൽ സ്ഥല പരിശോധന നടത്തിയതിന്റെ അടിസ്ഥാനത്തിലും ടി ഭൂമി മറ്റേതെങ്കിലും സർക്കാർ ആവശ്യങ്ങൾക്ക് പരിഗണനയിൽ ഉള്ളതല്ലെന്നും പാറക്കെട്ടായുള്ള സ്ഥലം പരിഷ്കരിക്കുന്നതിന് ഉപയുക്തമല്ലെന്നും ബോധ്യപ്പെട്ടിട്ടുള്ളതാണ്. കൂടാതെ സർക്കാർ പങ്കാളിത്തത്തോടെയുള്ള വിഴിഞ്ഞം തുറമുഖ പദ്ധതിയുടെ സമയബന്ധിതമായ പൂർത്തീകരണത്തിന് പാറ ലഭ്യമാക്കേണ്ടതിനാൽ വിഴിഞ്ഞം തുറമുഖ പദ്ധതിയുമായി ബന്ധപ്പെട്ട അപേക്ഷകളെല്ലാം 10 ദിവസത്തിനുള്ളിൽ പരിശോധിച്ച് NOC നൽകുന്നതിനുള്ള നടപടി സ്വീകരിക്കുന്നതിനും, ഒന്നിലധികം അപേക്ഷകരുണ്ടെങ്കിൽ വിഴിഞ്ഞം പദ്ധതിക്ക് "സർക്കാരിന്റെ പ്രധാനപ്പെട്ട പദ്ധതി" എന്ന പരിഗണന നൽകി ടി അപേക്ഷകന് അനുമതി നൽകേണ്ടതാണെന്ന് 03/07/2018 ൽ ബഹു.മുഖ്യമന്ത്രിയുടെ അദ്ധ്യക്ഷതയിൽ ചേർന്ന ഉന്നതതല യോഗത്തിൽ തീരുമാനമായിട്ടുള്ളതാണ്. ഈ സാഹചര്യത്തിൽ മാണിക്കൽ വില്ലേജിലെ ബ്ലോക്ക് നമ്പർ 29-ൽ റീസർവ്വെ 120/10-ൽ ഉൾപ്പെട്ട 01.29.40 ഹെക്ടർ പ്രദേശത്തെ സർക്കാർ പാറ ചുവടെ ചേർത്തിരിക്കുന്ന നിബന്ധനകൾക്ക് വിധേയമായി നിയമാനുസൃതമായി ഖനനം ചെയ്യുന്നതിന് ചീഫ് എക്സിക്യൂട്ടീവ് ഓഫീസർ, അദാനി വിഴിഞ്ഞം പോർട്ട്സ് പ്രൈവറ്റ് ലിമിറ്റഡിന് നിരാക്ഷേപ സാക്ഷ്യപത്രം അനുവദിക്കുന്നു.





### നിബന്ധനകൾ

- 1) ഈ NOC പ്രകാരം ഖനനം ചെയ്യുന്ന പാറ വിഴിഞ്ഞം തുറമുഖ നിർമ്മാണത്തിന് മാത്രം വിനിയോഗിക്കേണ്ടതാണ്. ഖനനം ചെയ്യുന്ന പാറ വിപണനം ചെയ്യാൻ പാടുള്ളതല്ല.
- 2) NOC അനുവദിച്ച തീയതി മുതൽ 6 മാസത്തിനുള്ളിൽ പാരിസ്ഥിതിക അനുമതി നേടിയിരിക്കേണ്ടതാണ്.
- 3) സർക്കാരിന്റെയോ മറ്റ് പൊതുവായ ആവശ്യങ്ങൾക്കോ സർക്കാർ/ജില്ലാ ഭരണ കൂടം നിശ്ചയിക്കുന്ന നിരക്കിൽ പാറയും പാറ ഉത്പ്പന്നങ്ങളും നൽകേണ്ടതാണ്.
- 4) NOC അനുവദിച്ച തീയതി മുതൽ രണ്ട് വർഷത്തിനുള്ളിൽ ഖനനം ചെയ്യുന്ന പ്രവർത്തനങ്ങൾ ആരംഭിച്ചിട്ടില്ലെങ്കിൽ ഈ NOC അസാധുവാകുന്നതാണ്.
- 5) ഖനന പ്രവർത്തനങ്ങൾ അദാനി ഗ്രൂപ്പിന്റെ നേരിട്ടുള്ള നിയന്ത്രണത്തിൽ ആയിരിക്കേണ്ടതാണ്.
- 6) പാരിസ്ഥിതിക അനുമതിയും നിയമപരമായ ആവശ്യമുള്ള മറ്റ് എല്ലാ അനുമതിയും നേടിയ ശേഷം മാത്രമേ ഖനനം ആരംഭിക്കാൻ പാടുള്ളൂ.
- 7) 2015-ലെ കെ.എം.എം.സി ചട്ടങ്ങളിലെയും 1957-ലെ കെ. എൽ.സി ആക്ടിലെയും വ്യവസ്ഥകൾ കർശനമായി പാലിക്കേണ്ടതാണ്.
- 8) ജനവാസമുള്ള കെട്ടിടങ്ങളിൽ നിന്നും നിയമപ്രകാരമുള്ള അകലം പാലിച്ചും അപകടരഹിതമായും മാത്രമേ ഖനനം നടത്തുവാൻ പാടുള്ളൂ.
- 9) പാറ ഖനനം നടത്തുന്ന പ്രവൃത്തിക്കായി നിയോഗിക്കുന്ന ജോലിക്കാരുടെ വിവരങ്ങൾ അടങ്ങിയ ഒരു രജിസ്റ്റർ സൂക്ഷിക്കേണ്ടതാണ്.
- 10) എക്സ് പ്ലോസീവ് ആക്ട് പ്രകാരമുള്ള നിബന്ധനകൾ കർശനമായി പാലിക്കേണ്ടതും മറ്റ് അടിസ്ഥാന സൗകര്യങ്ങൾ ടി സ്ഥലത്ത് ലഭ്യമാക്കേണ്ടതുമാണ്.
- 11) ഖനനം നിമിത്തം ഉണ്ടാകുന്ന കഴികൾ മണ്ണിട്ട് മൂടി അപകടരഹിതമാക്കേണ്ടതും കമ്പി വേലി കെട്ടി സംരക്ഷിക്കേണ്ടതുമാണ്.
- 12) നിരാക്ഷേപ സാക്ഷ്യ പത്രത്തിന്റെ കാലാവധി മൈനിംഗ് & ജിയോളജി വകുപ്പ് ലീസ് നൽകുന്ന തീയതി മുതൽ 10 വർഷത്തേയ്ക്കോ, വിഴിഞ്ഞം പദ്ധതിയുടെ നിർമ്മാണ പ്രവർത്തനങ്ങൾ തീരുന്നത് വരെയോ ഏതാണോ ആദ്യം അതുവരെയായിരിക്കുന്നതാണ്.
- 13) തഹസിൽദാർ അംഗീകരിച്ച് നൽകുന്ന സ്പെച്ച് പ്രകാരമുള്ള ഭൂമിയിൽ മാത്രമേ ഖനനം നടത്താൻ പാടുള്ളൂ.

14) പ്രസ്തുത സ്ഥലം പാറ ഖനനത്തിന് അനുയോജ്യമല്ലായെന്ന് മൈനിംഗ് & ജിയോളജി ഡയറക്ടർക്ക് ബോധ്യപ്പെടുകയാണെങ്കിൽ ഈ നിരാക്ഷേപ സാക്ഷ്യപത്രം പ്രാബല്യത്തിൽ വരുന്നതല്ല.

മേൽ വിവരിച്ച നിബന്ധനകൾ ലംഘിക്കപ്പെടുന്ന പക്ഷം ഈ നിരാക്ഷേപ സാക്ഷ്യപത്രം റദ്ദാക്കി തുടർനടപടികൾ സ്വീകരിക്കുന്നതായിരിക്കും.

(ഒപ്പ്)

ജില്ലാ കളക്ടർ

സ്വീകർത്താവ്

ചീഫ് എക്സിക്യൂട്ടീവ് ഓഫീസർ, അദാനി പോർട്ട്സ് പ്രൈവറ്റ് ലിമിറ്റഡ്.

പകർപ്പ്

1. പ്രിൻസിപ്പൽ സെക്രട്ടറി മത്സ്യബന്ധനവും തുറമുഖവും (ഇ)വകുപ്പ് (ആമുഖ കത്ത് സഹിതം)
2. ഡയറക്ടർ, മൈനിംഗ് & ജിയോളജി, തിരുവനന്തപുരം.
3. തഹസിൽദാർ, നെടുമങ്ങാട്.
4. വില്ലേജ് ഓഫീസർ, മാണിക്കൽ.
5. ജില്ലാ ജിയോളജിസ്റ്റ്, തിരുവനന്തപുരം.
6. MD & CEO, VISL

അംഗീകാരത്തോടെ,



ഡെപ്യൂട്ടി കളക്ടർ (എൽ.ആർ)







കേരളം KERALA

CE 536171

തിരുവനന്തപുരം ജില്ലയിൽ നെടുമങ്ങാട് താലൂക്കിൽ മാണിയ്ക്കൽ വാർഡിൽ ജോക്ക് നമ്പർ 29 റീസർവ്വേ 120/10 നമ്പറിൽപ്പെട്ട 1.1081 ഹെക്ടർ സ്ഥലത്തു നിന്നും കരിങ്കല്ല് ഖനനം ചെയ്യുന്നതിന് അനുമതി നൽകുന്ന പക്ഷം താഴെ പറയുന്ന കാര്യങ്ങൾ നിർവ്വഹിക്കുമെന്ന് ഞാൻ സമ്മതിക്കുകയും ഉറപ്പുനൽകുകയും ചെയ്യുന്നു.

1. അംഗീകരിച്ച മൈനിംഗ് പ്ലാൻ പ്രകാരം മൈനിംഗ് നടത്തുന്നതാണ്.
2. ഖനനപ്രവർത്തനം മൂലം പരിസര മലിനീകരണവും പാരിസ്ഥിതിക പ്രശ്നങ്ങളും ഉണ്ടാകാതിരിക്കാൻ വേണ്ട ക്രമീകരണങ്ങൾ നടത്തുന്നതാണ്. ഇക്കാലയളവിൽ ബന്ധപ്പെട്ട അധികാരികളുടെ നിർദ്ദേശങ്ങൾ പാലിക്കുന്നതാണ്.

S.K. VIJAYA SANKAR B.A.; LL.B  
ADVOCATE & NOTARY  
Reg. No: 1/2000 Tvp  
33, Padma Nagar, Fort  
Trivandrum-695 023, Kerala-India  
Phone: 9387772429

ATTESTED

L. Jayalekshmy  
Vendor, Vanchiyoor  
Thiruvananthapuram

5 FEB 2019

no: 37823

02.02.19

CEO  
D. D. Mani Vazhappan





കേരളം KERALA

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CE 536170

സഹോടക വസ്തുക്കളുടെ അമിതമായ ഉപയോഗം മൂലം പരിസരവാസികൾക്ക് പ്രയാസം ഉണ്ടാക്കുകയില്ല. എന്റെ/കമ്പനിയുടെ/സ്ഥാപനത്തിന്റെ പേരിലുള്ള എക്സ്‌പ്ലോസീവ് ലൈസൻസ് പ്രകാരം വാങ്ങിക്കുന്ന സഹോടക വസ്തുക്കൾ ഉപയോഗിച്ചു മാത്രമേ ഞാൻ ഖനനം നടത്തുകയുള്ളൂ.

4. സമീപവാസികളിൽ നിന്നും പരാതിക്ക് ഇടവരാത്തവിധത്തിൽ മാത്രമേ ഖനന പ്രവർത്തനം നടത്തുകയുള്ളൂ.

5. ക്വാറിയിൽ ജോലി ചെയ്യുന്ന തൊഴിലാളികൾക്കും ക്വാറിയുമായി ബന്ധപ്പെട്ട് പ്രവർത്തിക്കുന്നവർക്കും മറ്റ് പൊതുജനങ്ങൾക്കും ക്വാറി പ്രവർത്തനം മൂലം അപകടങ്ങൾ സംഭവിക്കാതിരിക്കുന്നതിനുവേണ്ടിയുള്ള സുരക്ഷ ക്രമീകരണങ്ങൾ ക്വാറിയിലും പരിസരത്തും നടത്തുന്നതാണ്. ക്വാറിക്ക് ചുറ്റും ഫെൻസിംഗ് ആവശ്യമുള്ള പക്ഷം ഫെൻസിംഗ് നടത്തുന്നതാണ്.

S.K. VIJAYA SANKAR B.A.; LL.B  
ADVOCATE & NOTARY  
Reg. No: 1/2000 Tvpem  
33, Padma Nagar, Fort  
Trivandrum-695 023, Kerala, India  
Phone: 9387772423

*Rajesh The*  
**ATTESTED**  
*L. Jayalakshmy*



10/37822 CEO  
06.02.19 Odari Vithinjam Pottu P. Ltd

L. Jayalakshmy  
Vendor, Vanchiyoor  
Thiruvananthapuram

5 FEB 2019





അപേക്ഷയോടൊപ്പം ഹാജരാക്കിയിരിക്കുന്ന രേഖകളിൽ ഒന്നും തന്നെ തെറ്റായ വിവരങ്ങളോ വ്യാജരേഖകളോ ഇല്ലാത്തതാണ്. അപേക്ഷയോടൊപ്പം ഹാജരാക്കിയ സമ്മതപത്രങ്ങൾക്കും/പവർ ഓഫ് അറ്റോർണിക്കും ഇപ്പോഴും നിയമസാധുതയുള്ളതാണെന്ന് ഞാൻ ഉറപ്പ് നൽകുന്നു. ഈ രേഖകളിൽ ഒപ്പിട്ടിരിക്കുന്നത് ഇതുമായി ബന്ധപ്പെട്ട വ്യക്തികൾ മാത്രമാണ്. സമ്മതപത്രം/പവർ ഓഫ് അറ്റോർണിക്കും നൽകിയ വ്യക്തികൾക്ക് ഇപ്പോഴും ഇന്ത്യൻ പൗരത്വമുള്ളതാണ്. കമ്പനി/പാർട്ട്ണർഷിപ്പ് ഫാം എന്നിവ സംബന്ധിച്ച് ഞാൻ ഹാജരാക്കിയ എല്ലാ രേഖകളും നിയമാനുസൃതമായി നിലവിൽ സാധുതയുള്ളതുമാണ്. ക്വാറിയിൽ ചേർന്ന് കിടക്കുന്ന റവന്യൂ പുറംപോക്കിൽ നിന്നും ഞാൻ/ഞങ്ങൾ അനധികൃതമായി നടത്തുന്നതല്ല. അപ്രകാരം ഖനനം നടത്തുന്ന പക്ഷം എനിക്ക് എതിരെ ഉണ്ടാകാവുന്ന ഏതൊരു നടപടിയ്ക്കും ഞാൻ തടസ്സം നിൽക്കുന്നതല്ല. അപേക്ഷയോടൊപ്പം ഹാജരാക്കിയിരിക്കുന്ന രേഖകളിൽ തെറ്റായ വിവരങ്ങൾ ഉണ്ടെന്ന് ഏതെങ്കിലും രേഖകൾ വ്യാജമാണെന്നോ തെളിയുന്ന പക്ഷം ആയതിന്റെ പൂർണ്ണ ഉത്തരവാദിത്വം എനിക്ക് തന്നെയാണെന്ന് എനിക്ക് ബോധ്യപ്പെട്ടിട്ടുണ്ട്. അപ്രകാരമുള്ള എന്തെങ്കിലും പ്രവൃത്തിക്ക് എതിരെ ഏത് നിയമനടപടിയും സ്വീകരിക്കുന്നതിന് തടസ്സമില്ലാത്തതും തെറ്റായ വിവരങ്ങൾ നൽകിയോ, വ്യാജരേഖകൾ നൽകിയോ ആണ് ഞാൻ/ഞങ്ങൾ അനുമതി സമ്പാദിച്ചതെന്ന് തെളിയുന്ന പക്ഷം എനിക്ക്/കമ്പനിയ്ക്ക്/സ്ഥാപനത്തിന് അനുവദിച്ച അനുമതികൾ റദ്ദ് ചെയ്യുന്നതിനും എനിക്ക്/ഞങ്ങൾക്ക് പൂർണ്ണസമ്മതവുമാണ്. അപേക്ഷയിലും അപേക്ഷയോടൊപ്പം ഹാജരാക്കിയ രേഖകളിലും ബന്ധപ്പെട്ട ഉദ്യോഗസ്ഥരോ, ബന്ധപ്പെട്ട വ്യക്തികളോ മാത്രമാണ് ഒപ്പിട്ടിരിക്കുന്നത്. മേൽ വിവരങ്ങൾ സത്യമാണ്.

ഒപ്പ്   
സാക്ഷികൾ

പേര്  
RAJESH JHA

1. പൂർണ്ണമായ പേരും  
വിലാസവും ഒപ്പും

Arun Mohan,  
Flat 3-A, Fort Orion,  
Kakkanad P.O. Kochi - 682020

2. പൂർണ്ണമായ പേരും  
വിലാസവും ഒപ്പും

Muneeb E.T  
Flat No: 7 D.  
Horizon park.  
Althara Road.





Partly dictated by me. M.S. Srinivasan, Advocate K 1191/2002



GOVERNMENT OF KERALA

CE 536176

### AFFIDAVIT

**RAJESH JHA**, Managing Director & CEO, Adani Vizhinjam Port Private Limited, 2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram, Registration No. U61200GJ2015PTC083954 of Company having registered office at Adani house, Nr. Mithakali Six Roads, Navarangpura, Ahmedabad-380009, Gujarat, India, do hereby solemnly affirm and state as follows:-

The Company have filed the upto date income tax returns, paid the income tax assessed thereon and paid the income tax on the basis of self assessment as per the provisions contained in the Income Tax Act 1961.

What is stated above are true and correct to the best of my knowledge, information and belief.

Dated this the 6<sup>th</sup> day of February 2019.

*Rajesh*  
**DEPONENT**

Solemnly affirmed on this 6<sup>th</sup> day of February 2019 at Trivandrum, Kerala,



**S.K. VIJAYA SANKAR B.A.; LLB**  
ADVOCATE & NOTARY  
Reg. No: 1/2000 Tyam  
33, Padma Nagar, Fort  
Trivandrum-695 027, Kerala  
Phone: 9381772429

**ATTESTED**

*Rajesh Jha*  
10.37832 CEO  
06.02.19 Adani Vizhinjam Port pvt Ltd

*L. Jayalakshmy*  
L. Jayalakshmy  
Advocate, Vanchiyoor  
Thiruvananthapuram

**5 FEB**





GEMS



## GLOBAL Environment & Mining Services

(Analytical Laboratory, Consulting Engineers, Mine designers, Geologist &amp; Surveyors)

3<sup>rd</sup> Main Road, Basaveswara Badavane, HOSAPETE - 583201,

Dist., Bellary (Karnataka). Ph: +91-8394 651111, 229433

e-mail : [gems\\_hpt@yahoo.com](mailto:gems_hpt@yahoo.com), [gems\\_hpt@gmail.com](mailto:gems_hpt@gmail.com), Website: [www.globalmining.in](http://www.globalmining.in)

Certificate No: TC-5323

GEMS-LD/TF/11/01

Date: 11.02.2019

### Analysis Report of Ambient Air Quality Monitoring

- |    |                                 |                                                                                                                                                                                                                                                 |
|----|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Name of the Customer/Address    | Granite Building Stone Quarry of<br>M/s. Adani Vizhinjam Port Private Limited.,<br>Extent: 1.1081 Ha. (2.7381 Acres)<br>Re-Block No. 29, Re-Sy No. 120/10,<br>Aryanadu Village, Nedumangad Taluk,<br>Thiruvananthapuram District, Kerala State. |
| 2  | Sample Description              | : <b>Ambient Air Quality Monitoring</b>                                                                                                                                                                                                         |
| 3  | Sample Collected By             | : GLOBAL Environment & Mining Services                                                                                                                                                                                                          |
| 4  | Particulars of Sample Collected | : Combined Sampler (GTI-241)                                                                                                                                                                                                                    |
| 5  | Duration of the Monitoring      | : 24 Hour of Sampling                                                                                                                                                                                                                           |
| 6  | Name of the Station             | : <b>Manikkal (A2)</b>                                                                                                                                                                                                                          |
| 7  | Sample Received                 | : 05.02.2019                                                                                                                                                                                                                                    |
| 8  | Date of Analysis                | : 07.02.2019                                                                                                                                                                                                                                    |
| 9  | Date of Analysis Completion     | : 11.02.2019                                                                                                                                                                                                                                    |
| 10 | Sample Code                     | : GEMS/GBSQA VPPL/AAQM/2019/132                                                                                                                                                                                                                 |
| 11 | Report Number                   | : ULR-TC532319000000089F                                                                                                                                                                                                                        |



### Results

Date of Monitoring	PM10 [ $\mu\text{g}/\text{m}^3$ ]	PM2.5 [ $\mu\text{g}/\text{m}^3$ ]	SO <sub>2</sub> [ $\mu\text{g}/\text{m}^3$ ]	NO <sub>2</sub> [ $\mu\text{g}/\text{m}^3$ ]
	IS : 5182: (Part 23) 2006 (RA 2012)	USEPA 2001	IS : 5182: (Part 2) 2001 (RF 2014)	IS : 5182: (Part 6) 2006 (RF 2014)
06.02.2019	38.40	12.80	12.40	10.60
Standard	100	60	80	80

### INFERENCE

As per CPCB Standards,  
Report Status: - Measured Values for the above parameters are within the limit.

**\*\*End of Report\*\***

*J.M. Thippeswamy*  
Analysed By  
J.M. Thippeswamy  
Chemist

*S.S. Afreen*  
Checked By  
S.S. Afreen  
Environmental Engineer

*R.K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



### Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thinblies 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
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**GLOBAL Environment & Mining Services**

(Analytical Laboratory, Consulting Engineers, Mine designers, Geologist &amp; Surveyors)

3<sup>rd</sup> Main Road, Basaveswara Badavane, HOSAPETE – 583201,

Dist., Bellary (Karnataka). Ph: +91-8394 651111, 229433

e-mail : [gems\\_hps@yahoo.com](mailto:gems_hps@yahoo.com), [gemsfab.hpt@gmail.com](mailto:gemsfab.hpt@gmail.com), Website: [www.globalmining.in](http://www.globalmining.in)

Certificate No: TC-5323

GEMS-LD/TF/11/01

Date: 11.02.2019

**Analysis Report of Ambient Air Quality Monitoring**

- |    |                                 |   |                                                                                                                                                                                                                                                 |
|----|---------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Name of the Customer/Address    | : | Granite Building Stone Quarry of<br>M/s. Adani Vizhinjam Port Private Limited.,<br>Extent: 1.1081 Ha. (2.7381 Acres)<br>Re-Block No. 29, Re-Sy No. 120/10,<br>Aryanadu Village, Nedumangad Taluk,<br>Thiruvananthapuram District, Kerala State. |
| 2  | Sample Description              | : | Ambient Air Quality Monitoring                                                                                                                                                                                                                  |
| 3  | Sample Collected By             | : | GLOBAL Environment & Mining Services                                                                                                                                                                                                            |
| 4  | Particulars of Sample Collected | : | Combined Sampler (GTI-241)                                                                                                                                                                                                                      |
| 5  | Duration of the Monitoring      | : | 24 Hour of Sampling                                                                                                                                                                                                                             |
| 6  | Name of the Station             | : | Core zone area (A1)                                                                                                                                                                                                                             |
| 7  | Sample Received                 | : | 05.02.2019                                                                                                                                                                                                                                      |
| 8  | Date of Analysis                | : | 07.02.2019                                                                                                                                                                                                                                      |
| 9  | Date of Analysis Completion     | : | 11.02.2019                                                                                                                                                                                                                                      |
| 10 | Sample Code                     | : | GEMS/GBSQA VPPL/AAQM/2019/131                                                                                                                                                                                                                   |
| 11 | Report Number                   | : | ULR-TC532319000000088F                                                                                                                                                                                                                          |

**Results**

Date of Monitoring	PM10 [ $\mu\text{g}/\text{m}^3$ ]	PM2.5 [ $\mu\text{g}/\text{m}^3$ ]	SO <sub>2</sub> [ $\mu\text{g}/\text{m}^3$ ]	NO <sub>2</sub> [ $\mu\text{g}/\text{m}^3$ ]
	IS : 5182: (Part 23) 2006 (RA 2012)	USEPA 2001	IS : 5182: (Part 2) 2001 (RF 2014)	IS : 5182: (Part 6) 2006 (RF 2014)
05.02.2019	36.40	12.50	10.60	10.40
Standard	100	60	80	80

**INFERENCE**

As per CPCB Standards,

Report Status: - Measured Values for the above parameters are within the limit.

**\*\*End of Report\*\***

*J.M. Thippeswamy*  
Analysed By  
J.M. Thippeswamy  
Chemist

*S.S. Afreen*  
Checked By  
S.S. Afreen  
Environmental Engineer

*K. Ramakrishna Reddy*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager

**Note:**

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## GLOBAL Environment & Mining Services

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3<sup>rd</sup> Main Road, Basaveswara Badavane, HOSAPETE - 583201,

Dist., Bellary (Karnataka). Ph: +91-8394 651111, 229433

e-mail : [gems\\_hpt@yahoo.com](mailto:gems_hpt@yahoo.com), [gems@lab.hpt@gmail.com](mailto:gems@lab.hpt@gmail.com), Website: [www.globalmining.in](http://www.globalmining.in)



Certificate No: TC-5323

GEMS-LD/TF/08/01

Date: 11.02.2019

### TEST REPORT OF AMBIENT NOISE LEVEL MONITORING

1	Name of the Customer/Address	Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited, Extent: 1.1081 Ha. (2.7381 Acres) Re-Block No. 29, Re-Sy No. 120/10, Aryanadu Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State.
2	Sample Description	Ambient Noise Level Monitoring
3	Sample Collected By	GLOBAL Environment & Mining Services
4	Particulars of Sample Collected	Digital LCD Sound Level Meter (ED-6080WBNI)
5	Duration of the Monitoring	24 Hour of Sampling
6	Date of Sample Receipt	05.02.2019
7	Date of Analysis Completion	07.02.2019
8	Sample Code	GEMS/GBSQAVPPL/ANLM/2019/133 & 134
9	Report Number	ULR-TCS32319000000090F

Date	05.02.2019	06.02.2019
Name of the Location	Core Zone	Manikkal
Time (hrs)	N1	N2
6.00	48.6	50.0
7.00	50.2	52.8
8.00	52.6	54.4
9.00	52.8	54.6
10.00	54.4	56.8
11.00	54.2	58.0
12.00	52.0	54.4
13.00	52.2	54.2
14.00	50.0	54.4
15.00	50.2	54.6
16.00	48.8	56.8
17.00	48.2	57.2
18.00	48.2	58.2
19.00	46.4	56.4
20.00	42.4	54.2
21.00	40.2	52.2
22.00	40.4	50.4
23.00	40.2	50.2
00.00	40.4	50.0
01.00	40.2	48.2
02.00	40.2	48.0
03.00	40.0	48.2
04.00	44.2	48.2
05.00	46.0	48.4
Lmax	54.4	58.2
Lmin	40.0	48.0
Ld	50.99	55.25
Ln	41.91	49.54
Leq	51.4	57.4

**\*\*End of Report\*\***



#### Note:

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**NOISE: (AMBIENT STANDARDS)**

Area Code	Category of Area	Limit in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Area	50	40

Note	Day time shall mean from 6:00 am and 10:00 pm
	Night time shall mean from in between 10:00 pm and 5:00 am
	Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority
	Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority
	*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which relatable to human being
	A "decibel" is a unit in which noise is measured
	"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
Leq: It is energy mean of the noise level over a specified period.	

*S.S. Afreen*  
Checked By  
S.S. Afreen  
Environmental Engineer

*R.K.R.*  
Authorised Signatory  
K. Ramakrishna Reddy  
Technical Manager



**Note:**

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thinbles 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
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# GLOBAL Environment & Mining Services

(Analytical Laboratory, Consulting Engineers, Mine designers, Geologist & Surveyors)

3<sup>rd</sup> Main Road, Basaveswara Badavane, HOSAPETE - 583201,

Dist., Bellary (Karnataka). Ph: +91-8394 651111, 229433

e-mail : [gems\\_hpt@yahoo.com](mailto:gems_hpt@yahoo.com), [gems\\_hpt@gmail.com](mailto:gems_hpt@gmail.com), Website: [www.globalmining.in](http://www.globalmining.in)



Certificate No: TC-5323

GEMS-LD/TF/23/01

Date: 11.02.2019

## Analysis Report of Drinking Water

1	Name of the Customer/Address	:	Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited., Extent: 1.1081 Ha. (2.7381 Acres) Re-Block No. 29, Re-Sy No. 120/10, Aryanada Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala State.
2	Sample Collected By	:	GLOBAL Environment & Mining Services
3	Sample type	:	Well Water
4	Name of the location	:	Buffer area (A1)
5	Date of Sample Collection	:	05.02.2019
6	Date of Sample Received	:	07.02.2019
7	Date of Sample Analyzed	:	11.02.2019
10	Sample Code	:	GEMS/GBSQAVPPL/WW/2019/135
11	ULR Number	:	ULR-TC532319000000091F




Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS : 10500 : 2012	
					Desirable Limits	Permissible Limits
1.	pH	APHA 22 <sup>nd</sup> Edition 2012 4500 B (Pg No. 4-92 to 4-96)	-	7.40	6.5 to 8.5	No Relaxation
2.	Conductivity	APHA 22 <sup>nd</sup> Edition 2012 2510 B (Pg No. 2-54)	µS/cm	144	-	-
3.	Turbidity (NTU)	APHA 22 <sup>nd</sup> Edition 2012 2130 B (Pg No. 2-14)	NTU	0.18	1	5
4.	Total Dissolved Solids	APHA 22 <sup>nd</sup> Edition 2012 2540 B (Pg No. 2-65)	mg/L	86	500	2000
5.	Calcium as Ca	APHA 22 <sup>nd</sup> Edition 2012 3500 Ca B (Pg No. 3-84)	mg/L	18	75	200
6.	Magnesium as Mg	APHA 22 <sup>nd</sup> Edition 2012 3500 B-Mg By Calculation	mg/L	6.40	30	100
7.	Total Suspended Solids	APHA 22 <sup>nd</sup> Edition 2012 2540 B (Pg No. 2-66 to 2-67)	mg/L	1.32	-	-
8.	Dissolved Oxygen	IS:3025 (part 38)- 1989, RA - 2014 Winkler titrimetric acid modification	mg/L	7.42	-	-
9.	BOD 3 days at 27° C	IS:3025 (part 44) - 1993, RA-2014,	mg/L	NIL	-	-
10.	COD as O <sub>2</sub>	APHA 22 <sup>nd</sup> Edition 2012 2540 B (Pg No. 5-19 to 5-20)	mg/L	NIL	-	-
11.	Dissolved Phosphate as P	IS:3025 (part 38)- 1989, RA - 2014, Stannous chloride method	mg/L	<0.01	-	-
12.	Sodium as Na	APHA 22 <sup>nd</sup> Edition 2012 Na 3500 B (Pg No. 3-97 to 3-98)	mg/L	8.58	-	-
13.	Potassium as K	APHA 22 <sup>nd</sup> Edition 2012 3500 B (Pg No. 3-87 to 3-88)	mg/L	0.54	-	-
14.	Total Hardness as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2012 2340 C (Pg No. 2-46)	mg/L	44.0	200	600
15.	Chloride as Cl	APHA 22 <sup>nd</sup> Edition 2012 4500 Cl (Pg No. 4-72)	mg/L	25.0	250	1000
16.	Total Iron as Fe	APHA 3500 B (Pg No. 3-77)	mg/L	0.10	0.30	No Relaxation
17.	Sulphate as SO <sub>4</sub>	APHA 22 <sup>nd</sup> Edition 2012 4500 SO <sub>4</sub> - E (Pg No. 4-190)	mg/L	82	200	400
18.	Fluoride as F	APHA 22 <sup>nd</sup> Edition 2012 4500 F-D (Pg No. 4-87 to 4-88)	mg/L	0.14	1	1.50
19.	Nitrate Nitrogen as NO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2012 4500 NO <sub>3</sub> E (Pg No. 4-125 to 4-127)	mg/L	5	45	No relaxation
20.	Total Alkalinity as CaCO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2320 B (Pg No. 2-35)	mg/L	30.4	200	600


### Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thinbles 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.

21.	Oil & Grease	APHA 22 <sup>nd</sup> Edition 2012 5520 B (Pg No 5-40 to 5-41)	mg/L	NIL		
22.	Total Coliform count*	APHA 22 <sup>nd</sup> Edition 2012 9222 B (Pg No 9-66) Membrane filter technique	MPN/ 100ml	Absent	Shall not be detectable in any 100 ml sample	-
23.	Escherichia coli count*	APHA 22 <sup>nd</sup> Edition 2012 9222 B (Pg No 9-66) Membrane filter technique	E.Coli/ 100ml	Absent	Shall not be detectable in any 100 ml sample	-

**\*\*End of report\*\***

  
**Analysed By**  
 Keerthana Yadav B.R  
 Chemist

  
**Checked By**  
 S.S. Afreen  
 Environmental Engineer

  
**Authorised Signatory**  
 K. Ramakrishna Reddy  
 Technical Manager



**Note:**

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thinbles 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
4. Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hospete jurisdiction only.





**National Accreditation Board for  
Testing and Calibration Laboratories**  
(A Constituent Board of Quality Council of India)



## **CERTIFICATE OF ACCREDITATION**

### **GLOBAL ENVIRONMENT & MINING SERVICES**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2005**

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

for its facilities at

3rd Cross, 60 feet Main Road, 16th Ward, Basaveshwara Badavane,  
Hospet, Karnataka

in the field of

**TESTING**



Certificate Number TC-5323

Issue Date 12/10/2017

Valid Until 11/10/2019

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Signed for and on behalf of NABL

N. Venkateswaran  
Program Director



89076970100030000405

Anil Relia  
Chief Executive Officer

# PLATES





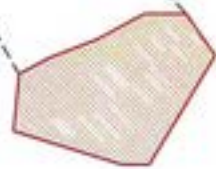
**INDIA**



**KERALA STATE**



**THIRUVANANTHAPURAM DISTRICT**



**I N D E X**



LEASE BOUNDARY



DISTRICT BOUNDARY



NATIONAL HIGHWAY WITH NO.



MAJOR ROADS



OTHER ROADS



STATE CAPITAL



TALUK HEADQUARTER



OTHER TOWNS



RAILWAY TRACK



WATER BODY



TOURIST CENTER

PLATE NO.1

**GRANITE BUILDING STONE QUARRY OF  
M/s. Adani Vizhinjam Port Private Limited.**

Re-Sy. Block No. 29, Re-Sy. Nos. 120/10, Municipal Village, Neehunnangal Taluk,  
Thiruvananthapuram District, Kerala.

**ADMINISTRATIVE PLAN**

Title

Scale

NTS

Extent : 1.0811ha. (2.7081 Acre)

Certified that the above plan is correct.

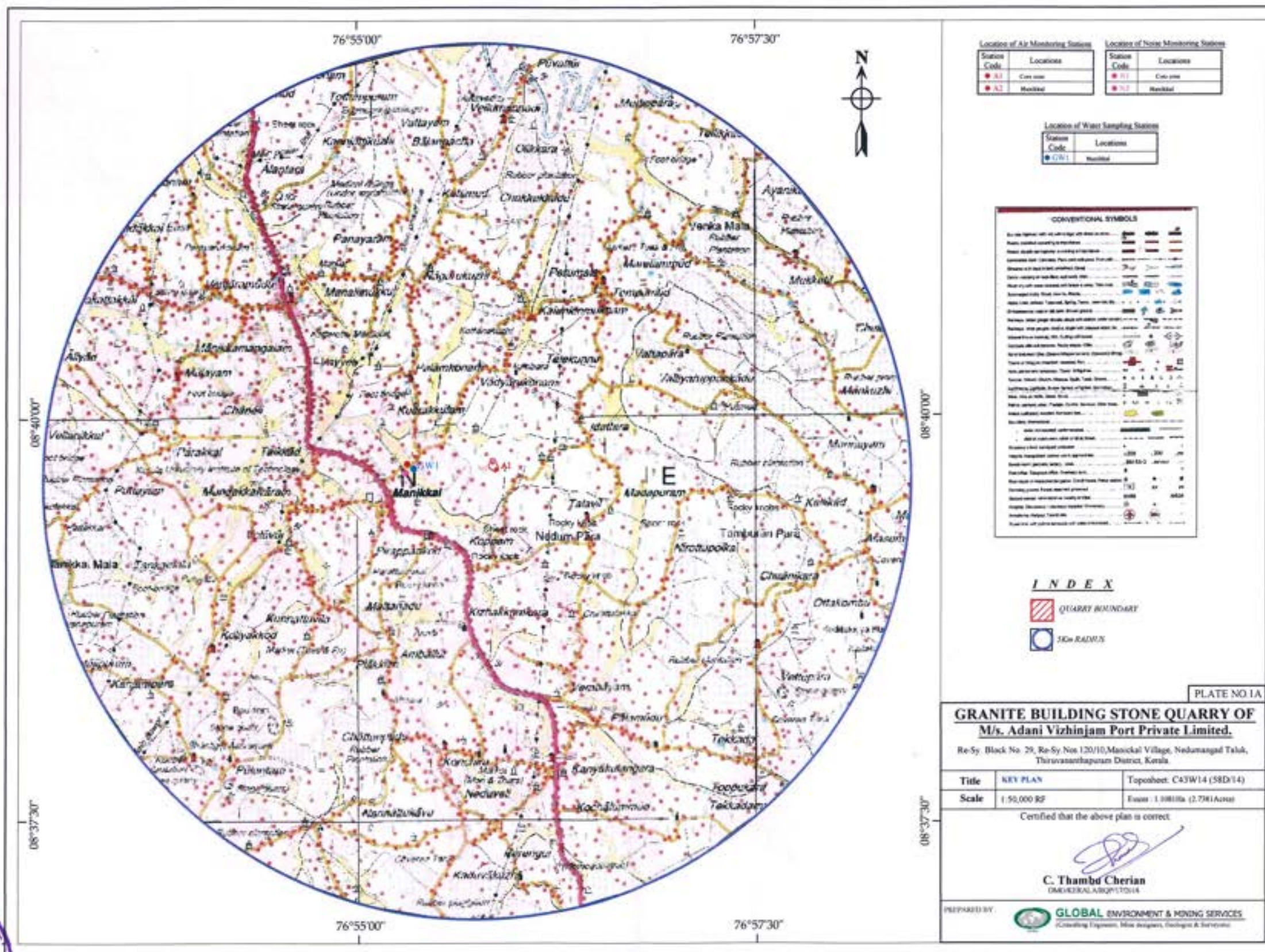
**C. Thambi Chorian**  
DISTRICT ENGINEER

PRO/P&B/13 BY



**GLOBAL ENVIRONMENT & MINING SERVICES**  
Consulting Engineers, Mineralogists, Geologists & Surveyors







DISTRICT : THIRUVANANTHAPURAM

TALUK  
: NEDUMANGAD

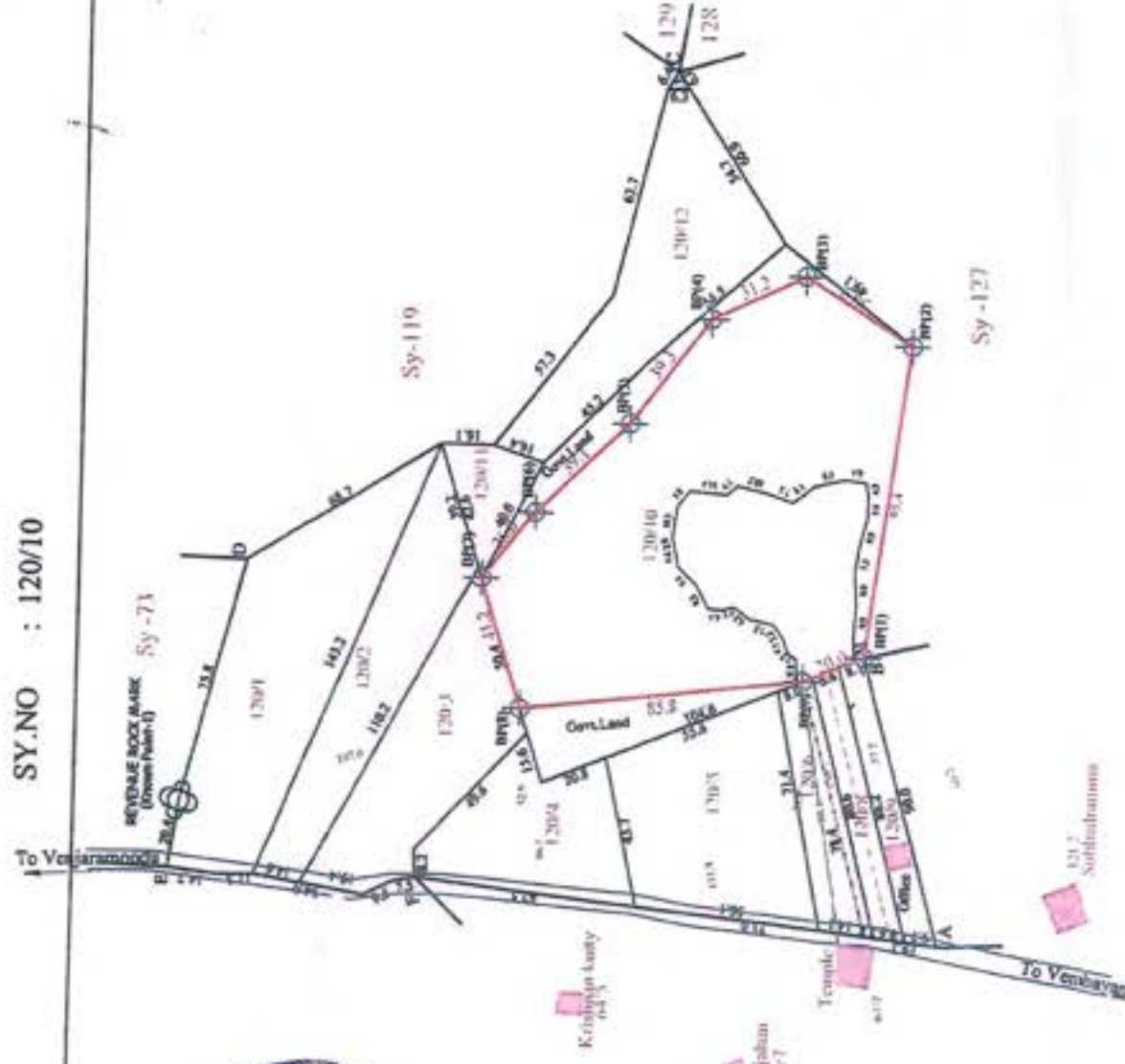
VILLAGE : MANICKAL

BLOCK No : 29

SY.NO : 120/10

## SURVEY MAP

FILE NO.:



റീസർവെ 120/10 ൽ ചെന്നാനുമതിക്കായി ആവശ്യപ്പെടുന്ന സ്ഥലം 1.081 H

വർഷം	പ്രതിവർഷം	ആകെ
2009-10	120/10	0.8159 H

റീസർവെ 120/10 ൽ വന്നാൽമതിക്കായി ആവശ്യപ്പെടുന്ന സ്ഥലത്തിന്റെ ചുറ്റുമുള്ള ബഹർ എരിയ 0.2922 H

പഞ്ചായത്ത് രോഡ്

പ്രൊഫ. സി. ജി. ജോർജ്ജ്

പരിസ്ഥിതി പ്രദേശങ്ങളിലെ വീട്

പാറ മാർക്ക് കാണുന്ന സ്റ്റേഷനുകൾ

റീസർവ്വെ 120/10  
സ്റ്റേറ്റ് റെവന്യൂ ഡിപ്പാർട്ട്മെന്റ്

വനാനുജ്ഞയ്ക്കായി ആവശ്യപ്പെടുന്ന സ്ഥലത്ത് മുമ്പ് പാറ വന്നു ചെൽത സ്ഥലം	0.2387 H
----------------------------------------------------------------------	----------

GPS READING		
BOUNDARY PILLAR	LATITUDE	LONGITUDE
BP1	8°39'35.12"N	76°55'42.96"E
BP2	8°39'33.51"N	76°55'45.60"E
BP3	8°39'34.22"N	76°55'46.62"E
BP4	8°39'35.23"N	76°55'46.62"E
BP5	8°39'36.38"N	76°55'46.01"E
BP6	8°39'37.55"N	76°55'45.56"E
BP7	8°39'38.30"N	76°55'45.17"E
BP8	8°39'38.44"N	76°55'43.79"E
BP9	8°39'35.77"N	76°55'42.96"E

PROPERTY DETAILS					
Re Sy NO:	N O C AREA	UN'USSED AREA	BUFFER AREA	MINING AREA	LEASE AREA
120/10	1.2940 H	0.1859 H	0.2922 H	0.8159 H	1.1094 H

## PROPERTY DETAILS

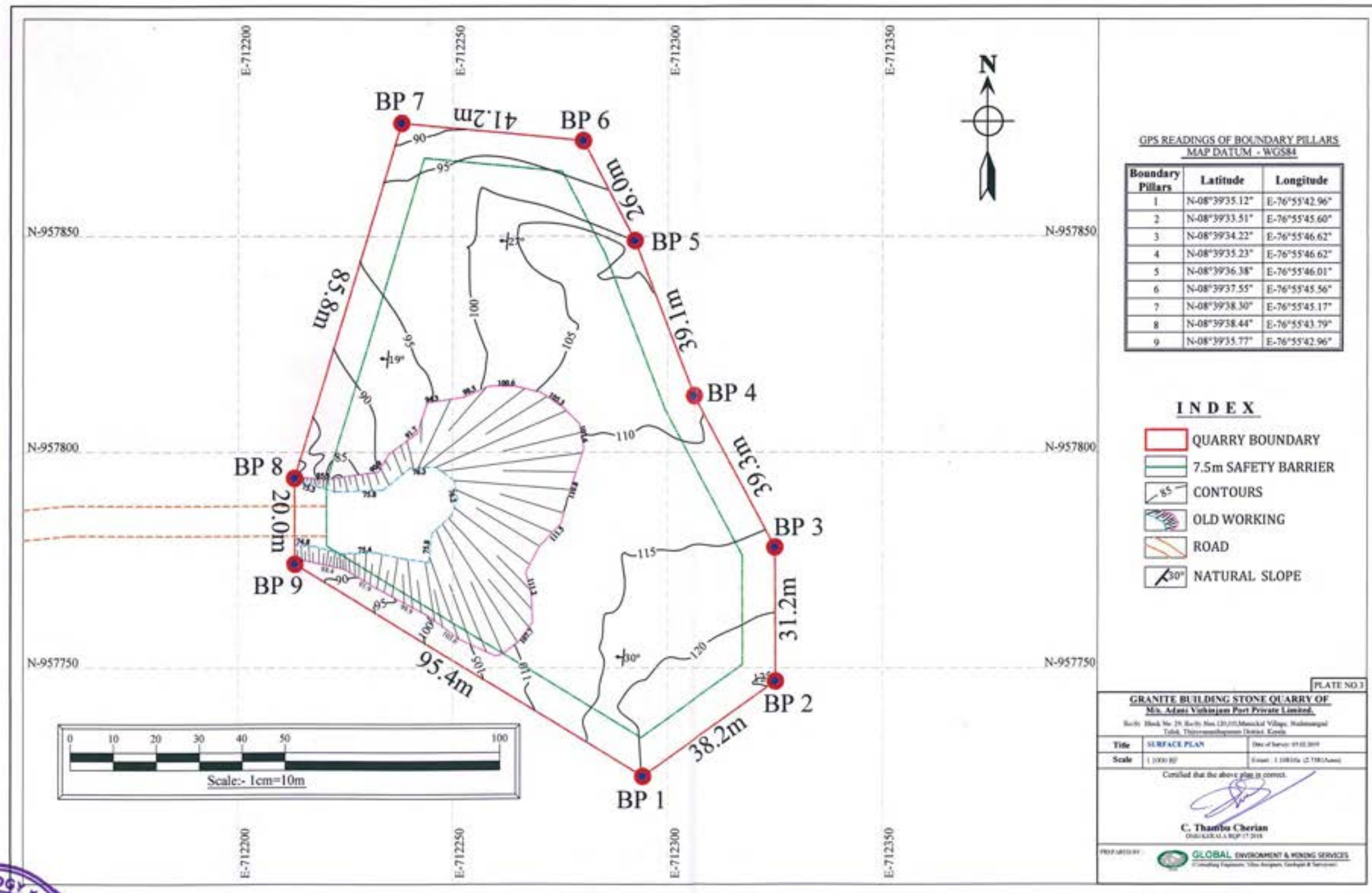
Applicant Designation &amp; Address:

M/s C.E.O ADANI VIZHINJAM PORT Pvt. Ltd.  
2nd Floor, Vipanchika Tower,  
Thycaud, Thiruvananthapuram.

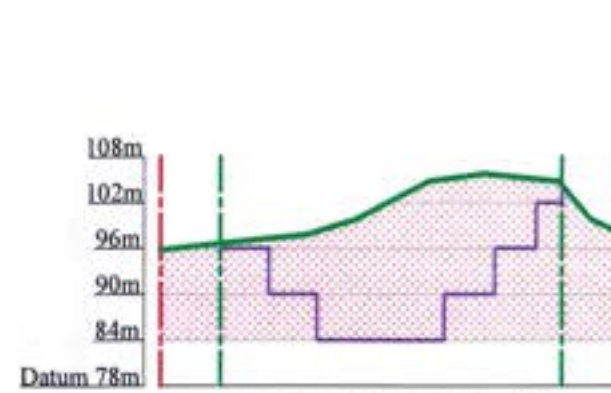
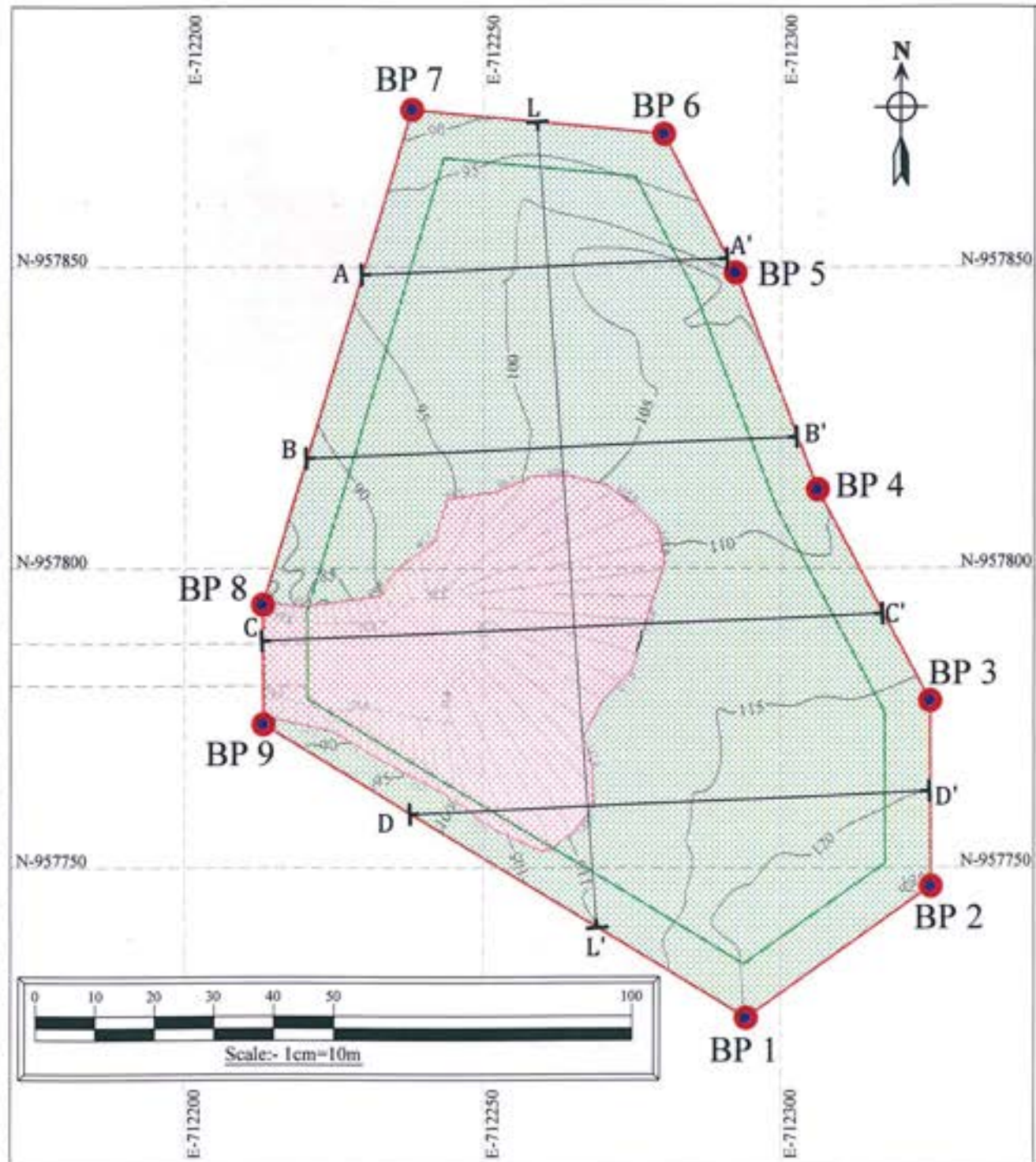
Scale 1 cm = 20 m

എ.പി.ജെ. അബ്ദുൽ ഖാദർ

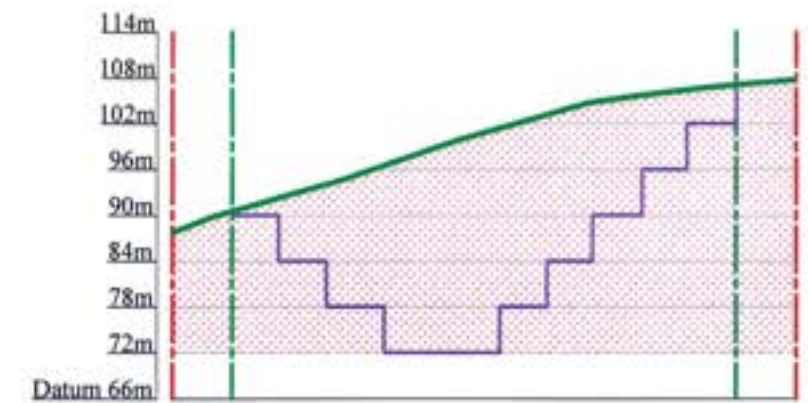




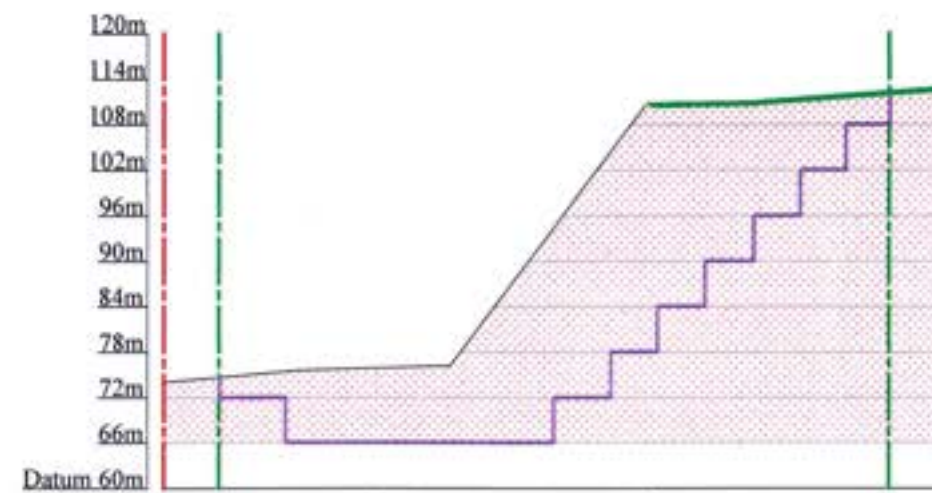




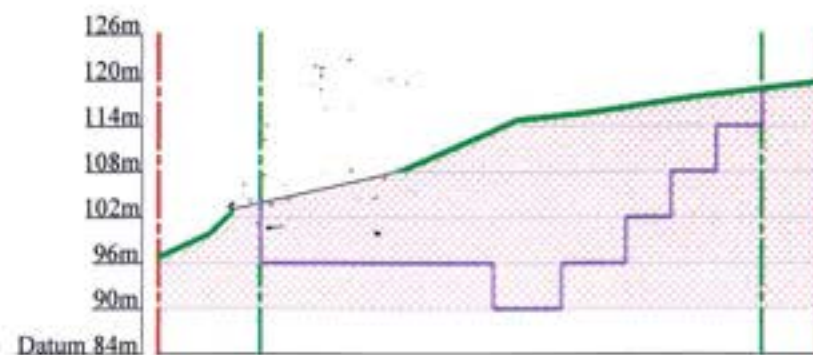
SECTION ON A-A'



SECTION ON B-B'



SECTION ON C-C'



SECTION ON D-D'



LONGITUDINAL SECTION ON L-L'

# INDEX

- QUARRY BOUNDARY
- 7.5m SAFETY BARRIER
- SOIL COVER
- GRANITE
- CONTOURS
- ROAD
- SECTION LINE
- ULTIMATE PIT LIMIT
- OLD WORKING

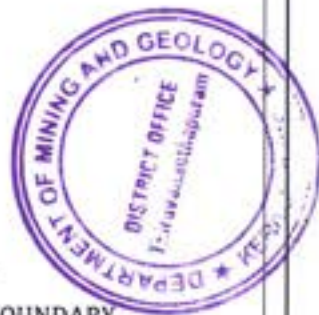


PLATE NO.4

## GRANITE BUILDING STONE QUARRY OF M/s. Adani Vizhinjam Port Private Limited.

Re-Sy. Block No. 29, Re-Sy. Nos. 120/10, Manickal Village, Nedumangal Taluk,  
Thiruvananthapuram District, Kerala.

Title: GEOLOGICAL PLAN & CROSS SECTIONS

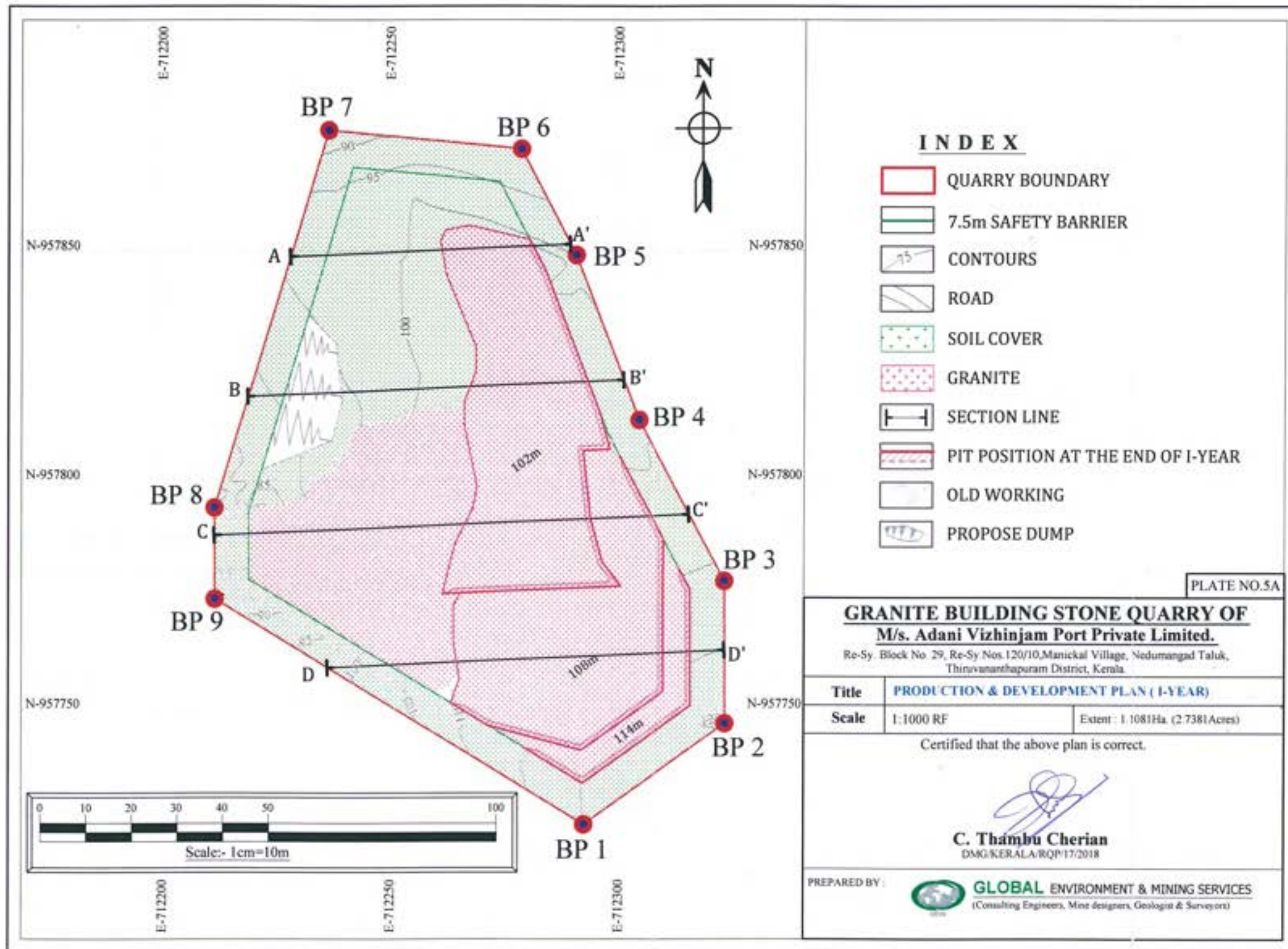
Scale: 1:1000 RF Extent: 1.1081Ha. (2.7381Acres)

Certified that the above plan & section is correct.

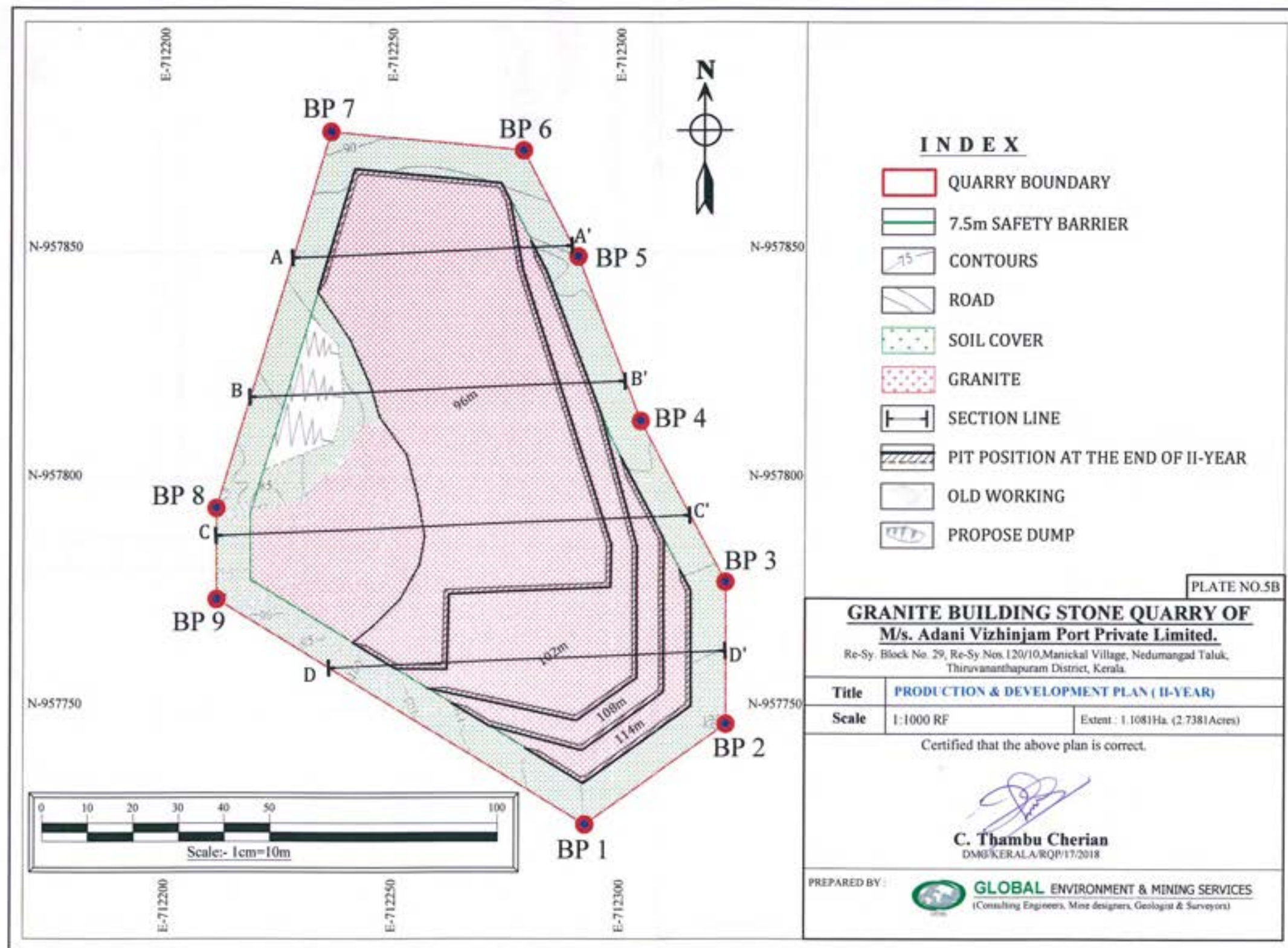
C. Thambu Cherian  
DMG/KERALA/RQP/17/2018

PREPARED BY: GLOBAL ENVIRONMENT & MINING SERVICES  
(Consulting Engineers, Mine designers, Geologists & Surveyors)

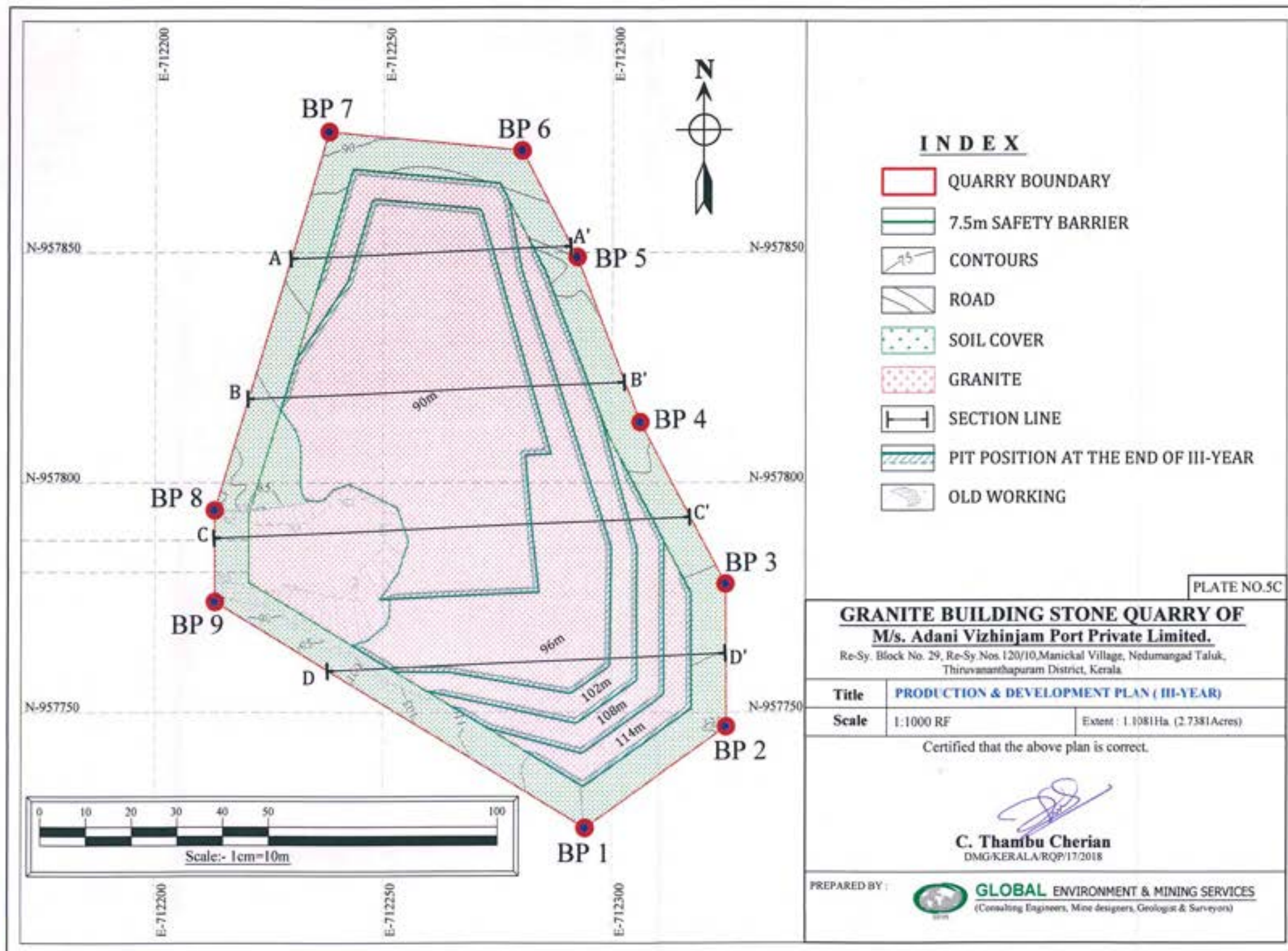




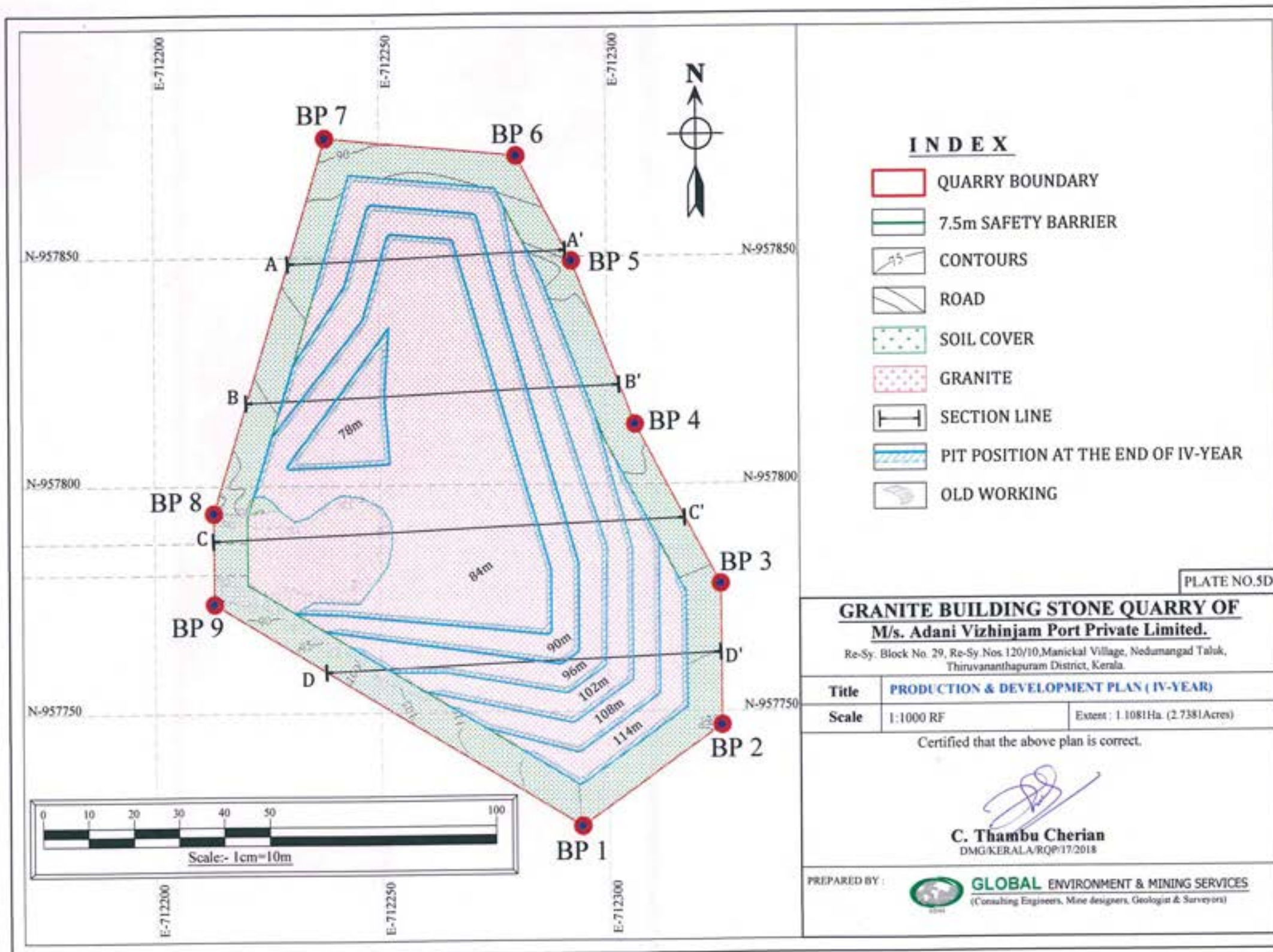




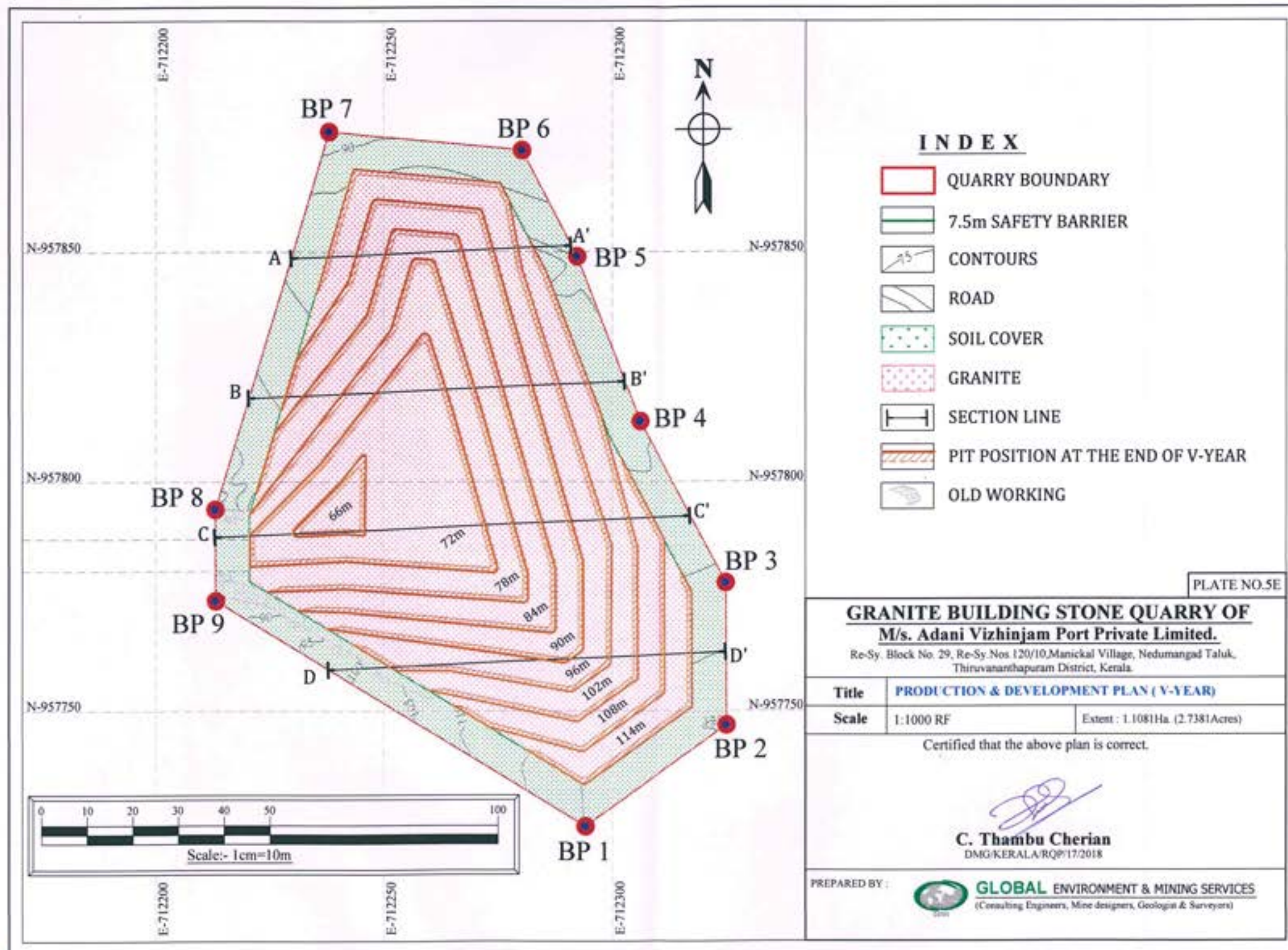




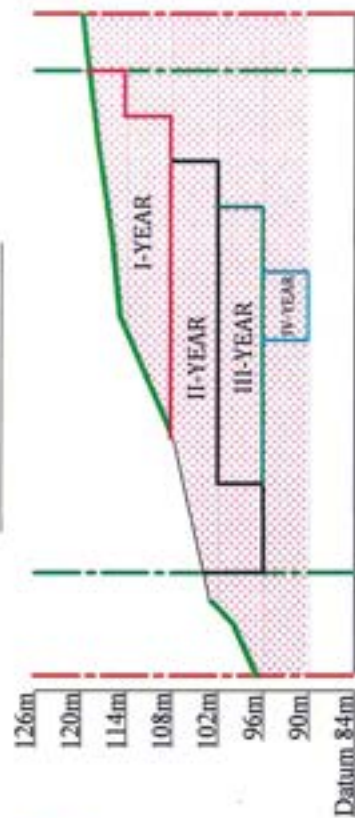
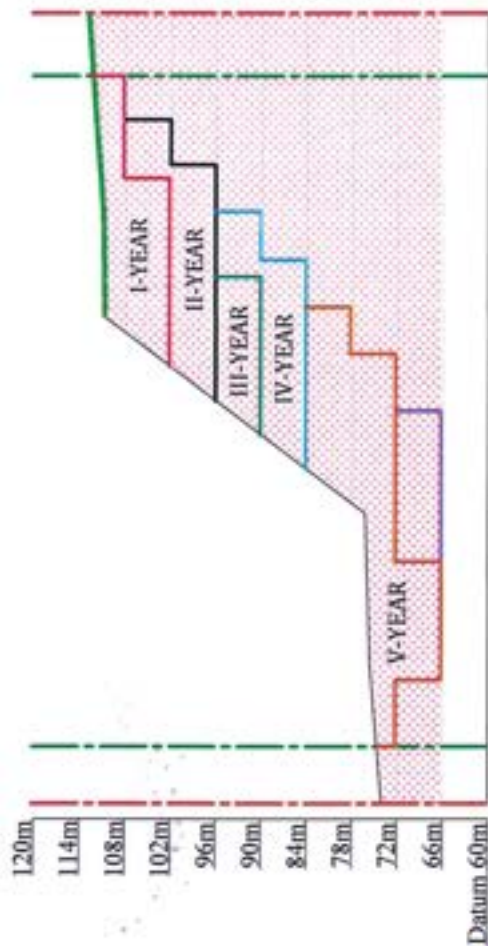
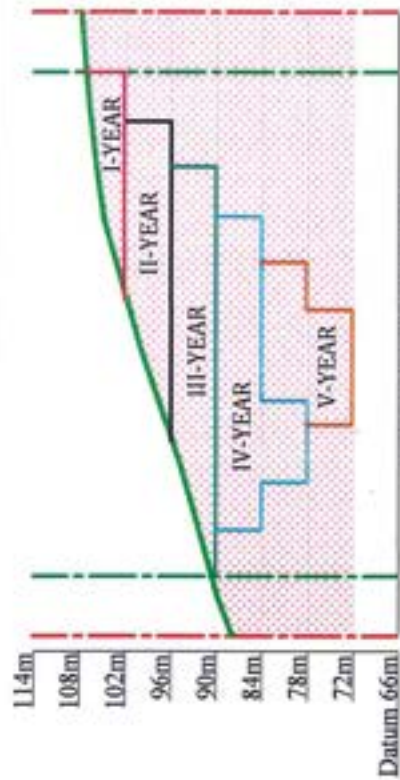
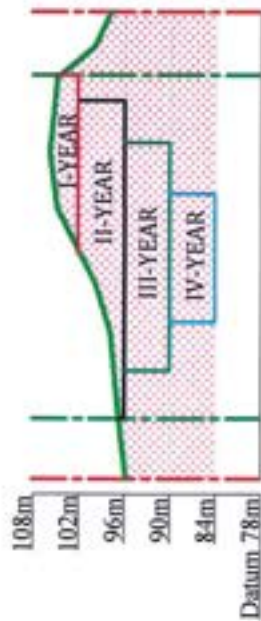












# I N D E X

- QUARRY BOUNDARY
- 7.5M SAFETY BARRIER
- ULTIMATE PIT LIMIT
- SOIL COVER
- GRANITE
- PIT POSITION AT THE END OF I-YEAR
- PIT POSITION AT THE END OF II-YEAR
- PIT POSITION AT THE END OF III-YEAR
- PIT POSITION AT THE END OF IV-YEAR
- PIT POSITION AT THE END OF V-YEAR



PLATE NO. 6

## GRANITE BUILDING STONE QUARRY OF M/s. Adani Vizhinjam Port Private Limited.

Block No. 29, Block Area 120 Hectares, Vizhinjam, Thiruvananthapuram District, Kerala.

### PRODUCTION & DEVELOPMENT SECTIONS

Title	1:1000 RF
Scale	Exam: 1:1000 (2:700)

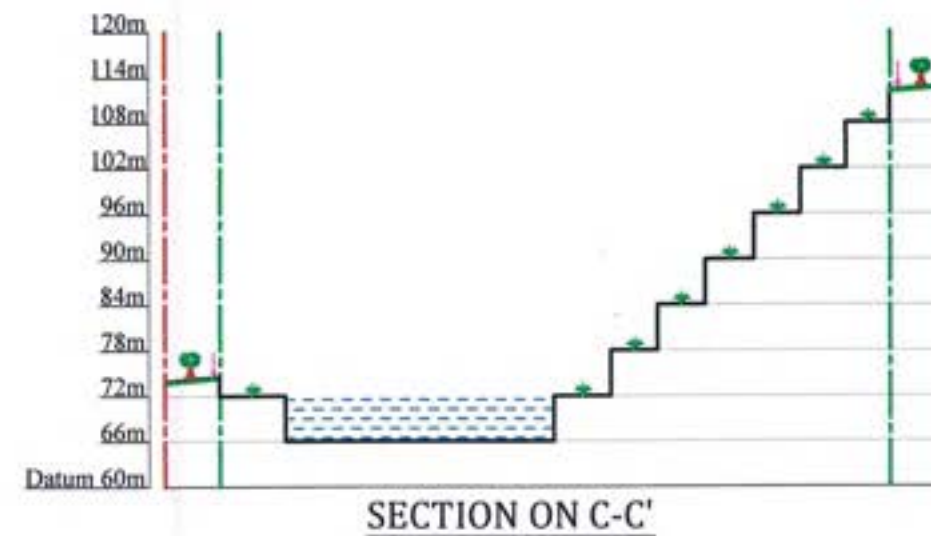
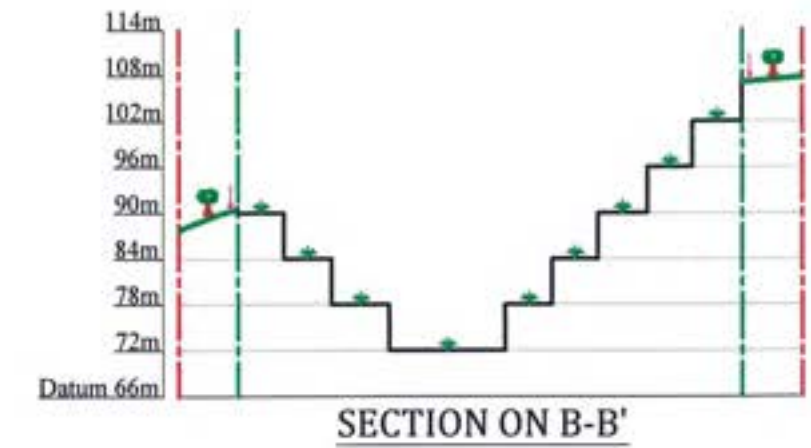
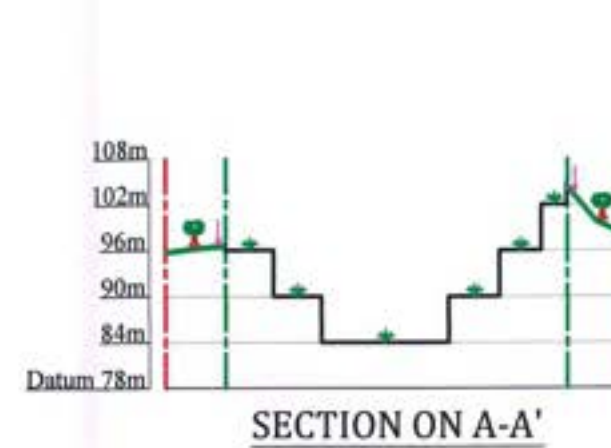
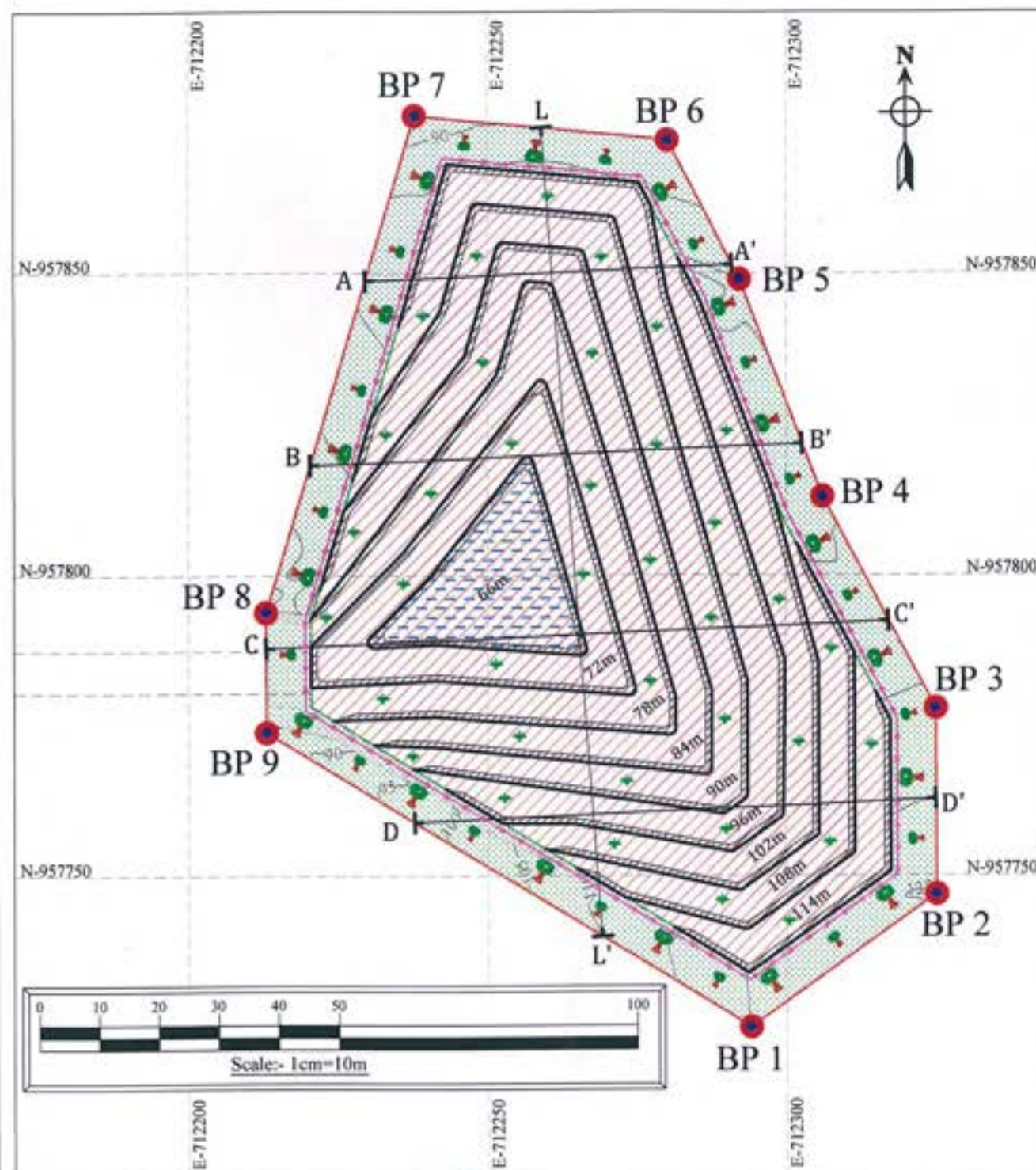
Certified that the above plan is correct.

C. Thambbi Chelvan  
ENGINEER (MINE)

PREPARED BY

GLOBAL ENVIRONMENT & MINING SERVICES  
Consulting Engineers, Mineral Engineers, Geologists & Surveyors





**LAND USE AT CONCEPTUAL STAGE (Ha.)**

PARTICULARS	AREA IN Ha.
AREA FOR QUARRYING	0.8159
AREA FOR SAFETY BARRIER	0.2922
<b>TOTAL</b>	<b>1.1081</b>

#### INDEX

- QUARRY BOUNDARY
- 7.5m BUFFER ZONE PLANTATIONS
- CONTOURS
- ROAD
- PLANTATION IN BENCHES
- SECTION LINE
- ULTIMATE BENCHES
- WATER POND
- FENCING

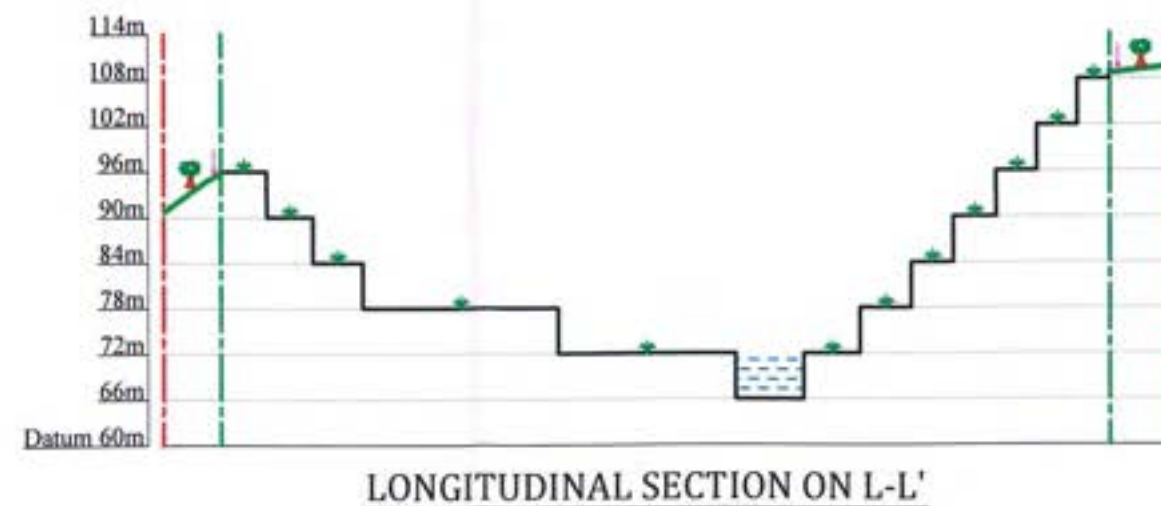
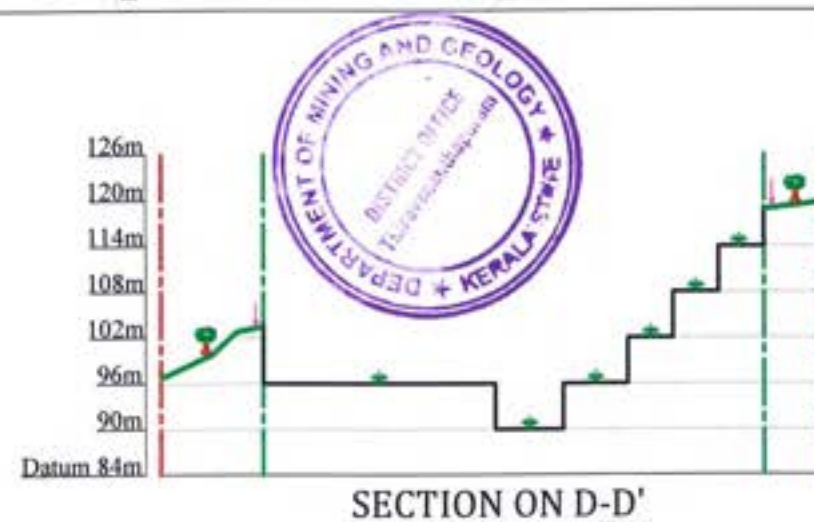


PLATE NO.7

#### GRANITE BUILDING STONE QUARRY OF M/s. Adani Vizhinjam Port Private Limited.

Re-Sy. Block No. 29, Re-Sy. Nos.120/10, Manickal Village, Nedumangad Taluk,  
Thiruvananthapuram District, Kerala

<b>Title</b>	CONCEPTUAL PLAN & SECTIONS
<b>Scale</b>	1:1000 RF

Extent : 1.1081Ha. (2.7381Acres)

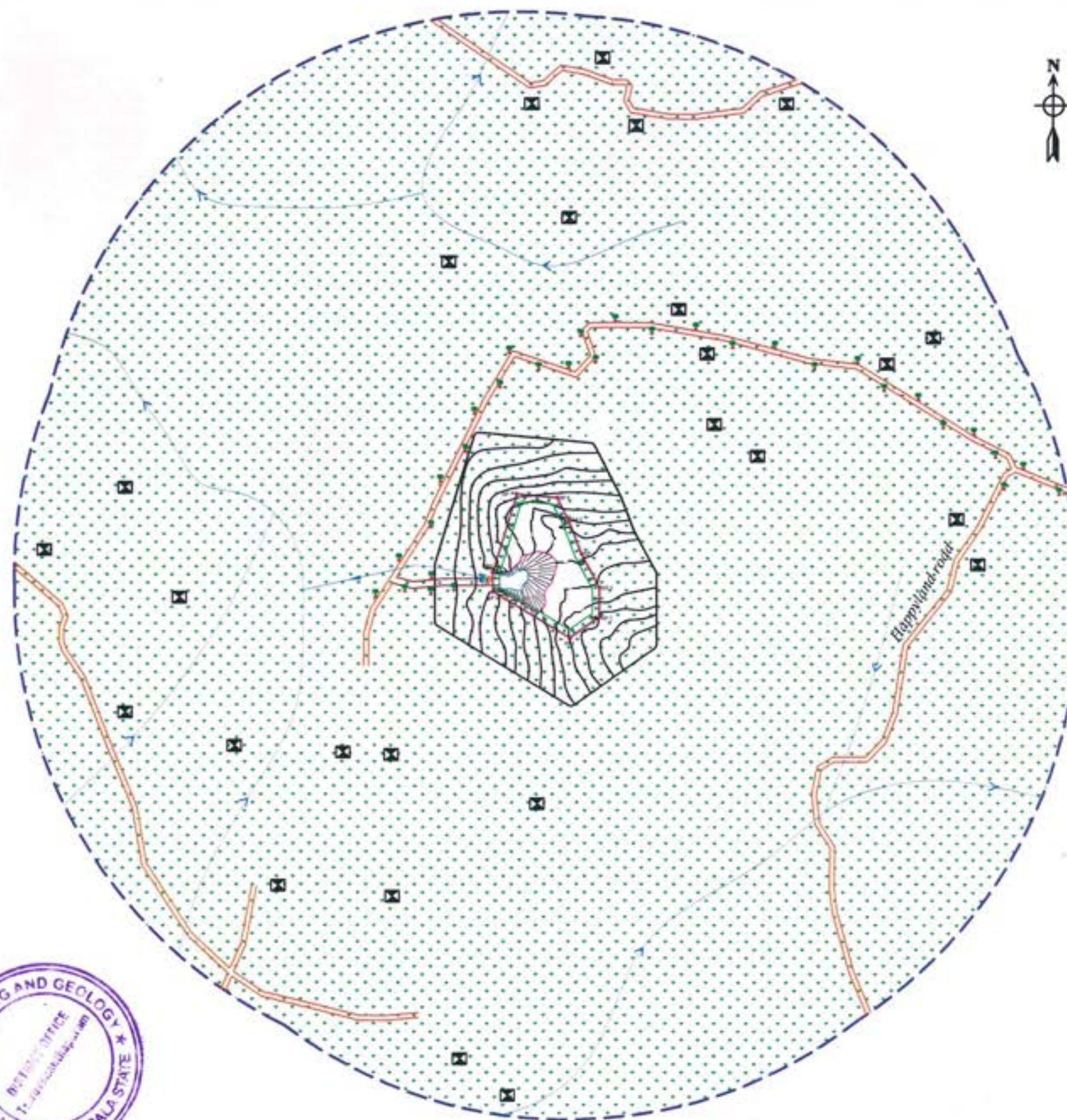
Certified that the above plan & section is correct.

**C. Thambu Cherian**  
DMG/KERALA/RQP/17/2018

PREPARED BY **GLOBAL ENVIRONMENT & MINING SERVICES**  
(Consulting Engineers, Mine Designers, Geologist & Surveyors)



MAP SHOWING ALL FEATURES (SITE & SURROUNDINGS WITHIN 500m. RADIUS) - M/s. Adani Vizhinjam Port Private Limited.



## INDEX

- QUARRY BOUNDARY
- 7.5m SAFETY BARRIER
- CONTOURS
- VILLAGE ROAD
- PRIVATE ROAD
- 60m LIMIT LINE
- 500m LIMIT LINE
- PRIVATE LAND
- PROPOSED PLANTATIONS
- GARLAND DRAIN
- SILT SETTLING TANK
- RAIN WATER HARVESTING POND
- NATURAL WATER COURSE
- HOUSES / SHEDS

PLATE NO.8

### GRANITE BUILDING STONE QUARRY OF M/s. Adani Vizhinjam Port Private Limited.

Re-Sy. Block No. 29, Re-Sy Nos. 120/10, Marickal Village, Nedumangal Taluk,  
Thiruvananthapuram District, Kerala

Title	ENVIRONMENT PLAN / DRAINAGE PLAN (Map showing all features site & surroundings within 500m radius)	
Scale	1:5000 RP	Extent : 1.1081 Ha. (2.7381 Acres)

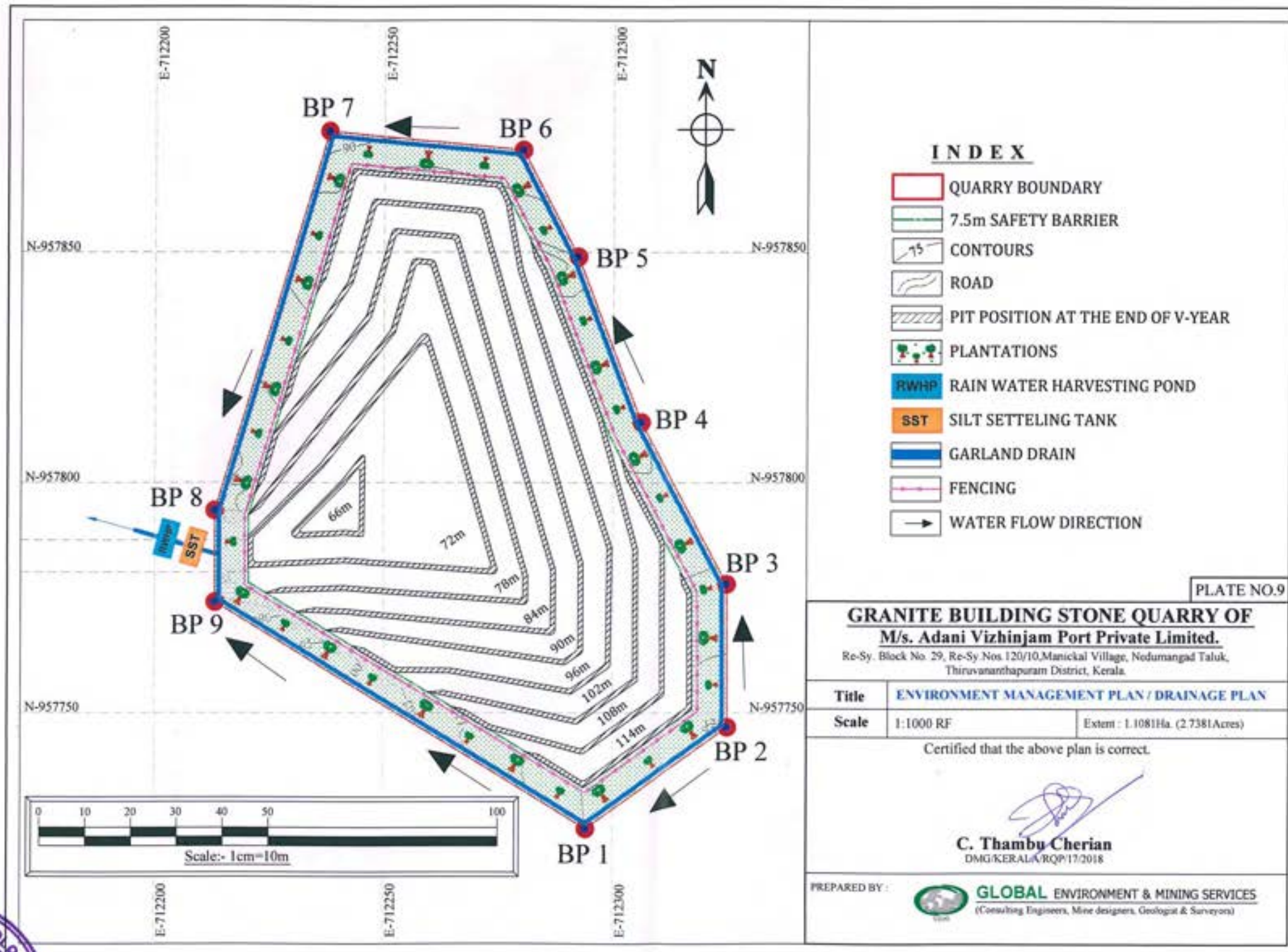
Certified that the above plan is correct.

C. Thambu Cherian  
DMG KERALA RDP/17/2018

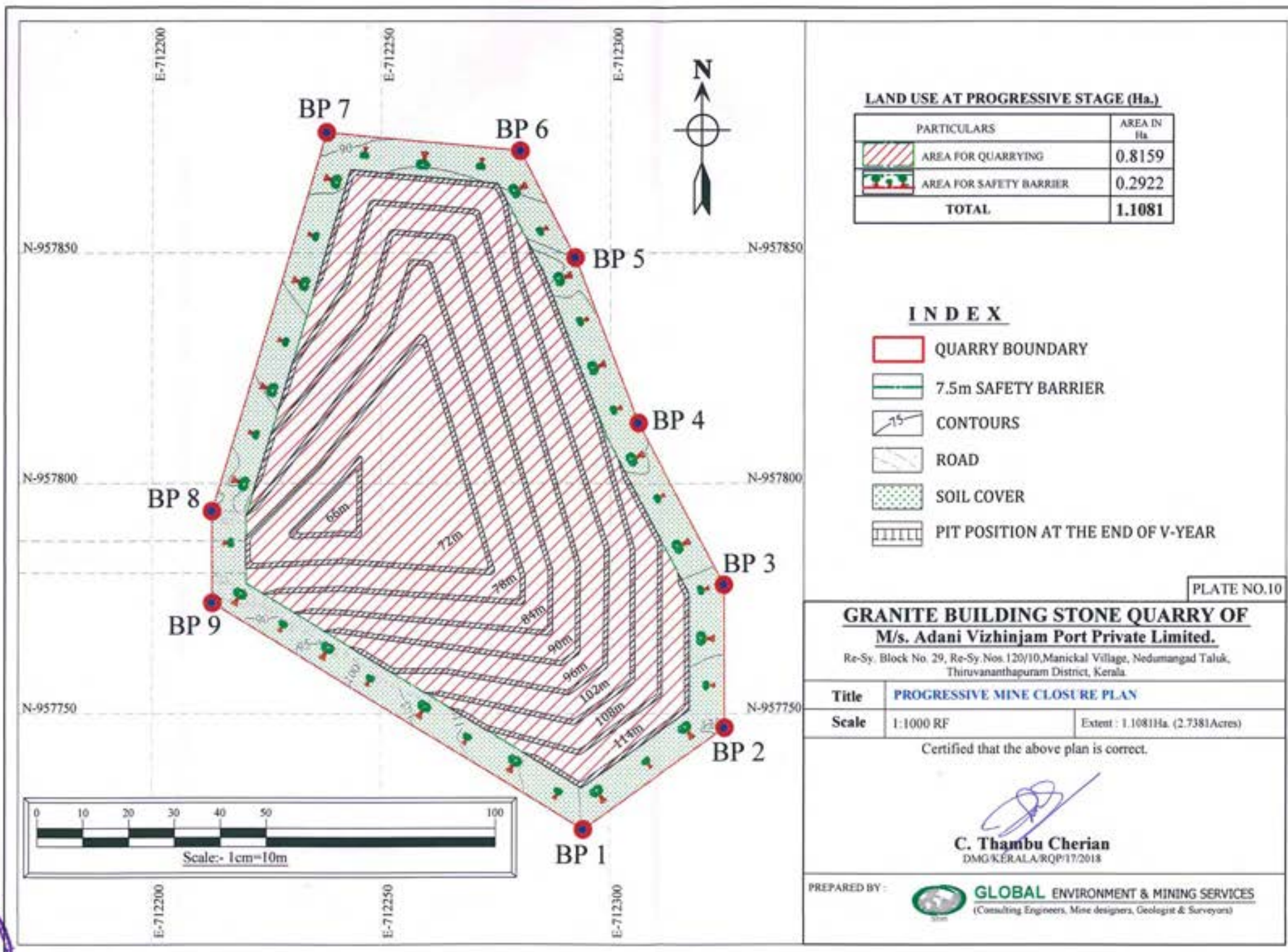
PREPARED BY: GLOBAL ENVIRONMENT & MINING SERVICES  
(Consulting Engineers, Map Designers, Geologists & Surveyors)

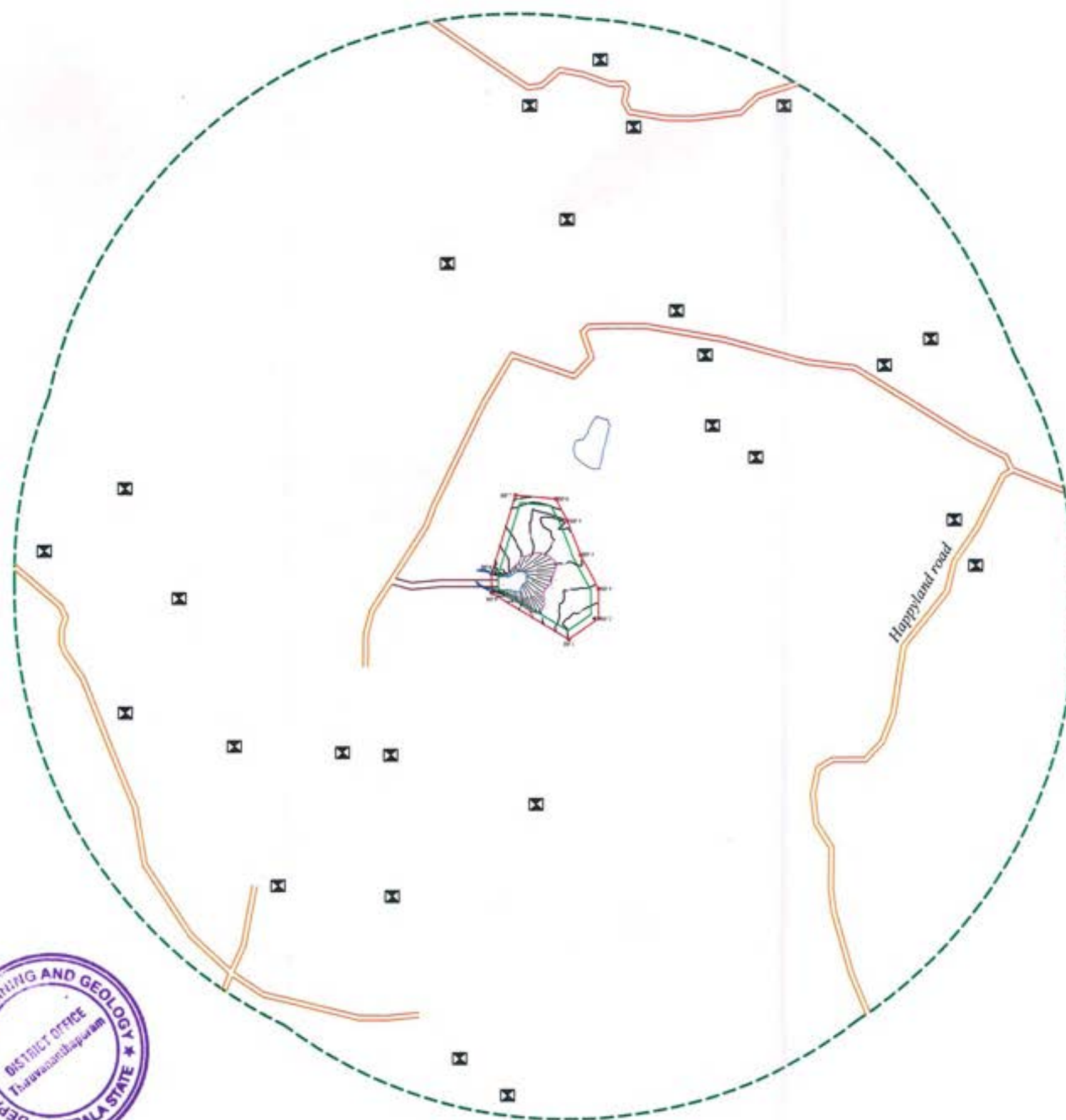












# INDEX

-  QUARRY BOUNDARY
-  7.5m SAFETY BARRIER
-  CONTOURS
-  VILLAGE ROAD
-  PRIVATE ROAD
-  500m LIMIT LINE
-  HOUSES / BUILDINGS
-  OLD PIT
-  OLD WORKING



PLATE NO.11


## GRANITE BUILDING STONE QUARRY OF M/s. Adani Vizhinjam Port Private Limited.

Re-Sy. Block No. 29, Re-Sy Nos 120/10, Marickal Village, Nedamangad Taluk,  
Thiruvananthapuram District, Kerala

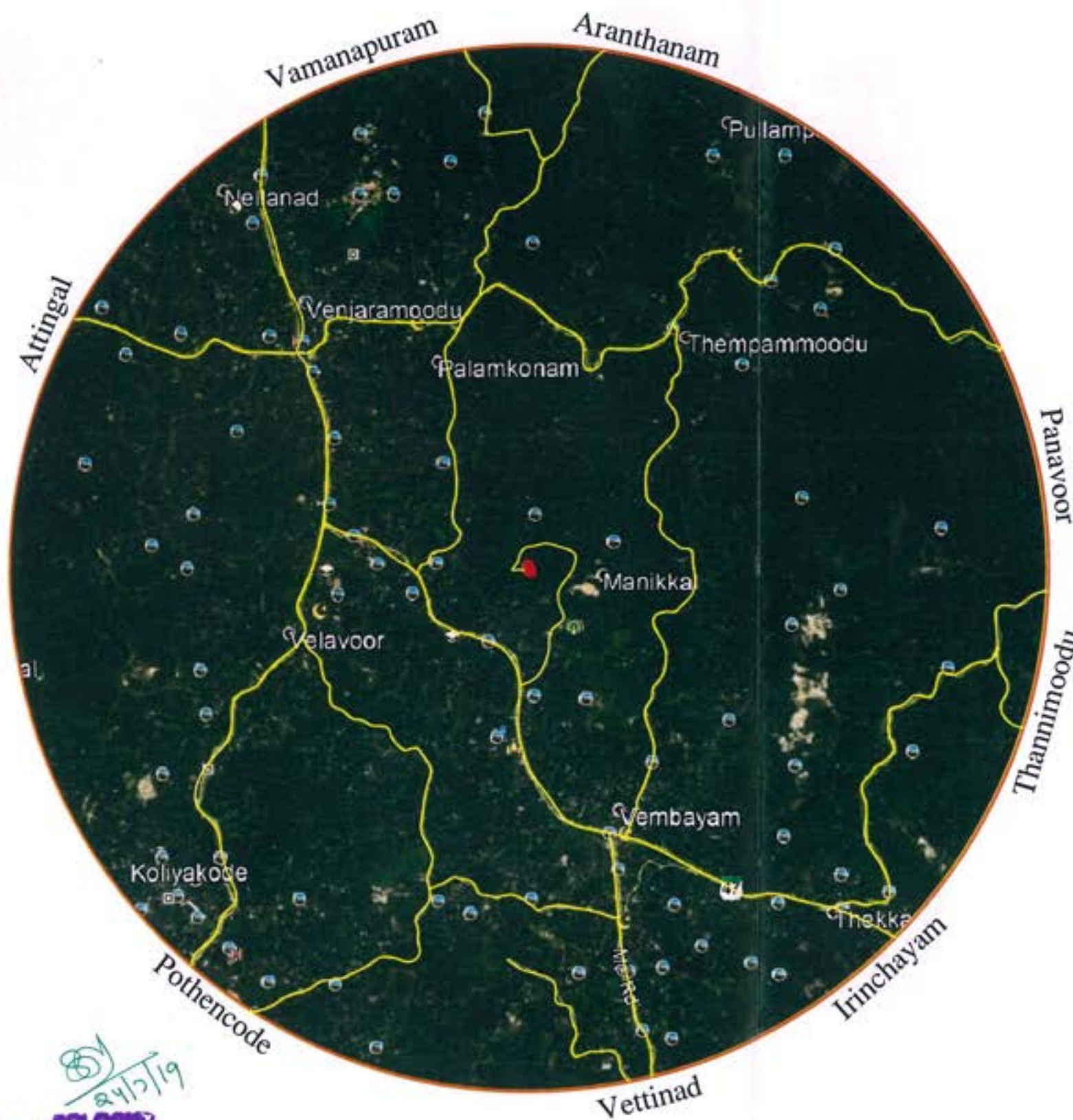
Title	INFRASTRUCTURE PLAN	
Scale	1:5000 RF	Extent : 1.1081 Ha (2.7381 Acres)

Certified that the above plan is correct.


**C. Thambu Cherian**  
DMG/KERALA/906/17/2018


PREPARED BY:  **GLOBAL ENVIRONMENT & MINING SERVICES**  
(Consulting Engineers, Mine designers, Geologist & Surveyors)





## INDEX

 QUARRY BOUNDARY

 5Km RADIUS

 TRANSPORTATION ROAD

PLATE NO.12

**GRANITE BUILDING STONE QUARRY OF**  
**M/s. Adani Varinjani Part Private Limited,**  
 Re-Sy. Block No. 29, Re-Sy. Nos. 120/10, Manickal Village, Nedumangal Taluk,  
 Thiruvananthapuram District, Kerala.

<b>Title</b>	BUFFER MAP (5Km) SHOWING SITE LOCATION & TRANSPORTATION ROUTE MAP	
<b>Scale</b>	1:50,000 RF	Extent : 1.1081 Ha (2.7381 Acres)

Certified that the above plan is correct.

  
**C. Thambu Cherian**  
 DMG/KERALA/RQP/17/2018

PREPARED BY:  **GLOBAL ENVIRONMENT & MINING SERVICES**  
 (Consulting Engineers, Mine designers, Geologist & Surveyors)



  
**24/12/19**  
**GEOLOGIST**  
**DISTRICT OFFICE**  
**DPT. OF MINING & GEOLOGY**  
**THIRUVANANTHAPURAM**

**Annexure B: Renewed NoC from  
District Collector, Thiruvananthapuram**



തിരുവനന്തപുരം ജില്ലാകളക്ടറുടെ നടപടിക്രമം

(ഹാജർ: കെ.ഗോപാലകൃഷ്ണൻ.ഐ.എ.എസ്)

ബി7-127329/2018

തീയതി: 04/01/2020

വിഷയം : സർക്കാർ പാറ ഖനനം - നിരാക്ഷേപ സാക്ഷ്യപത്രം -, കാലാവധി ദീർഘിപ്പിച്ച് ഉത്തരവാകുന്നത് - സംബന്ധിച്ച്.

- സൂചന : 1. അദാനി വിഴിഞ്ഞം പോർട്ട് പ്രൈവറ്റ് ലിമിറ്റഡ് കമ്പനി MD&CEO യുടെ 10/12/2019 ലെ AVPPL/GOK/2019-20/972 നമ്പർ കത്ത്
2. ഈ കാര്യലയത്തിൽ നിന്ന് 13/07/2018 ന് അനുവദിച്ച ബി7-127329/18 നമ്പർ നിരാക്ഷേപ സാക്ഷ്യപത്രം

വിഴിഞ്ഞം തുറമുഖ നിർമ്മാണത്തിന് പാറ ലഭ്യമാക്കുന്നതിന് വേണ്ടി മാണിക്കൽ വില്ലേജിലെ ബ്ലോക്ക് നം.29 ൽ റീസർവ്വെ 120/10 ൽ ഉൾപ്പെട്ട 1.29.40 ഹെക്ടർ വിസ്തീർണ്ണമുള്ള സർക്കാർ ഭൂമിയിലെ പാറ ലീസിന് എടുത്ത് ഖനനം ചെയ്യുന്നതിന് ചീഫ് എക്സിക്യൂട്ടീവ് ഓഫീസർ അദാനി വിഴിഞ്ഞം പോർട്ട് പ്രൈവറ്റ് ലിമിറ്റഡിന്റെ പേർക്ക് 13/07/2018 ന് ബി7-127329/18 നമ്പർ നിരാക്ഷേപസാക്ഷ്യപത്രം അനുവദിച്ചിട്ടുള്ളതാണ്. നിരാക്ഷേപസാക്ഷ്യപത്രം അനുവദിച്ച തീയതി മുതൽ 6 മാസത്തിനുള്ളിൽ പാരിസ്ഥിതിക അനുമതി നേടിയിരിക്കണമെന്ന് ടി നിരാക്ഷേപസാക്ഷ്യപത്രത്തിൽ വ്യവസ്ഥ ചെയ്തിട്ടുള്ളതാണ്. എന്നാൽ ഡിമാർക്കേഷൻ സൂച്ച് , ലറ്റർ ഓഫ് ഇൻഡന്റ്, മൈനിംഗ് പ്ലാൻ അപ്രൂവൽ എന്നിവ ലഭിക്കാൻ ഉണ്ടായ കാലതാമസം മൂലം പാരിസ്ഥിതിക അനുമതിയ്ക്കുള്ള അപേക്ഷ 6 മാസത്തിനകം സമർപ്പിക്കാൻ കഴിഞ്ഞിട്ടില്ലെന്നും ആയതിനാൽ നിരാക്ഷേപ സാക്ഷ്യപത്രത്തിന്റെ കാലാവധി ദീർഘിപ്പിച്ചുനൽകണമെന്നും കാണിച്ച് സൂചന(1) പ്രകാരം അപേക്ഷിച്ചിട്ടുള്ളതാണ്.

ഈ സാഹചര്യത്തിൽ ഈ കാര്യാലയത്തിൽ നിന്നും 13/07/18 ന് ചീഫ് എക്സിക്യൂട്ടീവ് ഓഫീസർ അദാനി വിഴിഞ്ഞം പോർട്ട് പ്രൈവറ്റ് ലിമിറ്റഡിന്റെ പേരിൽ അനുവദിച്ച നിരാക്ഷേപ സാക്ഷ്യപത്രത്തിലെ രണ്ടാമത്തെ നിബന്ധന പ്രകാരം പാരിസ്ഥിതിക അനുമതിക്ക് അപേക്ഷ നൽകുന്നതിനുള്ള കാലാവധി 31/03/2020 വരെ ദീർഘിപ്പിച്ച് ഇതിനാൽ ഉത്തരവാകുന്നു.

ഒപ്പ്

ജില്ലാ കളക്ടർ



അംഗീകാരത്തോടെ


ഭൂമിയർ സൂപ്രണ്ട്  
ജില്ലാകളക്ടർക്കുവേണ്ടി

ചീഫ് എക്സിക്യൂട്ടീവ് ഓഫീസർ അദാനി വിഴിഞ്ഞം പോർട്ട് പ്രൈവറ്റ് ലിമിറ്റഡ്

- പകർപ്പ്: 1. ഡയറക്ടർ, മൈനിംഗ് ആന്റ് ജിയോളജി, തിരുവനന്തപുരം
2. ജില്ലാ ജിയോളജിസ്റ്റ്, തിരുവനന്തപുരം
3. തഹസിൽദാർ, നെടുമങ്ങാട്



## **Annexure C: EMMC Structure at AVPPL**

	<b>Adani Vizhinjam Port Private Limited (AVPPL)</b>	<b>From: October 2021 To: March 2022</b>
<b>Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District</b>		

## Annexure C

### Environmental Management and Monitoring Cell (EMMC) Structure:

S. No.	Name	Designation	Role	Experience (In Years)	Qualification
1.	Hebin C	Manager	Head – Environment	15	MS, Oceanography & Coastal Area Studies
2.	Vaddi Venkat	Associate General Manager	Head- Techno-Commercial	28	B.E.(Mechanical)
3.	Palanivelu Kumar	Manager Techno Commercial	Mines Manager	40	MA & First Class Mine Manager Competency Certificate Holder
4.	Saravanan. N	Assistant Manager	Mines Manager	8	B.E (Mining)
5.	S. Madasamy	Senior Officer	Mining Mate Cum Blaster	15	12th Grade
6.	Sunil Kumar Ayyappan	Associate General Manager - Projects	Head- Projects	21	B-Tech in Civil Engineering, University of Kerala Post Graduate Diploma in Business Management MDI Gurgaon
7.	Anil Balakrishnan	Southern Head	Head – CSR	24	MSW, Phd.
8.	Arun Mohan	Deputy Manager	Finance	8	MBA
9.	Jesse Benjamin Fullonton	Assistant Manager	Environment	11	BSc. Chemical Tech; Msc. Env. Tech
10.	Kanwar P Malik	Head	Horticulture	17	BSc - Agriculture
11.	Arumugam S	Assistant Manager	Safety, Environment and Health	3	M.Tech – Industrial Safety Engineering



**Annexure D: DMG Letter for  
permission to carry out mining at a  
distance of 50 m from the residential  
houses**

Directorate of Mining & Geology,  
Kesavadasapuram, Pattom Palace.P.O.,  
Thiruvananthapuram - 4.  
Tel/Fax : 0471-2447429  
e-mail : director.dir.dmg@kerala.gov.in  
www.dmg.kerala.gov.in  
Dated..23.03.2019

No.9363/M3/2018

From

The Director of Mining & Geology

To

The Administrator,  
SEIAA, KERALA

Sir,

Sub:- Grant of Environmental Clearance - Change in yearwise production of mineral stipulated in mining plan and conditions contrary to KMMC Rules, 1967 - reg.

- Ref:- 1. EC No.02/2019 issued vide Order No.1200/EC2/2018/ SEIAA dt. 01.03.2018  
2. Kerala Minor Mineral Concession Rules 2015

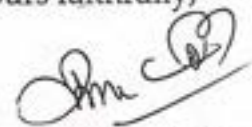
Please refer to the above. As per the reference 1<sup>st</sup> cited an Environmental Clearance was issued to M/s.Adani Vizhinjam Port Private Ltd. In order to grant EC, the company had submitted a mining plan approved by the Geologist concerned. When the EC was perused by this office and compared with the approved mining plan it is found that there is difference in the year wise (financial year) quantity of production allowed by the SEIAA. It is contrary to the provisions contained in the Kerala Minor Mineral Concession Rules 2015. As per Rule 68(1) of KMMC Rules, every lessee shall carry out quarrying operation in accordance with the approved mining plan. If quantity of yearwise production or any of the mode of production is altered, it is a deviation from the plan proposed by the proponent.

In the general condition of the EC granted, condition No.18 is that "A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided." This condition also is a deviation from the mining plan. If the



Geologist who approves the mining plan and inspects the site before sending the application to the Director finds that it is not safe to quarry within a distance of 100m from the dwelling houses, he directs the proponent to change the precise area. Based on the recommendations of the Geologist precise area is fixed and Letter of Intent is issued to the proponent. Mining Plan is prepared only after the issuance of LOI from this office. It may be noted that as per Rule 40 1(i), the lessee is permitted to carry out mining at a distance of 50m from residential houses. If the distance from the nearby dwelling houses is changed, deviating the conditions in the LOI or mining plan, the proponent cannot operate the mine as per the mining plan. This may even lead to the reduction in minable quantity of mineral. In these circumstances, I request to reconsider the entire matter as per the Kerala Minor Mineral Concession Rules and necessary changes may be made in the conditions in the EC granted. This is for information and necessary action.

Yours faithfully,



for Director of Mining & Geology

Copy to: M/s Adani Vizhinjam -  
port private Ltd.

ks/23.3



**Annexure E: Submission of Signed EC,  
CTO, Advertisements of EC in  
Newspapers, Screenshot of EC  
Uploaded to Website and Notarized  
Affidavit that all EC Conditions will be  
followed**



## Jesse Benjamin Fullonton

---

**From:** Rajesh Kumar Jha  
**Sent:** Thursday, May 14, 2020 4:55 PM  
**To:** rosz.bng-mefcc@gov.in  
**Cc:** seacseiaakerala@gmail.com; Shalin Shah; Manoranjan Tripathy; Harsh Yadav; Hebin Chenthamarakshan; Jesse Benjamin Fullonton  
**Subject:** EC No. 1416/EC1/2019/SEIAA dated 27.02.2020 - Half Yearly Compliance Report - Oct 2019 to Mar 2020 - Reg.

Dear Sir/Madam,

This is with reference to the **Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020** issued by State Environment Impact Authority (SEIAA), Kerala to issued to Adani Vizhinjam Port Private Limited (AVPPL) for **Granite Building Stone Quarry Project in Block No.29, Re-Survey No.120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala.**

Since the EC was granted on 27.02.2020, as on date, AVPPL have not initiated any work at the site. **Therefore, the EC compliance for the half yearly period (October 2019 to March 2020) ending 31.03.2020 is not substantial.** In the meantime, AVPPL have complied with all the conditions that are applicable prior to commencement of operations; as detailed in the attached letter (Ref: AVPPL/MOEF/2020-21/1127 dated 13.05.2020).

Thanks & Regards,

**Rajesh Jha**  
MD & CEO  
**Adani Vizhinjam Port Pvt. Ltd.**

2<sup>nd</sup> Floor, Vipanchika Tower, PO-Thycaud, Trivandrum- 695014, Kerala, India  
Direct Line: 0471 277 2116 | [www.adani.com](http://www.adani.com)





Ports and  
Logistics

AVPPL/MOEF/2020-21/1127

Date: 13<sup>th</sup> May 2020

To,  
Ministry of Environment Forest and Climate Change (MoEF&CC),  
Regional Office (Southern Zone),  
Kendriya Sadan, IV<sup>th</sup> Floor, E&F Wings, 17th Main Road, II<sup>nd</sup> Block,  
Koramangala, Bangalore-560034  
[rosz.bng-mefcc@gov.in](mailto:rosz.bng-mefcc@gov.in)

**Subject:** Submission of Half Yearly Compliance Report (HYCR) to Conditions of Environmental Clearance (EC) for the Period October 2019 to March 2020 - Reg.

**Reference:** SEIAA-Environmental Clearance (EC) for the proposed granite building stone quarry in Block No.29, Re-Survey No.120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala; by M/s. Adani Vizhinjam Port Pvt. Ltd. vide No. 1416/EC1/2019/SEIAA dated 27.02.2020

Dear Sir/Madam,

This is with reference to the Environmental Clearance (EC) for the proposed granite building stone quarry in Block No.29, Re-Survey No.120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala; by M/s. Adani Vizhinjam Port Pvt. Ltd. (AVPPL) vide No. 1416/EC1/2019/SEIAA dated 27.02.2020.

The general conditions of the EC, Point No. 27 states that "*proponent shall submit half yearly reports in soft copy and SEIAA will upload it on the website*". Since the orders for EC was granted on 27.02.2020 and AVPPL have not initiated any work at the site and therefore the compliance for the half yearly period ending 31.03.2020 is not substantial.

It is requested that the first Half Yearly Compliance Report (HYCR) will be submitted for the period April 2020 to September 2020. In the meantime, AVPPL have complied with the conditions that are applicable prior to commencement of operations as detailed below:

- **Point No. 20:** *Consent from Kerala Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity*  
AVPPL have already obtained CTO from KSPCB vide Consent No:PCB/TVM-DO/ICO/NDD/QRY/29/2020 dated 16.03.2020 (A copy of the CTO is enclosed as **Annexure I**).
- **Point No. 25:** *The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper)*

Adani Vizhinjam Port Private Limited  
2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud  
Thiruvananthapuram  
Kerala-695014

[www.adani.com](http://www.adani.com)  
CIN -U61200GJ2015PTC083954

Registered Office: Adani House, Nr Mithakhali Circle, Navrangpura, Ahmedabad 380 009, Gujarat, India



*shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at [www.seiaakerala.org](http://www.seiaakerala.org). The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation."*

Details of the EC were advertised in the local newspapers published on 01.03.2020 (A copy of the Newspaper Advertisements is enclosed as **Annexure II**). The signed EC was submitted to SEIAA vide AVPPL/SEIAA/2019-20/1083 dated 04.03.2020 (A copy of the signed EC is enclosed as **Annexure III**).

- **Point No. 26:** *"The Environmental Clearance shall be put on the website of the company by the proponent."*

The EC has been uploaded to the Adani Ports website: <https://www.adaniports.com/Downloads> (A screenshot of the same is enclosed as **Annexure IV**).

- **Point No. 29:** *"The proponent should provide notarized affidavit (indicating the number and date of EC proceedings) that all the conditions stipulated in the EC shall be scrupulously followed."*

The Notarized Affidavit was submitted to SEIAA vide AVPPL/SEIAA/2019-20/1083 dated 04.03.2020 (A copy of the Notarized Affidavit is enclosed as **Annexure V**).

This is for your information and records.

Thanking you.

Yours Sincerely,



Rajesh Jha  
Chief Executive Officer



Encl: As Stated Above

Copy to: State Environment Impact Assessment Authority (SEIAA), K.S.R.T.C Bus Terminal Complex, 4th Floor, Thampanoor, Thiruvananthapuram, Kerala

## **Annexure I: CTO from KSPCB**



**FILE NO : PCB/TVM-DO/ICO/NDD-12806757/2020**

**Date of issue : 16/03/2020**



**KERALA STATE POLLUTION CONTROL BOARD**

**CONSENT TO**

**OPERATE/AUTHORISATION/REGISTRATION**

**ISSUED UNDER**

The Water (Prevention & Control of Pollution) Act, 1974

The Air (Prevention & Control of Pollution) Act, 1981

and

The Environment (Protection) Act, 1986

**As per Application No. :12806757**

**Dated:11-03-2020**

**TO**

**M/s BUILDING STONE QUARRY OF ADANI VIZHINJAM PORT PRIVATE LIMITED**

**Manickal Village,**

**Nedumangad Taluk**

**Consent No. :PCB/TVM-DO/ICO/NDD/QRY/29/2020**

**Valid Upto :26/02/2025**

## 1. GENERAL

1.1. This integrated consent is granted subject to the power of the Board to withdraw consent, review and make variation in or revoke all or any of the conditions as the Board deems fit.

1	<b>VALIDITY</b>	26/02/2025
2	Name and Address of the establishment	BUILDING STONE QUARRY OF ADANI VIZHINJAM PORT PRIVATE LIMITED MANICKAL VILLAGE, NEDUMANGAD TALUK 695607
3	Communication	Telephone :91-9099056757 Fax :04712-2325600 E-mail:hebin.c@adani.com
4	Occupier Details	Rajesh Jha CEO Adani Vizhinjam Port Pvt Limited   Second Floor, Vipanchika Tower, Thycaud, Trivandrum,
5	Local Body	MANICKAL
6	Survey Number	Re- survey Block 29 , Re survey no: 120/10
7	Village	Manickal
8	Taluk	NEDUMANGAD
9	District	THIRUVANANTHAPURAM
10	Capital Investment(Rs in Lakhs)	400
11	Scale	Small
12	Category	RED
13	Annual fee(Rs)	Rs 40000/-
	Total Fee remitted(Rs)	Rs 200000/-
14	RAW MATERIAL	PRODUCTS
	Quarrying in 1.1081 Ha	Rock @281033 Metric Tonnes
15	Total Power Required (HP)	-

## 2. CONDITIONS AS PER

### The Water(Prevention and Control of Pollution)Act, 1974

- 2.1 In case of generation of trade effluent from the industry, effluent treatment system consisting of treatment units having adequate capacity established as per the Integrated Consent to Establish issued shall be operational at all times during which the industry is functional. Additional facilities required, if any, to achieve the standards laid down by the Board u/s 17(1) (g) of the Water Act shall also be made along with.
- 2.2 Water consumption: 2KLD
- 2.3 Effluent generation: -
- 2.4 The characteristics of effluent after treatment shall confirm to the following tolerance limits:

SL.NO.	Characteristics	Unit	Tolerance Limit	
			Sewage	Trade Effluent



2.5 Mode of disposal of treated effluent: -

### 3. CONDITIONS AS PER

#### The Air(Prevention and Control of Pollution)Act, 1981

3.1 Adequate air pollution control measures shall be operational at all times during the functioning of the industry. Additional facilities required, if any, to achieve the standards laid down by the Board shall also be made along with.

Stack No.	Sources of Emission	Emission Rate(Nm3/Hr)	Stack Height above		Control Equipment
			Ground Level	Roof Level	

3.2 Emission characteristics shall not exceed the following:

Sl.No.	Parameter	Limiting Standards (mg/Nm3)
--------	-----------	-----------------------------

### 4. CONDITIONS AS PER




#### The Environment (Protection) Act, 1986.

4.1 The operation of the industry shall be strictly in compliance with the provisions of the Noise Pollution (Regulation and Control) Rules 2000.

4.2 Used lead acid batteries shall be disposed of as per the Batteries (Management and Handling) Rules, 2001

4.3 Hazardous waste generated, if any, shall be handled as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

4.3.1 Activities for which Authorisation is granted

Collection		transport	
Reception		Storage	
Treatment		Reprocessing/Disposal	

4.3.2 Type, quantity and mode of storage/collection/disposal of hazardous wastes shall be as follows:

Sl.No.	Hazardous Waste	Schedule Category	Quantity Tonne/year
--------	-----------------	-------------------	---------------------

Mode of	
Storage	Disposal

4.4 E-waste shall be disposed off safely as per the E-Waste (Management)Rules, 2016.

## **5. SPECIFIC CONDITIONS**

5.1 Quarrying is restricted to the land bearing Sy nos: 120/10.

5.2 This consent is granted subject to the power of the Board to review and make variations in all or any of the conditions as per section 21 of the Air (Prevention and Control of Pollution) Act 1981 and section 25 of the Water (Prevention and Control of pollution) Act 1974.

5.3 Any change in the particulars furnished in the references and/or in the identity of the occupier / authorized agent shall be intimated to the Board within a week.

5.4 It is the responsibility of occupier to ensure that quarrying activities are restricted to only area shown in the attached drawing and at a distance more than 50 m from the nearby residential buildings, places of worship, public buildings, public road having vehicular traffic, river or lake, railway line and bridges.

5.5 After excavation at the site is completed, the land may be reclaimed or used for rain water harvesting with protective barriers/any other suitable purpose like aquaculture approved by the authority.

5.6 All the necessary control measures provided should be maintained properly to ensure that the system is adequate to control the air and water pollution caused by the functioning of the unit within the limit.

5.7 Regular wetting of the roads in the premises of the quarry and approach roads near the quarry shall be done for avoiding excessive dust emission within and outside the boundary of the unit.

5.8 Boundary of quarrying area shall be fenced and demarcated.

5.9 Fugitive emission from the quarry premises and road leading to quarry shall be suppressed using water sprinkling.

5.10 The suspended particulate matter (SPM) at boundary of the premises of the quarry shall not exceed the following limit applicable to that area as per the National Ambient Air Quality Standards. a) The PM 10 in ambient air at the boundary shall not exceed 100 microg/m<sup>3</sup> b) The PM 2.5 in ambient air at 1m outside the boundary shall not exceed 60 microg/m<sup>3</sup>.

5.11 The sound level measured at 1.0 m outside the boundary shall not exceed the limit as per the Ambient Air Quality Standards in respect of Noise.

5.12 The operation of the unit shall be commenced/done only after obtaining clearances from all concerned authorities.

5.13 The quarry shall be operated only from 6am to 6pm.

5.14 For renewal of the consent in case of continuance of operation of the industry, application in the



prescribed form shall be submitted through the web portal of the Board <http://krocmms.nic.in> for renewing the Consent on or before two month in advance to expiry date. Late application will be accepted with 10% (for application before expiry date) & 50% of yearly fee as late fee for application after due date.

5.15 This Consent is granted on the basis of ENVIRONMENTAL CLEARANCE DATED: 27/02/2020 and other documents furnished by the applicant. If any document is found false, the consent issued will be cancelled/ revoked.

5.16 This consent is granted subject to the Environmental Clearance No: 1416/EC1/2019/SEIAA dated 27/02/2020 issued by proceedings of State Environmental Impact Assessment Authority, SEIAA.

**RAMYA G** Digitally signed by  
RAMYA G  
Date: 2020.03.16  
16:50:08 +05'30'

DATE :16/03/2020

SIGNATURE & SEAL OF ISSUING AUTHORITY  
ENVIRONMENTAL ENGINEER  
DISTRICT OFFICE, THIRUVANANTHAPURAM



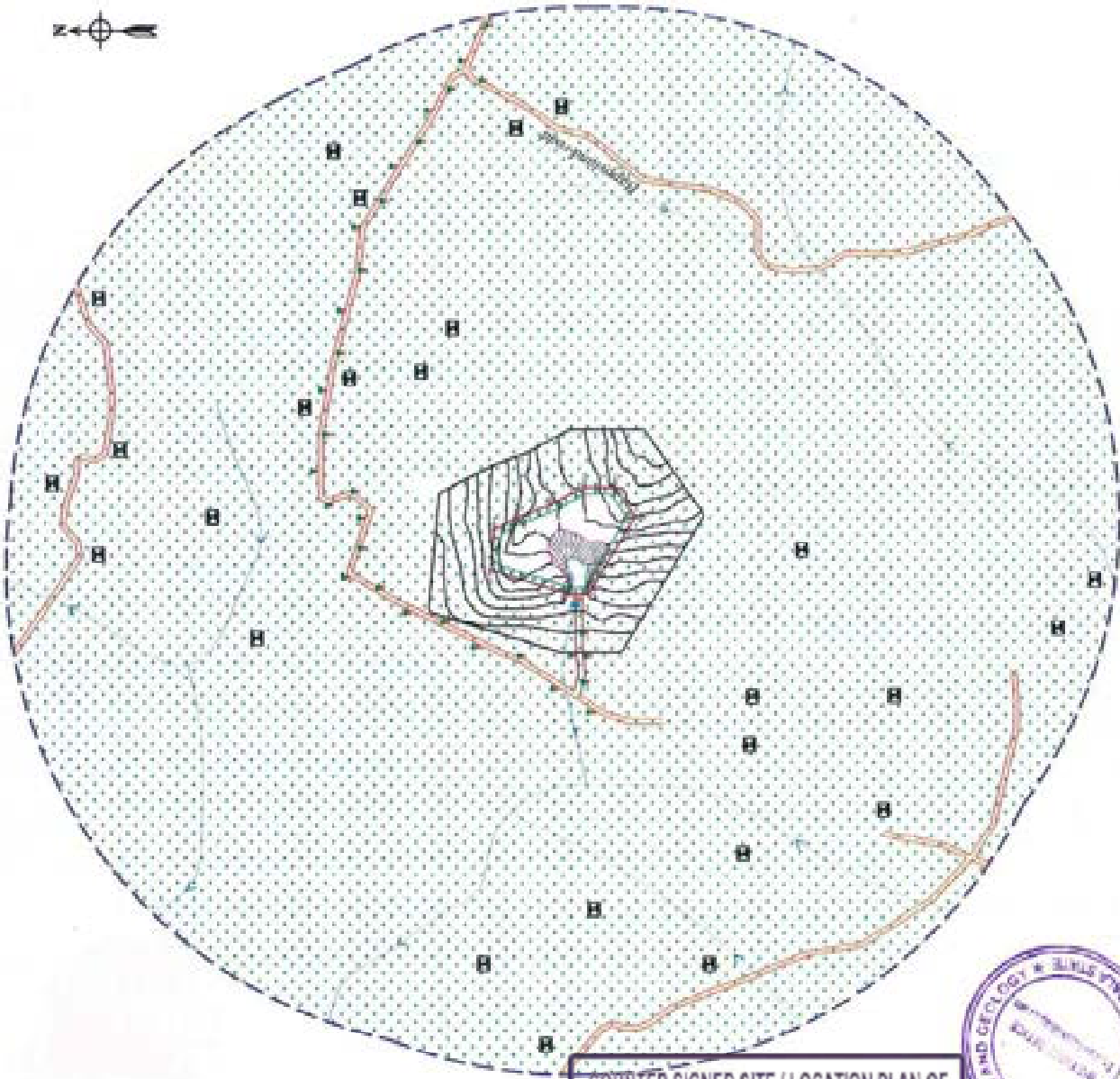
To

Building Stone Quarry of ADANI VIZHINJAM PORT PRIVATE LIMITED  
Manickal Village,  
Nedumangad Taluk

**1. This digitally signed document is legally valid as per the Information Technology Act 2000**

2. For verifying this document please go to [krocmms.nic.in](http://krocmms.nic.in) and search using date of issue/name of the unit/Application Number in "Consent Granted Applications" link in the home page of the Board's Online Consent Management and Monitoring System.

MAP SHOWING ALL FEATURES (SITE & SURROUNDINGS WITHIN 500m. RADIUS) - M/s. Adani Vizhinjam Port Private Limited.



# INDEX

- QUARRY BOUNDARY
- 7.5m SAFETY BARRIER
- CONTOURS
- VILLAGE ROAD
- PRIVATE ROAD
- 60m LIMIT LINE
- 500m LIMIT LINE
- PRIVATE LAND
- PROPOSED PLANTATIONS
- GARLAND DRAIN
- SILT SETTLING TANK
- RAIN WATER HARVESTING POND
- NATURAL WATER COURSE
- HOUSES / SHEDS

PLATE NO: 01

GRANITE BUILDING STONE QUARRY OF  
M/s. Adani Vizhinjam Port Private Limited.

Survey Block No. 75, Block No. 125/126/Manickal Village, Nandambur Taluk,  
Thiruvananthapuram District, Kerala.

Title	ENVIRONMENTAL PLAN (DRAINAGE PLAN)
Scale	1:5000 (A3)

Certified that the above plan is correct.

C. Tharish Chorian

PREPARED BY  
GLOBAL ENVIRONMENT & PLANNING SERVICES  
Creating a sustainable future together.

COUNTER SIGNED SITE / LOCATION PLAN OF  
BUILDING STONE QUARRY OF ADANI  
M/s. VIZHINJAM PORT PRIVATE LIMITED  
MANICKAL VILLAGE

RAMYA G

Digitally signed by RAMYA G  
Date: 2020.03.16 16:50:42  
+05'30'

ENVIRONMENTAL ENGINEER  
DISTRICT OFFICE, THIRUVANANTHAPURAM





## **Annexure II: Newspaper Advertisements**







## **Annexure III: Signed EC**





सत्यमेव जयते

Validity expires on 26.02.2025

**PROCEEDINGS OF THE ADMINISTRATOR, STATE ENVIRONMENT IMPACT  
ASSESSMENT AUTHORITY, THIRUVANANTHAPURAM  
(Present. SHAHER BANU)**

**Sub: SEIAA-Environmental Clearance for the proposed granite building stone quarry in Block No. 29, Re-survey No. 120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District by M/s Adani Vizhinjam Port Pvt. Ltd- Granted – Orders issued.**

**State Environment Impact Assessment Authority, Kerala**

**No. 1416/EC1/2019/SEIAA****dated, Thiruvananthapuram 27.02.2020**

- Ref: 1. Application received on 22.08.2019 from Shri.Rajesh Kumar Jha, Chief Executive Officer, M/s Adani Vizhinjam Port Pvt. Ltd, 2<sup>nd</sup> floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014
2. Minutes of the 103<sup>rd</sup> SEAC meeting held on 17<sup>th</sup> & 18<sup>th</sup> September, 2019.
3. Minutes of the 104<sup>th</sup> SEAC meeting held on 10<sup>th</sup> & 11<sup>th</sup> October, 2019.
4. Minutes of the 105<sup>th</sup> SEAC Meeting held on 28<sup>th</sup> & 29<sup>th</sup> October, 2019.
5. Minutes of the 106<sup>th</sup> SEAC meeting held on 28<sup>th</sup>, 29<sup>th</sup> & 30<sup>th</sup> November 2019.
6. Minutes of the 107<sup>th</sup> SEAC meeting held on 24<sup>th</sup> December, 2019.
7. Minutes of the 108<sup>th</sup> SEAC meeting held on 13<sup>th</sup> & 14<sup>th</sup> January, 2020.
8. Minutes of the 102<sup>nd</sup> SEIAA meeting held on 10<sup>th</sup> & 11<sup>th</sup> February, 2020.
9. G.O(Rt.) No.29/2019/Env dt.12.04.2019.

**ENVIRONMENTAL CLEARANCE NO. 29/ 2020**

Shri.Rajesh Kumar Jha, Chief Executive Officer, M/s Adani Vizhinjam Port Pvt. Ltd, 2<sup>nd</sup> floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014, vide his application received on 22.08.2019, has sought E.C under EIA Notification-2006, for the proposed granite building stone quarry in Block No. 29, Re-survey No. 120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, for an area of 1.1081 Ha. The project comes under Category B2, Activity 1(a), (i) as per the Schedule of EIA Notification 2006.



2. The proposed production capacity is 70,230.00 TPA(max). The period of mining lease is 6 years. The expected project cost is Rs. 82 lakhs.

3. The proposal was placed in the 103<sup>rd</sup> SEAC meeting held on 17<sup>th</sup> & 18<sup>th</sup> September, 2019. The Committee directed the proponent to submit recent non- cluster certificate.

Proponent vide letter dated 24.09.2019 submitted the recent cluster certificate dated 26.07.2019.

4. The proposal was placed in the 104<sup>th</sup> SEAC meeting held on 10<sup>th</sup> & 11<sup>th</sup> October 2019. The Committee decided to invite the proponent for presentation.

5. The proposal was placed in the 105<sup>th</sup> SEAC Meeting held on 28<sup>th</sup> & 29<sup>th</sup> October 2019. The proponent was present. The Committee directed the proponent to submit the following documents:

1. Specific CER plan
2. Revised drainage plan
3. Map showing overburden

The Committee entrusted Dr.R.Ajayakumar Varma and Shri.K.Krishna Panicker for field inspection.

The proponent submitted the documents on 23.11.2019. The Sub committee conducted the inspection on 5<sup>th</sup> November 2019.

The proponent vide letter dated 28.10.2019 stated that due to technical issues they had applied for ToR instead of EC. Since the area of the project is 1.1081 Ha and that there is no cluster situation, they requested to consider the project for EC.

6. The proposal was placed in the 106<sup>th</sup> SEAC meeting held on 28<sup>th</sup>, 29<sup>th</sup> & 30<sup>th</sup> November 2019. The Proponent is directed to submit the following documents:

- 1) Scientific plan for removal of excavated rock material from the quarry and transportation of the same
- 2) Drainage map showing feasible drains to carry the excess runoff from the project area to the nearest natural drainage
- 3) Location and design of silt trap and its maintenance



*Rajesh*



- 4) Plan for widening the Panchayat road on the western boundary of the quarry to absorb additional traffic due to the proposed quarry
- 5) Revise project cost considering fair value of land in accordance with revenue records.
- 6) Clarification regarding the acceptability of NOC submitted as it does not indicate time period.

The proponent submitted documents on 17.12.2019 as per the decision of 106<sup>th</sup> SEAC meeting. The proponent also stated that the letter submitted to the District Collector, Thiruvananthapuram seeking NOC will be submitted prior to the next SEAC meeting.

7. The proposal was placed in the 107<sup>th</sup> SEAC meeting held on 24<sup>th</sup> December, 2019. As per the request of the proponent dated 28.10.2019, the Committee decided to consider the application for EC rather than for ToR, since the proposed project area is 1.1081 Hectares. The proponent had promised to submit the fresh NOC from the District Collector before the SEAC meeting. But the same has not been submitted. Therefore the item was deferred.

The proponent submitted NOC from the District Collector, Thiruvananthapuram on 09.01.2020.

8. The proposal was placed in the 108<sup>th</sup> SEAC meeting held on 13<sup>th</sup> & 14<sup>th</sup> January, 2020. The Committee decided to recommend issuance of EC for ten years or completion of the construction of breakwater of Vizhinjam Port whichever is earlier and the other conditions laid down in the NOC No. 137/127325/18 dated 13.07.2018 of District Collector, Thiruvananthapuram.

9. The proposal was placed in the 102<sup>nd</sup> SEIAA meeting held on 10<sup>th</sup> & 11<sup>th</sup> February, 2020. Authority decided to issue EC for a period of 5 years for the quantity mentioned in the approved Mining Plan subject to the following specific conditions in addition to the general conditions.

1. *The Proponent shall follow the directions given by the District Collector, Thiruvananthapuram vide his NOC No. 137/127325/18 dated 13.07.2018. The copy of the NOC may also be enclosed with the EC.*
2. *Activities relating to Corporate Environmental Responsibility amounting to Rs.1.64 lakhs shall be carried out leading to protection and promotion of environment*



*Rafel*



*including waste management in the project district as per OM F.No.22-65/2017-IA-III dt.01.05.2018 of MoEF& CC as directed by Director, Directorate of Environment & Climate Change and supervised by District Collector.*

- 3. The proponent shall carry out quarrying as per the approved Mining Plan and the proponent should strictly follow the Kerala Minor Mineral Concession Rules 2015 and amendments thereby.*
- 4. 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.*
- 5. 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 Honourable 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.*

**10.** Environmental Clearance as per the EIA Notification 2006 is hereby accorded for the proposed granite building stone quarry project of Shri.Rajesh Kumar Jha, Chief Executive Officer, M/s Adani Vizhinjam Port Pvt. Ltd, 2<sup>nd</sup> floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014 in Block No. 29, Re-survey No. 120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala for an area of 1.1081 Ha for the quantity mentioned in the Mining plan, for a period of five years subject to the specific conditions in para 9 above, all the environmental impact mitigation and management measures answered to be undertaken by the project proponent in the Form I, EMP, PFR and Mining plan submitted to SEIAA. The assurances and clarifications given by the proponent will be deemed to be a part of these proceedings as if incorporated herein. Also the general conditions for projects stipulated for mining (items 1 to 48), appended hereto will be applicable and have to be strictly adhered to.



*Rajesh*



11. The 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 and relied on for grant of this clearance. The above undertakings and the conditions and the undertakings in Chapter 4 (Mining), Chapter 5 (Blasting), Chapter 6 (Mines Drainage), Chapter 7 (Stacking of Mineral rejects and Disposal of waste) Chapter 11 (Environment Management Plan) & Chapter 12 (Progressive Mine Closure Plan) of the Mining Plan as submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

12. Validity of the Environmental Clearance will be five years from the date of this clearance, subject to inspection by SEIAA on annual basis and compliance of the conditions, subject to earlier review of E.C in case of violation or non-compliance of conditions or genuine complaints from residents within the security area of the quarry.

13. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its authorised offices and also by the regional office of the Ministry of Environment & Forests, Govt. of India, Bangalore.

14. 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.

15. Instances of violation if any shall be reported to the District Collector, Thiruvananthapuram

16. The Half Yearly Compliance Report (HYCRs) with its contents of a covering letter, compliance report and environmental monitoring data has to be in PDF format merged into a single document. The email should clearly mention the name of the project, EC No and date, period of submission and to be sent to the Regional Office of MoEFF & CC by email only at email ID [rosz.bng-mefcc@gov.in](mailto:rosz.bng-mefcc@gov.in) . Hardcopy of HYCRs shall not be acceptable.



17. The given address for correspondence with the authorised signatory of the project is Shri.Rajesh Kumar Jha, Chief Executive Officer, M/s Adani Vizhinjam Port Pvt. Ltd, 2<sup>nd</sup> floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014

  
**SHAHER BANU**  
Administrator, SEIAA

✓ To,

Shri.Rajesh Kumar Jha  
Chief Executive Officer  
M/s Adani Vizhinjam Port Pvt. Ltd  
2<sup>nd</sup> floor, Vipanchika Tower  
Thycaud, Thiruvananthapuram – 695014

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.The Principal Secretary to Government, Environment Department, Government of Kerala
3. The Director, Directorate of Environment & Climate Change, 4th Floor KSRTC Bus Terminal, Thampanoor, Thiruvananthapuram, Kerala 695001.
- 4.District Collector, Thiruvananthapuram
- 5.Director, Mining & Geology, Thiruvananthapuram -4.
- 6.The Member Secretary, Kerala State Pollution Control Board
- 7.District Geologist, Thiruvananthapuram
- 8.Tahsildhar, Neyyattinkara Taluk, Thiruvananthapuram District
- 9.Village Officer, Anavoor Village, Thiruvananthapuram District
- 10.Chairman, SEIAA.
- 11.Website.
- 12.S/f
- 13.O/c







**STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA**  
**GENERAL CONDITIONS (for mining projects)**

1. A separate environmental management and monitoring cell with qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
2. Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including of approach road and internal roads.
3. Sprinklers shall be installed and used in the project site to contain dust emissions.
4. Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
5. In view of the deep pits left after the excavation, stacking at maximum top level should be carried out.
6. Corporate Environment Responsibility agreed upon by the proponent should be implemented.
7. The project proponent shall comply the conditions stipulated by the statutory authorities concerned.
8. Tarring /multiple options on the access roads shall be undertaken so as to reduce dust pollution during movement of vehicle.
9. Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions.
10. Height of benches should not exceed 5 m, and width should not be less than 5 m, if there is no mention in the mining plan/specific condition.
11. Ground level should be fixed in individual cases separately
12. No mining operations should be carried out at places having a slope greater than 45°.
13. Acoustic enclosures should have been 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 standards given by CPCB/KSPCB. This condition is applicable only in such cases if a crusher is adjacent to the quarry.
14. The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.
15. Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.
16. The transportation of minerals should be done in covered trucks to contain dust emissions.  
The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project. SEAC should assess the number of trees in each project site before the issuance of EC so as to ensure the promptness in planting.
17. Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.
18. A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.
19. 50 m buffer distance should be maintained from forest boundaries.
20. Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.
21. All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.
22. 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 only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority.
23. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
24. The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.



*Rajesh*




25. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at [www.seiaakerala.org](http://www.seiaakerala.org). The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.
26. The Environmental Clearance shall be put on the website of the company by the proponent.
27. Proponent shall submit half yearly reports in soft copy and SEIAA will upload it on the website.
28. 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 of 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
29. 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.
30. No change in mining technology and scope of working should be made without prior approval of the SEIAA, No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable.
31. The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.
32. The top soil, if any, shall temporarily be stored at earmarked site(s) only for the topsoil shall be 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 to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.
33. 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, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
34. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM<sub>10</sub> and PM<sub>2.5</sub> such as haul Road, loading and unloading points and transfer points – it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
35. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
36. Measures should be taken for control of noise levels below 85 dBA in the work environment.
37. The funds earmarked for environmental protection measures and CER activate should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.
38. The Regional Office of MOEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.
39. 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.
40. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
41. The SEIAA may revoke or suspend the order, for non implementation of any of the specific or this implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.



*Rajesh*



42. The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license or consent given by any other authority for the same project.
43. The Environmental Clearance will be subject to the final order of the courts in any pending litigation related to the land or project, in any court of law.
44. The mining operation shall be restricted to above ground water table and it should not intersect ground water table.
45. All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution taking centre. Washing of all vehicles shall be inside the lease area.
46. Project proponent should obtain necessary prior permission of the competent authorities for drawal of requisite quantity of surface water and ground water for the project.
47. Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly reports to SEIAA.
48. Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

  
**Administrator, SEIAA**





**Annexure IV: Screenshot of EC  
uploaded to Adani Ports Website**



## Vizhinjam Port

### Environment and CRZ Clearances

2014EC CRZ ClearanceVISL

Mar2019ECBuilding Stone Quarry  
ML36630 HaAVPPL

March2020BuildingStoneQuarryBlock  
No 29Area11081 HaManickal

### Current Environment Compliance Report

Compliance\_Report\_VISL\_April\_19\_to\_  
September\_19

ComplianceReportKadavila1SurveyNo  
5552April19toSeptember19

## **Annexure V: Notarized Affidavit**





കേരളം KERALA

CR 508124

**To Whomsoever It May Concern**

Declaration for scrupulously following Environmental Clearance conditions for  
Granite Stone Quarry at Manickal Village, Nedumangad Taluk,  
Thiruvananthapuram District, Kerala

I, Rajesh Jha, aged 54 years. S/o Late Krishna Chandra Jha, Chief Executive Officer of Adani Vizhinjam Port Private Limited having its office at 2<sup>nd</sup> Floor, Vipanchika Towers, Thycaud, Thiruvananthapuram do hereby solemnly affirm and state as follows:-

The company, Adani Vizhinjam Port Private Limited, was accorded Environmental Clearance from State Environment Impact Assessment Authority, Kerala, with letter No. 1416/EC1/2019/SEIAA dated 27.02.2020 valid till 26.02.2025 for the proposed Granite Building Stone Quarry in Block No. 29, Re Survey No. 120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala.



No. 21174  
Value. 100/-  
Issued. Adani vizhinjam port pvt ltd.

G. BALAKRISHNAN NAIR  
Advocate & Notary  
Vanchiyoor, Tvm-35

USHAKUMARY  
STAMP, VENDOR  
PUTHEN CHANTHAI  
THIRUVANANTHAPURAM







കേരളം കേരल KERALA

CR 508122

I solemnly affirm that Adani Vizhinjam Port Private Limited will scrupulously follow all the conditions stipulated in the Environmental Clearance accorded by State Environment Impact Assessment Authority.

All the facts stated above are true and correct to the best of our knowledge information and belief.

*[Signature]*  
Deponent

Solemnly affirmed and signed by the deponent in my presence who is personally known to me, at my office at Vanchiyoor Thiruvananthapuram, on the 12<sup>th</sup> day of March, 2020



*[Signature]*  
**G. BALAKRISHNAN NAIR**  
Advocate & Notary  
Vanchiyoor, Tvpm-35

No. 21172 Date 18-2-2020  
Value 100/-  
Issued Adani Vizhinjam port pvt Ltd.

*[Signature]*  
**S. USHAKUMARY**  
STAMP VENDOR  
PUTHEN CHANTHAI  
THIRUVANANTHAPURAM





**Annexure F: Purchase and Use of  
Explosives Approval from PESO,  
Ernakulam**



भारत सरकार

GOVERNMENT OF INDIA

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो)

PETROLEUM AND EXPLOSIVES SAFETY ORGANISATION (PESO)

कार्यालय उप-मुख्य विस्फोटक नियंत्रक

OFFICE OF THE DEPUTY CHIEF CONTROLLER OF EXPLOSIVES

केन्द्रीय भवन, काकनाड, एरनाकुलम, कोची, (केरल) - 682037

Kendriya Bhavan, Kakkanad, Ernakulam, Kochi, (KERALA) - 682037

Fax: (0484)2427276, Ph: 2427286, 2427296

No. E/SE/KL/22/129(E95316)

Dated 18/02/2022

To

Shri Binu V.  
Managing Partner, M/s. Galaxy Rock Sand Industries  
Vattakaitha House, Narickal PO, Punalur, Kollam - 691 326

Subject: Possession for Use of Explosives from magazine situated at Sy.No.289/7 of Koodal Village, Konni Taluk, Pathanamthitta District - Licence No. E/SE/KL/22/129(E95316) granted in Form LE-3 of Explosives Rules, 2008.

Ref: This Organisation letter of even number dated 17.06.2020 amending the Licence No. E/SE/KL/22/129(E95316)

Intimation regarding quarrying operations as per NOC from the District Magistrate, Thiruvananthapuram vide NOC No.DCTVM/3446/2020/A17 dated 18/05/2020, Letter of Indent No.5219/M3/2019 dated 07.06.2019 from the Director, Directorate of Mining & Geology, Thiruvananthapuram and EC No.1416/EC1/2019/SEIAA dated 27/02/2020 issued by SEIAA, Kerala at Re.Sy.Nos.120/10 of Re.Sy.Block No.20 of Manickal Village, Nedumangad Taluk, Thiruvananthapuram District to M/s.Adani Vizhinjam Port Pvt.Ltd, Thiruvananthapuram is hereby acknowledged along with agreement for use and transport of explosives with the explosive licence holder Mr.Binu V, Managing Partner, M/s.Galaxy Rocks and Industries, Punalur and M/s.Adani Vizhinjam Port Pvt.Ltd., Thiruvananthapuram. This is a project of public interest and nation building related to construction of deed brake water multi purpose port at Vizhinjam. This acknowledgement stands valid till the valid period of the agreement executed between the applicant and M/s.Adani Vizhinjam Port Pvt.Ltd, Thiruvananthapuram

Please note that the use of explosives in the quarries shall be as per the direction of DGMS, Bangalore as required under Minies Act, 1952 & Metaliferrous Mines Regulations Act, 1961.



Yours faithfully,

(Dr.P.K.Rana)

Dy.Chief Controller of Explosives(I/C),Ernakulam

Deputy Chief Controller of Explosives

Ernakulam

Copy to : M/s.Adani Vizhinjam Port Pvt.Ltd., 2<sup>nd</sup> floor, Vipanchika Tower, Thycaud, Thiruvananthapuram

Dy.Chief Controller of Explosives





भारत सरकार | Government of India  
वाणिज्य और उद्योग मंत्रालय | Ministry of Commerce & Industry  
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो) | Petroleum & Explosives Safety Organisation (PESO)  
पूर्व नाम: विस्फोटक विभाग | Formerly- Department of Explosives  
केन्द्रीय भवन, ब्लॉक सी-2, तीसरी मंजिल | Kendriya Bhavan, Block C-2, 3rd Floor  
CSEZ पी.ओ.कक्कनाड कोच्ची | CSEZ PO Kakkanaad Dist. Ernakulam Ernakulam 682037  
फोन (Phone):- 2427286 | फेक्स (Fax):- 2427276  
ई-मेल Email: dyccceernakulam@explosives.gov.in

दिनांक (Date): 18/02/2022

संख्या (No.): E/SE/KL/22/129(E95316)

सेवा में | To,

Shri. Bina V,  
Managing Partner, M/s. Galaxy Rock Sand Industries, Vattakaittha House, Narickal PO, Punalur, Town/Village - Kollam  
District-KOLLAM, State-Kerala, Pincode - 691326

विषय: Survey No.Sy.No. 289/7, ग्राम Koodal Village, Konni Taluk, जिला PATHANAMTHITTA, राज्य Kerala में विस्फोटक के मैगजीन में उपयोग के लिए कब्जा हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुज्ञप्ति सं E/SE/KL/22/129(E95316) के नवीनीकरण संदर्भ में।  
Subject: Possession for Use of Explosives from magazine situated at Survey No.:Sy.No. 289/7, Koodal Village, Konni Taluk, Dist. PATHANAMTHITTA, Kerala -Licence No.: E/SE/KL/22/129(E95316) granted in Form LE-3 of Explosives Rules, 2008 - Renewal regarding

महोदय | Sir,

आपका उपर्युक्त विषय पर पत्र संख्या 56427 दिनांक 10/02/2022 का संदर्भ ग्रहण करें। विस्फोटक नियम, 2008 के अंतर्गत प्ररूप LE-3 में जारी अनुज्ञप्ति दिनांक 31/3/2022 तक नवीनीकृत कर इस पत्र के साथ भेजी जा रही है।  
Reference to your letter No.: 56427 dated: 10/02/2022, the subject licence duly renewed upto 31/3/2022 and issued in Form LE-3 of Explosives Rules, 2008 is forwarded herewith.

Conditions:

- अनुज्ञप्ति के आगामी नवीकरण हेतु कृपया निम्नलिखित दस्तावेज दिनांक 31/03/2022 से पहले इस कार्यालय को भेजे जाएं।  
For further renewal of licence, please submit the following documents so as to reach this office on or before 31/3/2022.
- प्ररूप आरई-1 में विधिवत पूर्ण एवं हस्ताक्षरित आवेदन।  
Application in Form RE-1 duly filled in and signed.
  - एक से पाँच वर्ष के अनुज्ञप्ति शुल्को का, विस्फोटक नियम, 2008 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से साइसेस शुल्क ऑनलाइन जमा किया जाना है।  
Licence fees renewable for one to five years, to be submitted online through e-payment facility available on online application portal under the Explosives Rules, 2008.
  - अनुमोदित प्लान के साथ मूल अनुज्ञप्ति।  
Original licence with approved plan.
  - कृपया इस संबंध में विस्फोटक नियम, 2008 के नियम 112 का भी संदर्भ ग्रहण करें।  
In this connection, please also refer to Rule 112 of Explosives Rules, 2008.
  - विस्फोटकों के क्रय हेतु आरई-11 में मांगपत्र (इंडेंट) आपूर्तिकर्ता को दिया जाए और उसी की एक प्रति इस कार्यालय को भेजी जाए (आतिशबाजी गोदाम के लिए नहीं)।  
Indent for purchase of explosives shall be placed in RE-11 with the supplier and copy of the same shall be sent to this office. (Not applicable for firework store house)
  - कृपया विस्फोटकों की त्रैमासिक विवरणी हर तिमाही के अंत में आरई-7 में प्रस्तुत की जाए। विवरणी इस कार्यालय के कार्यालय में आगामी तिमाही के 10 तारीख तक पहुंचानी चाहिए (आतिशबाजी गोदाम के लिए लागू नहीं)।  
Please submit quarterly returns of explosives in RE-7 at the end of every quarter so as to reach this office by 10th of the succeeding quarter. (Not applicable for fireworks store house)
  - सभी ब्लास्टिंग ऑपरेशन एक सक्षम द्वारा की जाएगी जो उपरोक्त नियमों के तहत एक वैध शॉट फायर प्रमाणपत्र धारक हो। हालांकि, खान अधिनियम 1952 के अन्तर्गत खानों में ब्लास्टिंग ऑपरेशन करने वाले ब्लास्टर की योग्यता उसी अधिनियम से निर्धारित हो।  
All blasting operations shall be carried out by a competent person holding a valid shot firer's permit granted under above rules. However, blasting operations in mines coming under the purview of the Mines Act 1952, the blaster shall have qualifications prescribed in the regulations framed under said Act.

भवदीय | Your's faithfully

(पी.के.राणा | Dr. P. K. Rana)

विस्फोटक नियंत्रक | Controller of Explosives

कृते उप मुख्य विस्फोटक नियंत्रक | For Dy. Chief Controller of Explosives  
कोच्ची | Ernakulam

प्रतिलिपि प्रेषित | Copy Forwarded to:

- जिला मजिस्ट्रेट (District Magistrate), PATHANAMTHITTA (Kerala)
- राज्य विस्फोटक नियंत्रक (For Information) | For The Dy. Chief Controller of Explosives, कोच्ची | Ernakulam

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क आदि के लिए हमारी वेबसाइट <http://peso.gov.in> देखें।)  
(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

Note :- This is system generated document does not require physical signature. Applicant take printout for their records.

## अनुज्ञापि प्ररुप एल. ई.-3 | LICENCE FORM LE-3

(विस्फोटक नियम, 2008 की अनुसूची 4 के भाग 1 के अनुच्छेद 3(क) से (घ) देखिए।)

(See article 3(a) to (d) of Part 1 of Schedule IV of Explosives Rules, 2008)

(ग) उपयोग के लिए एक समय पर वर्ग 1,2,3,4,5 या वर्ग 7 के विस्फोटक या किसी मैगजीन में वर्ग 6 के विस्फोटक रखने के लिए अनुज्ञापि

Licence to possess : (c) for use, explosives of class 1, 2,3,4,5,6 or 7 in a magazine

अनुज्ञापि सं. (Licence No.) : E/SE/KL/22/129(E95316)

वार्षिक फीस रुपए (Annual Fee Rs): 4200/-

1. Licence is hereby granted to

**Shri Binu V (अधिभागी / Occupier : Shri Binu V.),** Managing Partner, M/s.Galaxy Rock Sand Industries, Vattakaitha House, Narickal PO, Punalur, Town/Village - Kollam, District-KOLLAM, Kerala, Pincode - 691326



को अनुज्ञापि अनुदत्त की जाती है।

2. अनुज्ञापिधारी की प्रास्थिति | Status of licensee : **Partnership Firm**

3. अनुज्ञापि निम्नलिखित प्रयोजनों के लिए विधिमान्य है।  
Licence is valid only for the following purpose.

possess for use of Nitrate Mixture, Safety Fuse, Electric Delay Detonators, Non Electric (Nonel) detonators, Detonating Fuse, Electric and/or Ordinary Detonators, के उपयोग के लिए

4. अनुज्ञापि विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमान्य है।

Licence is valid for the following kinds and quantity of explosives: -- (क) (a)

क्र Sr. No.	नाम और विवरण Name and Description	वर्ग और प्रभाग Class & Division	उप-प्रभाग Sub-division	मात्रा किसी एक समय में Quantity at any one time
1.	Nitrate Mixture	2,0	0	500 Kg.
2.	Safety Fuse	6,1	0	1100 Mtrs
3.	Electric Delay Detonators	6,3	0	5000 Nos.
4.	Non Electric (Nonel) detonators	6,3	0	10000 Nos.
5.	Detonating Fuse	6,2	0	6000 Mtrs
6.	Electric and/or Ordinary Detonators	6,3	0	10000 Nos.

(ख) किसी एक कलेंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा [अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञापि के लिए]

(b) Quantity of explosives to be purchased in a calendar month [applicable for licence under article 3 (b) and (c)] : **20 times as above.**

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञप्त परिसर की पुष्टि होती है। रेखाचित्र क्र. (Drawing No.) E/SE/KL/22/129 (E95316)

The licensed premises shall conform to the following drawing :  
(s): दिनांक (Dated) 03/04/2017

6. अनुज्ञापि परिसर निम्नलिखित पते पर स्थित हैं। The licensed premises are situated at following address:

Survey No. Sy.No. 289/7, , ग्राम (Town/Village) : Koodal Village, Konni Taluk, पोलिस थाना (Police Station) : Kooda  
जिला (District) PATHANAMTHITTA राज्य (State) Kerala पिनकोड (Pincode) 691326  
दूरभाष (Phone) 9447025511 ई. मेल (E-Mail) binuvk8100@gmail.com फेक्स (Fax)

7. अनुज्ञापि परिसर में निम्नलिखित सुविधाएं अंतर्विष्ट हैं।

The licensed premises consist of following facilities.

Portable Magazines of A type No.007 and B type No.024  
fabricated by Everest Granites, Kochi

8. अनुज्ञापि समय - समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपाबद्धों के अधीन रहते हुए अनुदत्त की जाती है।

The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following Annexures.

- उपर्युक्त क्रम सं. 5 में यथा कथित रेखाचित्र (स्थान, सन्निर्माण संबंधी और अन्य विवरण दर्शित करते हुए)।  
Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
- अनुज्ञापि प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञापि की शर्तों और अतिरिक्त शर्तों।



Conditions and Additional Conditions of this licence signed by the licensing authority.

3. दूरी प्ररूप DE-2 | Distance Form DE-2.

9. यह अनुज्ञप्ति तारीख 31 मार्च 2022 तक विधिमान्य रहेगी। This licence shall remain valid till 31st day of March 2022.

यह अनुज्ञप्ति, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट सेट-VII के अधीन तथा उपवर्णित इस अनुज्ञप्ति की शर्तों का अधिक्रमण करने या यदि अनुज्ञप्त परिसर योजना या उससे संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रतिसंहत की जा सकती है, जहां वह लागू हो।

This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

Sd/-

उप मुख्य विस्फोटक नियंत्रक | Dy. Chief Controller of Explosives  
Ernakulam

तारीख | The Date - 03/04/2017

**Amendments :**

- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 16/05/2019
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 06/06/2019
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 13/12/2019
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 17/06/2020
- Amendment in Drawings/Facilities/Premises dated : 17/06/2020

नवीनीकरण के पृष्ठांकन के लिए स्थान  
Space for Endorsement of Renewal

इसे उप मुख्य विस्फोटक नियंत्रक  
For Deputy Chief Controller of Explosives  
एरनाकुलम Ernakulam

नवीनीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry	अनुज्ञापन प्राधिकारी के हस्ताक्षर और स्टाम्प Signature of licensing authority and stamp
18/02/2022	31/03/2027	Dy. Chief Controller of Explosives, Ernakulam

**कानूनी चेतावनी :** विस्फोटकों को गलत ढंग से चलाने या उनका दुरुपयोग विधि के अधीन गंभीर दांडिक अपराध होगा।  
**Statutory Warning :** Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

**Note :-** This is system generated document does not require physical signature. Applicant may take printout for their records.

**Annexure G: D&O Trade License  
Deemed granted vide judgment dated  
13.01.2021 in WP(C)**



IN THE HIGH COURT OF KERALA AT ERNAKULAM

PRESENT

THE HONOURABLE MR. JUSTICE A.K.JAYASANKARAN NAMBIAR

WEDNESDAY, THE 13TH DAY OF JANUARY 2021 / 23TH POUSEHA, 1942

WP(C).No.274 OF 2021(H)

PETITIONER/S:

M/S. ADANI VIZHINJAM PORT PVT. LTD.,  
HAVING ITS REGISTERED OFFICE AT ADANI CORPORATE  
HOUSE, SHANTIGRAM, NR. VAISHNO DEVI CIRCLE, S.G  
HIGHWAY AHMEDABAD, GUJARAT-682 421 AND HAVING ITS  
BRANCH OFFICE AT 2ND FLOOR, VIPANCHIKA TOWERS,  
THYCAUD, THIRUVANANTHAPURAM, REPRESENTED BY ITS MD  
AND CEO SRI. RAJESH KUMAR JHA.

BY ADVS.  
SRI.ROSHEN.D.ALEXANDER  
SMT.TINA ALEX THOMAS  
SHRI.HARIMOHAN

RESPONDENT/S:

- 1 MANICKAL GRAMA PANCHAYAT  
OFFICE OF THE MANICKAL GRAMA PANCHAYAT, PIRAPPANCODE  
P.O., THIRUVANANTHAPURAM-695 607 REPRESENTED BY ITS  
SECRETARY.
- 2 THE SECRETARY  
MANICKAL GRAMA PANCHAYAT, OFFICE OF THE MANICKAL  
GRAMA PANCHAYAT, PIRAPPANCODE P.O.,  
THIRUVANANTHAPURAM-695 607.
- 3 THE DIRECTOR OF MINING AND GEOLOGY  
DIRECTORATE OF MINING AND GEOLOGY, PATTON P.O.,  
THIRUVANANTHAPURAM-695 004.
- 4 STATE OF KERALA  
REPRESENTED BY SECRETARY, DEPARTMENT OF PORTS AND  
FISHERIES GOVERNMENT SECRETARIAT, THIRUVANANTHAPURAM-  
695 001.  
R1-2 BY ADV. SHRI.K.P.HARISH  
GP.SRI.A RAVIKRISHNAN

THIS WRIT PETITION (CIVIL) HAVING COME UP FOR ADMISSION ON  
13.01.2021, THE COURT ON THE SAME DAY DELIVERED THE FOLLOWING:

### JUDGMENT

The petitioner, which is a private limited company, and selected as the Concessionaire for the Design, Build, Finance, Operate and Transfer of Vizhinjam Seaport Project, has approached this Court aggrieved by Ext.P17 order passed by the 1<sup>st</sup> respondent Panchayat, which refused to issue the D &O license to the petitioner for conducting quarrying operations in Block No. 29 of Re-survey No.170/10 of Manickal Village. In the writ petition, it is the case of the petitioner that the application for D &O license was submitted by the petitioner as early as on 18.3.2020 and resubmitted on 5.8.2020, and by 5.9.2020 the petitioner had secured a deemed license, in terms of Section 236(3) of the Kerala Panchayat Raj Act. It is the specific case of the petitioner that during the said period, there was no communication in the nature of Ext.P17 from the 1<sup>st</sup> respondent and hence it has to be treated as having obtained a deemed license by virtue of the provisions referred above. There is a further prayer in the writ petition for a direction to the 3<sup>rd</sup> respondent to consider its application for quarrying lease on the basis of the deemed license secured by it as per Section 236(3) of the Kerala Panchayat Raj Act( 'the Act' for short).

2.I have heard the learned counsel appearing for the petitioner and also the learned Government Pleader appearing for the respondents.

3.On a consideration of the facts and circumstances of the case as also the submissions made across the Bar, I find that the circumstances under which an applicant for D&O license can be said to have obtained a deemed license in accordance with Section 236(3) of the Act, have been delineated by



a Full Bench decision of this Court in *Abdul Kharim and Another V Pazhayakunummel Grama Panchayat and Another*, [2018(5) KHC 643].

4. Taking cue from the said decision, I am of the view that on the facts of the instant case, the petitioner can be said to have secured a valid deemed license as on 5.9.2020 in terms of Section 236(3) of the Act. Accordingly, I dispose the writ petition by declaring the petitioner as having secured and valid deemed license as on 5.9.2020 under Section 236(3) of the Act, and directing the 3<sup>rd</sup> respondent to consider the petitioner's application for quarrying lease on the basis of the said declaration and the applications submitted by him for the said lease. The 3<sup>rd</sup> respondent shall consider and pass orders on the application for quarrying lease within a period of six weeks from the date of receipt of a copy of this judgment, after hearing the petitioner.

The petitioner shall produce a copy of the writ petition together with a copy of this judgment, before the 3<sup>rd</sup> respondent, for further action.

Sd/-

A.K.JAYASANKARAN NAMBIAR  
JUDGE

**Annexure H: Lease Order and Lease  
Execution from DMG**



DIRECTORATE OF MINING & GEOLOGY  
 Kesavadasapuram, Pattom Palace P.O.  
 Thiruvananthapuram-695004  
 Phone/Fax : 0474-2447429  
 Email : director.dir.dmg@kerala.gov.in  
 Web : www.dmg.kerala.gov.in

No.7671/M3/2021

22/01/2022

From  
**The Director of Mining &Geology**

To  
**Shri. Rajesh Jha**  
 Executive Officer  
 Adani Vizhijam Port Pvt.Ltd  
 2<sup>nd</sup> Floor,Vepanchika Towers  
 Thycaud,Thiruvananthapuram

Sir,

Sub:- Mining & Geology - Mines and Minerals - Minor Mineral - Granite Building Stone -  
 Preparation and execution of quarrying lease deed - reg.

Ref:-

1. Pro. Order No428/2021-22/5219/M3/2019/DMG dated Thiruvananthapuram 22/01/2022
2. Kerala Minor Mineral Concession Rules, 2015
3. Kerala Minerals (Prevention of Illegal Mining, Storage & Transportation) Rules, 2015
4. Mines & Minerals (Development & Regulation) Act 1957

Please refer to the order cited above, wherein a quarrying lease for Granite (Building Stone) is granted to Sri. Rajesh Jha, Executive Officer, Adani Vizhijam Port Pvt Ltd, 2<sup>nd</sup> Floor, Vepanchika Towers, Thycaud, Thiruvananthapuram over an area of 1.1081 Hectares of land in Block No.29, Re Survey no. 120/10 (Govt. Land) of Manickal Village, Nedumangad Taluk, Thiruvananthapuram District for a period of 6 years.

A draft copy of quarrying lease deed in Form H is enclosed. I request you to prepare three copies of the quarrying lease deed, original on plain paper and two copies of the same in stamped paper worth Rs. 500/- and produce the same before the Geologist, District Office, Thiruvananthapuram for scrutiny and execution. The date of execution will be filled by the Geologist at the time of execution or you fill in the date after getting confirmation from the District Geologist. After scrutiny of the quarrying lease deed, the Geologist will inform you the date of execution convenient to him. You have to be present in person at the District Office on such date with two



witnesses for execution of deed. It may be noted that the survey map based on which leases granted to you forms a part of the deed and same has to be included in the lease deed. The signature of the lessee and lessor has to be affixed in the survey map also. After execution of deed, as per the request of the District Geologist, stamp duty shall be fixed by District Registrar. On remittance of stamp duty, a certificate of remittance of stamp duty will be entered in the lease deed by the Registrar. The lease deed has to be registered by the office of the Registration Department concerned and after registration, the documents have to be produced before the District Geologist.

A chalan for Rs.11,081/- (Rupees Eleven Thousand and Eighty One only) being the security deposit is enclosed herewith duly counter signed. Please affix your signature at the appropriate places before remittance of money in the treasury. The original treasury receipted chalan may also be produced along with the typed copies of the lease deed before the Geologist, District Office, Thiruvananthapuram at the time of execution. Please note that the quarrying lease deed has to be executed within a period of six months from the date on which quarrying lease has been granted and got registered in accordance with the Registration Act, 1908 vide Rule 44 of the Kerala Minor Mineral Concession Rules, 2015.

Before starting quarrying operations you have to send 2 copies of notice in attached Form-D to the Director (Mining), Directorate General of Mines Safety, No.5, 14th Main(100ft) Road, 4thBlock, Koramangla, Bengaluru-560 034 and one copy to District Magistrate concerned.

Signature Not Verified

Yours faithfully

Digitally signed by S. HARIKISHORE IAS  
Date: 2022.01.22 12:22:34 IST  
Reason: Approved ☐

**S. HARIKISHORE IAS**

**DIRECTOR**



Encl.: (To the applicant)

1. Proceedings order
2. Draft Form-H
3. Form D
4. Counter signed Chalan

Copy to:

The Geologist, District Office, Thiruvananthapuram for further necessary action.

(Ref. Your letter No362/DOT/ML/2019 Dtd.03/06/2019) You are instructed to execute the lease deed as and when it is received. The Proceedings Order cited as reference 1, original survey map and draft Form-H are enclosed herewith. The survey map forms a part of lease deed and the signatures of both lessor and lessee has to be affixed in the Sy. map also. A copy of the lease deed may be forwarded to this office soon after registration.



Please ensure that the area under this grant is demarcated and boundary stones maintained properly before execution of the lease deed.

You may ensure remittance of security deposit, surface rent etc. for the amount specified in the lease order. You may also obtain financial guarantee from the lessee for the amount specified in the lease order.

You are also instructed to obtain and forward the Form-D to this office. Since Form- D is a statutory document, no movement permits shall be issued to lessee if lessee fails to prove that he had sent notice in Form-D to the Director (Mining), Directorate General of Mine Safety, No. 5, 100ft Road, 17th Main, Koramangala 4th Block Bengaluru, Kamataka -560034 and District Magistrate.

You are further instructed to forward photocopies of the registered lease deed to the Director of Mines Safety, Bengaluru & District Collector. Please ensure that the lessee is observing the requirements as per mining plan, lease grant order, form-H and KMMC Rules, 2015.

Encl: (To the District Geologist)

1. Original Survey Map
2. Draft Form-H
3. Proceedings order

**PROCEEDINGS OF THE DIRECTOR OF MINING & GEOLOGY,  
THIRUVANANTHAPURAM, KERALA  
(Present: S. HARIKISHORE IAS)**

**Sub.:-** Department of Mining and Geology - Mines & Minerals - Minor Mineral - Granite (Building Stone) Quarrying Lease to Shri. Rajesh Jha, Chief Executive Officer, Adani Vizhinjam Port Pvt Ltd, 2nd Floor, Vipanchika Towers, Thycaud, Thiruvananthapuram sanctioned orders - issued - reg.

**Ref:-**

1. Application dated 06/02/2019 from Shri. Rajesh Jha, Chief Executive Officer, Adani Vizhinjam Port Pvt Ltd, 2nd Floor, Vipanchika Towers, Thycaud, Thiruvananthapuram
2. Letter No.362/DOT/ML/2019 dated 03/06/2019,24/07/2019 from the Geologist, District Office, Thiruvananthapuram
3. Letter of Intent No 5219/M3/2019 dated 07/06/9 issued by Director of Mining and Geology
4. Environmental clearance No.1416/EC1/2019/SEIAA Dtd 27/02/2020 by the State Environment Impact Assessment Authority, Kerala (valid till 26/02/2025)
5. Integrated consent to operate No.PCB/TVM-DO/ICO/NDD/QRY/29/2020 Dtd.11/03/2020 issued by Kerala State Pollution Control Board Thiruvananthapuram (valid till 26/02/2025)
6. Explosive License NOE/SE/KL/22/129(E95316) Dtd17/06/2020 issued by Petroleum and Explosives Safety Organization, Emakulam (valid till 31/03/2022)
7. Dangerous and Offensive Trade License (Deemed as granted vide Judgment Dtd.13/01/2021 in WP(C). No. 274 of 2021)
8. Mines and Minerals (Development & Regulation)Act, 1957.
9. Kerala Minor Mineral Concession Rules, 2015
10. Kerala Minerals (Prevention of Illegal Mining, Storage & Transportation) Rules 2015

No.428/2021-22/5219/ M3/2019/DMG

Thiruvananthapuram **22/01/2022**

**ORDER**

Shri. Rajesh Jha, Chief Executive Officer, Adani Vizhinjam Port Pvt Ltd, 2nd Floor, Vipanchika Towers, Thycaud, Thiruvananthapuram submitted an application vide reference 1<sup>st</sup> cited to obtain quarrying lease to quarry Granite (Building Stone) over an area of 1.1081 Hectares of Government land (as per the survey map issued by Tahsildar, Nedumangad) comprised in Block No. 29, Re-survey No.120/10 of Manickal village, Nedumangad Taluk, Thiruvananthapuram District. Vide letter referred 2<sup>nd</sup> above, the District Geologist Thiruvananthapuram has intimated that the applied area is contiguous and there is no dues by way of royalty to be collected from the applicant.

Based on the merit of the application and the enclosed mandatory documents including the No Objection Certificate issued by the District Collector, Thiruvananthapuram, survey map, demarcation certificate and the land assignment certificate issued by Revenue Authorities and based





on the recommendation of the District Geologist, a letter of intent was issued to the applicant vide reference 3<sup>rd</sup> cited, intimating the intention of the Department to grant quarrying lease subject to production of approved mining plan and other statutory licenses. The District Geologist forwarded the mining plan (prepared by C.Thambu Cherian, DMG/KERALA/RQP/17/2018) duly approved by him and other statutory licenses submitted by the applicant to this office. In the approved mining plan it is mentioned that during the **life of the mine (6 years) mineable mineral reserve of 2,90,032 MT**. Since the applicant has produced all statutory documents as per the letter of Intent, it is decided to grant a quarrying lease in the said land and hence the following orders are issued.

A quarrying lease is hereby granted to Shri. Rajesh Jha, Chief Executive Officer, Adani Vizhinjam Port Pvt Ltd, 2nd Floor, Vipanchika Towers, Thycaud, Thiruvananthapuram to **quarry Granite (Building Stone) over area of 1.1081 Hectares of land** (as per the Survey map issued by Tahsildar, Nedumangad) **comprised in Block No. 29, Re-survey No. 120/10 of Manickal Village, Nedumangad Taluk, Thiruvananthapuram District for 6 (Six years) as per the Kerala Minor Mineral Concession Rules, 2015**, subject to the conditions mentioned below.

1. The lessee shall execute quarrying lease deed within the period of six months from the date of this order in Form H as per Rule 43 of the Kerala Minor Mineral Concession Rules, 2015 and quarrying lease deed shall be registered in accordance with the provisions of the Indian Registration Act, 1908.
2. The lessee shall commence quarrying operation only after the deed is executed and registered.
3. The lessee shall not assign, sublet or transfer his lease or any right or interest therein to any person without previous written permission of the Director of Mining and Geology.
4. Royalty is payable to Government as per Rule 32 of the Kerala Minor Mineral Concession Rules, 2015 in respect of minor mineral quarried and moved out of the quarry subject to revision from time to time on the basis of amendments to the Schedule I of the said rules. In case the lessee opts for consolidated royalty payment system by registering attached metal crusher units as per the Rule 89, then Consolidated royalty at the rate specified in Schedule III of the said Rules shall be paid instead of royalty specified in Schedule I
5. Dead rent is realizable under 40(1) (d) of the said rules subject to revision from the time to time on the basis of amendments to the Schedule II of the said rules.
6. Surface rent realizable under 40(1)(e) of the said rules will be equal to the land revenue assessed by the Revenue Department subject to revision from time to time on the basis of the land revenue.
7. The lessee shall also deposit an amount of Rs11,081/- (Rupees Eleven Thousand and Eighty One only) being the security deposit at the rate of Rs.10000/- per hectare as security deposit for the observance of the terms and conditions of the lease before the deed is executed as per rule 42 of the said Rules.
8. The lessee shall produce financial guarantee for Rs. 1,00,000/- (Rupees one lakh only) as stipulated in rule 62 of KMMC Rules 2015, before execution of lease deed.
9. The lessee shall pay tax related to Revenue Department, if any, as directed by them and the details should be furnished to the District Geologist periodically.
10. The lessee shall pay 10% of the amount of royalty/consolidated royalty as the case may be paid by them, being the District Mineral Foundation Trust Fund in addition to the royalty /consolidated royalty, as per rule 63 of KMMC Rules, 2015.
11. In addition to the royalty, rents, funds, fees etc. that are required to be remitted by the lessee as per the Mines and Minerals (Development and Regulation) Act, 1957 and Rules made there under, the lessee shall pay all other fees, rents, taxes etc. as required by other agencies





including Goods and Service Tax (GST) for royalty.

12. The quarrying shall be carried out as per the conditions stipulated in Kerala Minor Mineral Concession Rules 2015 and storage and transportation of mineral shall be carried out as per Kerala Minerals (Prevention of illegal Mining, Storage and Transportation) Rules 2015.
13. The quarrying operations shall be strictly as per the approved mining plan and schemes of mining.
14. The lessee shall review the progressive quarry closure plan every five years from the date of opening of the quarry and shall submit to the competent authority for its approval. The lessee shall submit to the competent authority in this behalf, a yearly report before 1<sup>st</sup> July of every year describing protective works including reclamation and rehabilitation work carried out as envisaged in the approved quarry closure plan and if there is any deviation, reasons thereof.
15. The lessee shall submit a scheme of mining for the next five years or remaining period of the lease to the competent authority for approval at least one hundred and twenty days before the expiry of the first five year period for which it was approved on the last occasion.
16. The lessee shall submit final quarry closure plan one year prior to the proposed closure of the quarry and close the quarry as per the approved quarry closure plan.
17. The production of Granite (Building Stone) from the area covered under this grant shall be subject to the year-wise quantity specified in the approved Mining Plan and Scheme of mining.
18. The lessee shall not win and dispose of any type of dimension and decorative stones from the area over which the quarrying lease has been sanctioned on the strength of this order.
19. The lessee shall comply with any and all laws, ordinances, rules and orders related to quarrying operations of any and all governmental or quasi-governmental authorities.
20. The lessee shall comply with all the conditions mentioned in other statutory license required for carrying out quarrying operations.
21. The lessee shall stop all quarrying activities in the event of expiry of any other statutory licenses which is required for carrying out quarrying activities in the State as per the prevailing Acts and Rules. Any quarrying activity undertaken violating the above conditions will be treated as illegal and lessee will be solely responsible for such act and lessee will be liable to pay the penalty imposed by any officer competent to enforce such Acts & Rules.
22. In case the lessee makes any breaches in the conditions of the lease deed or violates the conditions stipulated in relevant Act and Rules based on which all Statutory Licenses are issued for quarrying, then the lessee will be solely responsible for any such breaches and violation and in such cases, the lessee will be solely liable to pay such sum of money as fixed by competent authorities as due and penalty.
23. The lessee shall indemnify and keep indemnified the State Government against all actions, proceedings, suits, claims, demands, losses, damages, cost charges and expenses incurred or suffered by them as a reason of any non-observance or non performance of rules and regulations.
24. This lease is granted in good faith based on the documents/licenses submitted by the lessee. The lessee is solely responsible for the authenticity of the documents/ licenses submitted. At any stage, if it is observed that the documents submitted are incorrect or fake or forged or if it is found that some information was omitted or suppressed, then this lease is liable to be cancelled. In such an event the quarrying carried out with the strength of this lease will be treated as quarrying conducted without any lawful authority.
25. The lessee shall properly maintain the boundary pillars erected as per the demarcation certificate issued by the Village Officer till the expiry of lease.
26. The lessee shall erect a notice board in Malayalam at prominent place with a minimum size of





- 1 meter x 1.5 meters in a metallic board near the entrance of the quarry to the effect that it shall contain the name and address of the lessee, mineral concession number and date, validity of concession, the name of the mineral quarried, proposed annual production etc. In addition details of other statutory licenses shall be displayed.
27. The lessee shall erect by the side of the road leading to quarry (preferably 100m away from quarry), a warning board with danger sign regarding operation of the quarry and use of explosives.
  28. The lessee should take effective preventive measures for the safety of labourers as well as the general public. In due course of quarrying, if any part of the quarry become unsafe, then the lessee shall properly fence that area for preventing accidents by falling of human beings, animals, vehicles, or any objects in to the pit formed by the quarrying.
  29. The lessee shall not carry out any quarrying operations within 7.5 meters from the boundary of the lease area and quarrying operations shall be carried out in benches.
  30. The lessee shall send a notice in Form D appended to KMMC Rules 2015 to the Director (Mining), Directorate General of Mines Safety, No.5, 14th Main (100ft) Road, 4th B Block, Koramangla, Bengaluru-560034 and to the District Magistrate concerned before commencing the quarrying operation and shall intimate the same to the District office of the Department of Mining Geology concerned.
  31. The lessee shall keep book of accounts of production and dispatch of granite (building stone) and shall file monthly and annual returns in Form F and Form G appended to KMMC Rules 2015.
  32. The quarrying permit granted from the District office, if any, in the area of this quarrying lease hereby stands cancelled from the date of this order.
  33. In this case, the anticipated royalty to be remitted for the mineral extracted per year at the present rate of royalty of Rs 24/- per metric ton with average annual production of 48,340 metric ton is Rs 11,60,160/- (Rupees Eleven Thousand Sixty Thousand and One Hundred and Sixty only). In this case, the surface rent to be remitted per year at the present rate of Rs 5 per Are per year is Rs 554/- (Rupees Five Hundred and Fifty Four only) and in the event of non functioning of quarrying the Dead Rent to be realized for the 1st year NIL 2nd year- 300/- (Rupees Three Hundred only) and 3rd year onwards - Rs.1200/- (Rupees one thousand two hundred only) per hectare subject to revision from time to time. The terms and conditions stated in this order will be subject to such further modifications as may be made by the State Government from time to time.

Signature Not Verified

Digitally signed by S.HARIKISHORE IAS  
Date: 2022.01.22 12:22:51 IST  
Reason: Approved

S. HARIKISHORE IAS  
DIRECTOR

To  
✓ Shri. Rajesh Jha  
Chief Executive Officer  
Adani Vizhinjam Port Pvt.Ltd.  
2<sup>nd</sup> Floor, Vepanchika Towers  
Thycaud, Thiruvananthapuram



Copy to :

1. The Director (Mining) Directorate General of Mines Safety, No. 5, 14<sup>th</sup> Main (100ft) Road, 4<sup>th</sup> B Block Koramangla , Bengaluru-560034
2. Member Secretary, SEIAA, Thampanoor Bus Terminal Complex, Thiruvananthapuram
3. The Chairman, SEIAA, Thampanoor Bus Terminal Complex, Thiruvananthapuram
4. The Deputy Chief Controller of explosives, PESO C2 - III Floor, CGO Complex, Kakkanad, Ernakulam
5. The Environmental Engineer, Kerala State Pollution Control Board, District Office, Thiruvananthapuram
6. The Secretary, Manickal Grama Panchayath, Thiruvananthapuram District
7. The Tahsildar, Nedumangad Taluk Office, Thiruvananthapuram District
8. The Village Officer, Manickal village, Thiruvananthapuram District
9. Sri. C. Thambu Cherian, M/s Global Environment & Mining Services, 212, Celestic Towers, Palm Avenue, Green Glen Layout, Bellandur, Bangalore-560103(RQP)
10. The Geologist, District Office, Department of Mining and Geology, Thiruvananthapuram
11. Stock file/file copy





**Annexure I: Quarrying Lease  
Registration Agreement in Form H**

3/2/22

Adjudication Certificate Under Section 32 of Kerala Stamp Act 1959

Certified that the deficit stamp duty of Rs. 90,000/- (Ninety thousand and twenty only) in respect of this document has been levied vide Challan No. KL023490790202122 dt. 5/2/22 Sub Treasury Directorate of Treasuries, Tum

No. 523/I/2022

DISTRICT REGISTRAR (GL) COLLECTOR



FORM H

(See Rule 43)

QUARRYING LEASE



This deed of lease made on this the 28<sup>th</sup> day of January 2022 between the Governor of Kerala (hereinafter referred to as the "State Government" which expression shall, where the context so admits be deemed to include his successors and assigns) of the one part and Shri. Rajesh Jha, Chief Executive Officer, Adani Vizhinjam Port Pvt. Ltd, 2<sup>nd</sup> Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram, (Aadhar No. 2712 6816 7724 ) (hereinafter called the "lessee/ lessees" which expression shall where the

[Signature]  
28/1/22  
Lessor

GEOLOGIST  
DISTRICT OFFICE  
THIRUVANANTHAPURAM

[Signature]  
28/1/2022  
LESSEE  
RAJESH JHA



No. 523/I/2022

Presented in the office of the Sub Registrar of  
Kanyakulanga with the photographs and  
fingerprints of the buyer's and the  
presentant with the document 32A and a

fee of Rs. 24272/-. Paid at 2  
Hours 37 minutes on the 2nd day of March  
2022

(Twenty four thousand  
two hundred and  
seventy two only)

by

RAJESH JHA Rajesh  
residing at 2nd floor  
Vipanchika Tower

EXECUTION ADMITTED BY

(1)

RAJESH JHA Rajesh  
residing at 2nd floor, Vipanchika Tower,  
Thycaud, Thiruvananthapuram  
Chief Executive Officer.  
Adani Vizhinjam Port Pvt Ltd.

Document No. 523 of book I  
Year 2022 9 sheets 1 sheet





context so admits, include his/their heirs, executors, administrators, representatives and permitted assigns) of the other part.


Witnesseth that in consideration of the rents and royalties and lessee's/ Lessees' covenants, hereinafter reserved and contained the State Government hereby give on lease to the lessee/lessees the land measuring 1.1081 hectares in Block No.29, Re-survey No.120/10 (Government land) of Manickal Village, Nedumangad Taluk, Thiruvananthapuram District described in the schedule hereunder and delineated on the plan hereto annexed and therein coloured red (hereinafter called the "said lands") to hold the same for a period of 6 (six) years commencing from the 28/11/2022 and ending on the 22/11/2028 for the purposes of extracting minor mineral/ minerals and subject to the terms and conditions contained in the Kerala Minor Mineral Concession Rules, 2015 (hereinafter referred to as "the Rules") and to the terms and conditions hereinafter appearing.

1. The lessee/lessees shall have the right in and upon the said lands to extract Granite Building Stone (hereinafter called the said mineral/minerals) and to do all acts necessary for the extraction of the said mineral/minerals including the erection on the said lands, buildings and plant required for the purposes and also to take lead and carry away over the said lands and to dispose of the said minerals extracted as aforesaid.

2. The lessee/lessees shall during the subsistence of this lease have the liberty to work the said mineral/minerals and remove the same from the leasehold on permits issued by the State Government/competent authority or any other officer authorised by him in this regard. The permits shall be issued only on the basis of pre-paid royalty at the rates specified in Schedule I to these Rules. The royalty rates shall be subject to revision from time to time as the State Government may order.

3. The lessee/lessees shall pay to the State Government a yearly surface rent equal to the land revenue if any, assessable under the rules for the time being in force, or if the land be the

  
28/11/22  
LESSOR  
GEOLOGIST  
DISTRICT OFFICE  
DEPT. OF MINES & GEOL.  
THIRUVANANTHAPURAM

  
28/11/2022  
LESSEE  
RAJESH JHA



Identified by me

Sudheesh M s/o B. muraleedharan Nair, Senior  
Officer, Corporate Affairs Department, Adani Vizhinjam  
Port Pvt Ltd, residing at 20, Artech Sreeya, Kavaradi  
mukku, Kaidhamukku, TUPM, Pettah. P.O.

Muneeb E.T s/o E.T. Mohammed Rasheer, Executive  
Corporate Affairs Department, Adani Vizhinjam Port Pvt Ltd  
residing at Flat No 7D, Horizon Parks, Althena,  
Vellayambalam (ex) Tiruvandrum.

On this the 2nd day of March 2022

PREETHY V. M.  
SUB REGISTRAR

I have satisfied myself as to the execution of  
the other part in... (Additional charge)  
(Designation) for and on behalf of the C  
of Kerala the President of India who is  
from personal appearance under section  
of the Indian Registration Act, 1908

Governor of Kerala.

On this the 2nd day of March 2022

Registered as Document No. 523 of year 2022  
in book... volume No. 380  
On page 129 to 143 sheets 9  
2 sheet on this the 2nd day of March 2022  
Sub registrar

PREETHY V. M.  
SUB REGISTRAR  
Two duplicate  
registered  
along with the  
originals

(Including plan)

On this the 2nd day of March 2022



PREETHY V. M.  
SUB REGISTRAR

380  
129-143

property of Government or in reserve forest then equal to the land revenue plus cess, if any, per hectare of the land the surface whereof shall be occupied or used by the lessee/lessees for any of the purposes of this deed and so in proportion for any area less than one hectare. The said surface rent shall be paid by yearly payments; the first of such payments to be made on or before the last day of the first year of occupation provided always that no such rent shall be paid or demanded in respect of any roads or ways now in existence.

4. The lessee/lessees shall at all times during the currency of this lease keep correct and intelligible books of account showing accurately the quantity of the said minerals extracted and the weight and value of the said mineral sold or exported together with the names of the purchasers or consignees. The lessee shall also maintain a register of employees showing therein separately men, women employed daily and shall at reasonable times allow the competent authority appointed under the rules (hereinafter referred to as "competent authority") or the officer authorised by him to examine the said books of account and the register of employees and to take copies and extracts therefrom. The lessee/lessees shall submit reports in Forms F and G on the specified dates.

5. All sums found due under or by virtue of this deed from the lessee/ lessees may be recovered from him jointly and severally from them and his/their properties movable and immovable under the provisions of the Revenue Recovery Act for the time being in force as though such sums are arrears of land revenue or in any other manner as the State Government may deem fit.

6. The lessee/lessees shall at the lessee's/lessees' own expense erect and at all times maintain and keep in repair boundary marks and pillars along the boundaries of the said lands according to the demarcation shown in the plan hereto annexed.

7. The lessees shall not carry on or allow to be carried on any quarrying operations at or to any points within a distance of 100 meters from any railway line except with the previous written

  
25/1/22  
Lessor  
DISTRICT OFFICE  
DEPT. OF MINES & GEOL.  
MUMBAI

  
28/1/2022  
Lessee  
RATESH JHA



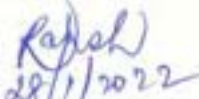
permission of the railway administration concerned and any bridge on National Highway or 50 meters from any reservoir, tanks, canals, rivers, bridges, public roads, other public works, residential buildings, the boundary walls of places of worship, burial grounds or burning Ghats or one kilometer from the boundary of National park or Wild life Sanctuaries except with the previous permission of the authorities concerned or the Government for competent authority. Provided that the railway administration or the State Government or any other authority in this behalf may in granting such permission impose such other conditions as may be found proper and necessary.

8. The sides of open workings shall be sloped, stepped or secured by the lessee in such a manner as to prevent slope failure, when an open working is worked in steps, steps shall be of sufficient breadth in relation to their height to secure safety. In open workings trees liable to fall and all loose ground and material shall be removed by the lessee sufficiently far from the edge or otherwise made source in order to prevent danger to persons employed in the quarry.

9. If a working place is found to be unsafe all persons shall be withdrawn by the lessee/lessees immediately from the dangerous area and all access to such working place except for the purpose of removing the danger of saving life shall be prevented by securely fencing the full width of all entrances to the place.

10. The lessee/lessees shall at all reasonable times allow any officer authorised by the Central Government or by the State Government in that behalf to inspect the said lands and the buildings and plants erected thereon and the lessee/lessees shall assist such persons in conducting the inspection and afford them all information they may reasonably require, and shall conform to and observe all orders which the Central and State Governments as the result of such inspection or otherwise, may from time to time pass.

  
28/1/22  
LESSOR  
GEOLOGIST  
DISTRICT OFFICE  
M.P.E. OF TOXIN & TOLU  
M.P.E. OF TOXIN & TOLU

  
28/1/2022  
LESSEE  
RAJESH JHA

11. The lessee shall be responsible for implementing the provisions of the various labour laws applicable, from time to time, to the quarry.

12. The lessee/lessees shall not assign or underlet the said lands or any part thereof or the rights or privileges, therein hereby granted or any of them without the previous permission in writing of the State Government/competent authority.

13. Where the lease or any right, title or interest therein has been assigned, sublet or transferred as provided in rule 45 read with condition 12, then the person in whose favour such assignment, sublease or transfer has been made shall be responsible for implementing the provisions of the various labor laws applicable, from time to time, to the quarry.

14. The lease may be surrendered by the lessee/lessees at any time after 3 months notice in writing to the State Government/competent authority provided the lessee/lessees has/have paid all sums due on account of the lease. Provided that if the lessee/lessees elects/elect to determine this lease before the expiry of the term of the lease, shall pay in addition to other dues a sum equal to the dead rent payable for the remaining part of the term of the lease deed.

15. If the lessee/lessees shall be desirous of taking a further lease of the said lands for a further term, he/they shall give three months' previous notice in writing of such desire to the State Government/competent authority and if the lessee/lessees has/have duly observed all the conditions of this lease, the State Government/competent authority may agree to renew the lease for such further term and on such terms and conditions as the State Government/competent authority may determine which shall be in accordance with the provisions of these rules.

16. If the lessee/lessees shall at any time during the said term use the said lands or any part thereof in any manner other than as authorized by this lease or fail to carry on quarrying operations

  
25/11/22  
LESSOR  
DISTRICT OFFICE  
HQ. OF JALGAON DISTRICT  
JALGAON

  
28/11/2022  
LESSEE  
RAJESH JHA



continuously without sufficient cause of which the State Government/competent authority shall be the judge or shall commit a breach of any of the conditions of this lease it shall be lawful for the State Government/competent authority to cancel this lease and take possession of the said lands or the alternative to receive from the lessee/lessees such penalty not exceeding Rs 25,000 (Rupees twenty five thousand only) for the breach as the State Government/competent authority may fix.

17. If at the expiration of three calendar months after the expiry of the lease or its sooner determination, there shall remain in or the said lands, any engines, machinery, plant buildings, structures and other works erections and conveniences the said minerals or other property which the lessee is/lessees are entitled to remove from the said lands, the same shall, if not removed by the lessee/lessees within one calendar month after notice in writing requiring their removal be given to the lessee/lessees by the State Government/competent authority be deemed to become the property of the State Government in such manner as they may deem fit without liability to pay any compensation or to account to the lessee/lessees in respect thereof.

18. This lease subject to all rules and regulations which may from time to time be issued by the State Government regulating the working of the quarries and other matters affecting safety, health and convenience of the lessee's/lessees' employees or of the public, whether under the Indian Mines Act or otherwise.

19. The lessee/lessees shall without delay send to the District Collector and the competent authority or the officer authorised by him in this regard report of any accident causing loss of life or serious bodily injuries or seriously affecting or endangering life or property which may at any time occur at or in the said lands in the course of operations under this lease.

20. The lessee/lessees shall furnish such reports and returns relating to output, labourers employed and other matters as the State Government may prescribe.

21. The lessee/lessees shall make and pay such reasonable

  
28/1/22  
LESSOR  
DISTRICT OFFICE  
CH. BY NAGAR & P.O. 100  
MUNICIPALITY

  
28/1/2022  
LESSEE  
RAJESH JHA

compensation as may be assessed by lawful authority in accordance with the law in force on the subject for all damage, injury or disturbance which may be done by him/them in exercise of the powers granted this lease indemnify and shall indemnify and shall keep indemnified fully and completely the State Government against all claims which may be made by any person or persons in respect of any such damage, injury or disturbance and all costs and expenses in connection therewith.

22. Any condition prescribed in the Kerala Minor Mineral Concession Rules, 2015 but left out in this lease which may be found applicable to the lessee/lessees shall be treated as binding on the lessee/lessees.

23. In this case, the anticipated royalty to be remitted for the mineral extracted per year at the present rate of royalty of Rs.24/- per metric ton with average annual production of 48,340 metric ton is Rs.11,60,160/- (Rupees Eleven Lakhs Sixty Thousand and One Hundred and Sixty only) and enhance the quantity of production and period of lease with permission of the lessor and registration of lease deed amended accordingly.

24. In this case, the surface rent to be remitted per year at the present rate of Rs.5 per Are per year is Rs.554/- (Rupees Five Hundred and Fifty Four only) and the refundable Security Deposit is Rs.11,081/- (Rupees Eleven Thousand and Eighty One only)


#### SCHEDULE OF DESCRIPTION OF LAND

<i>District</i>	<i>Taluk and Village</i>	<i>Re- Survey No. of the area</i>	<i>Area in hectares</i>
Thiruvananthapuram	Nedumangad Manickal	120/10(Govt. Land), Block No.29	1.1081

Bounded by Re-survey:-

On the North by : Resurvey Nos. 120/2, 120/3, & 120/4

On the East by : Re-Survey No.120/10 & 120/11

  
28/1/22  
L 5508  
**GEOLOGIST**  
**DISTRICT OFFICE**  
**DEPT OF MINING & GEOLOGY**  
**THIRUVANANTHAPURAM**

  
28/1/2022  
L 5508  
**RAJESH JHA**



On the South by : Re-survey Nos.120/10 & 127

On the West by : Re-survey Nos. 120/6, 120/7, 120/8, 120/9 & 120/10

In witness whereof the parties here to have signed on the date and year first above written.

Signed by.....  
for and on behalf of the Governor of Kerala.



In the presence of

- (1) Sharanath Mohan, MA Asst Geologist District office, Mining & Geology, T.V.PM
- (2) Unnikrishnan, s Asst Geologist District office Mining and Geology Thiruvananthapuram

Signed by.....  
For and on behalf of the  
lessee/lessees

In the presence of

- (1) Sushil Kumar Nair, Ashimad cheruvickal, Sankaragudi, Tvm  
Aadhar No. 8889 5342 1982
- (2) Sudhesh M. 20, Arochi Sagar, Kavaradimukku, Kairthamukku  
Aadhar No. 4004 7036 0988

28/11/22  
LESSOR  
GEOLOGIST  
DISTRICT OFFICE  
DEPT. OF MINING & GEOLOGY  
THIRUVANANTHAPURAM

28/11/2022  
LESSEE  
RAJESH JHA


 12/12/2019.  
 ഏഷ്യാൻ ഓഫീസർ  
 - മോണിക്കൻ



9 sheets

DISTRICT REGISTRAR (GLY) COLLECTOR

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Document No. 523 of book 1  
Year 2022 9 sheets 9

*[Signature]*



## **Annexure J: AAQM Report**



## TEST REPORT

**ULR No: TC540222000001934F**

LRI No.:SEAAL22030582A	Date: 19-03-2022	Page 1 of 1
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### CUSTOMER DETAILS

Customer Name & Address	<b>M/s Adani Vizhinjam Port Pvt Ltd</b> Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt : 12-03-2022

### SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN22030215
Sample Name	Ambient Air	Sample Received on	14-03-2022
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	14-03-2022
Sampled by	Lab Authorized Sampler	Test Completed on	18-03-2022

### DETAILS OF SAMPLING

Sampling Location	Project Site	Date of Sampling	12-03-2022
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	72 %
Latitude	8°39'15.3396" N	Longitude	76°55'24.60216"E

### SAMPLING SITE DETAILS

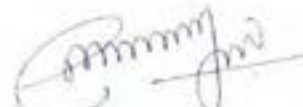
Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

### TEST RESULTS- CHEMICAL PARAMETERS

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
1	Particulate matter (PM <sub>10</sub> )	IS 5182 Part 23: 2006	µg/m <sup>3</sup>	53.7	100 (Max)



**Shency Joy**  
**Dy.TM-Chemical**  
Checked by:

**Laiju P.N.**  
**Laboratory Head**  
Authorized Signatory

The results are related only to the samples submitted for analysis and this test report shall not be reproduced except in full, without the written approval of the laboratory.

### Standard<sup>S</sup> Environmental & Analytical Laboratories

Accreditation & Approval: NABL accredited Testing Laboratory as per ISO/IEC 17025:2017  
vide Certificate No. TC - 5402 & "A" Grade Laboratory approved by KSPCB.

K.J. Tower, Pathalam, Udyogamandal P.O., Ernakulam-683 501, Tel. 0484-2546660, 93 87 27 24 02, 90 74 34 14 43  
Web: www.sealabs.in, E-mail: seaalab@gmail.com

**TEST REPORT****ULR No: TC540222000001934F**

LRI No.:SEAAL22030582A	Date: 19-03-2022	Page 1 of 1
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**TEST RESULTS- CHEMICAL PARAMETERS**

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
2	Particulate matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m <sup>3</sup>	29.4	60.0 (Max)
3	Sulphur dioxide (SO <sub>2</sub> )	IS 5182 Part 2: 2001	µg/m <sup>3</sup>	< 2.00	80.0 (Max)
4	Nitrogen dioxide (NO <sub>2</sub> )	IS 5182 Part 6: 2006	µg/m <sup>3</sup>	< 2.00	80.0 (Max)

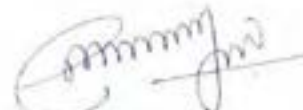
Remarks: The Air sample complies with National Ambient Air Quality Standards with respect to above parameters tested.

\*\*\*End of Report\*\*\*

# Standards



**Shency Joy**  
Dy.TM-Chemical  
Checked by:



**Laiju P.N.**  
Laboratory Head  
Authorized Signatory

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Web: www.sealabs.in, E-mail: seaalab@gmail.com



## TEST REPORT

<b>ULR No: TC540222000001935F</b>		
LRI No.:SEAAL22030583A	Date: 19-03-2022	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	<b>M/s Adani Vizhinjam Port Pvt Ltd</b> Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt : 12-03-2022

SAMPLE DETAILS			
Product Category	Atmospheric Pollution	Sample Code	EN22030216
Sample Name	Ambient Air	Sample Received on	14-03-2022
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	14-03-2022
Sampled by	Lab Authorized Sampler	Test Completed on	18-03-2022

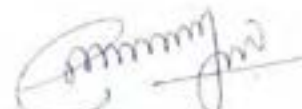
DETAILS OF SAMPLING			
Sampling Location	St: Johns Hospital, Manikkal	Date of Sampling	12-03-2022
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	72 %
Latitude	8°39'47.11752"N	Longitude	76°54'50.2128"E

SAMPLING SITE DETAILS			
Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

TEST RESULTS- CHEMICAL PARAMETERS					
Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
1	Particulate matter (PM <sub>10</sub> )	IS 5182 Part 23: 2006	µg/m <sup>3</sup>	36.1	100 (Max)



**Shency Joy**  
Dy.TM-Chemical  
Checked by:

**Laiju P.N.**  
Laboratory Head  
Authorized Signatory

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Web: www.sealabs.in, E-mail: seaalab@gmail.com

**TEST REPORT****ULR No: TC540222000001935F**

LRI No.:SEAAL22030583A	Date: 19-03-2022	Page 1 of 1
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**TEST RESULTS- CHEMICAL PARAMETERS**

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
2	Particulate matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m <sup>3</sup>	19.8	60.0 (Max)
3	Sulphur dioxide (SO <sub>2</sub> )	IS 5182 Part 2: 2001	µg/m <sup>3</sup>	< 2.00	80.0 (Max)
4	Nitrogen dioxide (NO <sub>2</sub> )	IS 5182 Part 6: 2006	µg/m <sup>3</sup>	< 2.00	80.0 (Max)

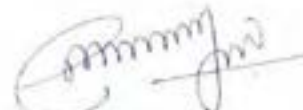
Remarks: The Air sample complies with National Ambient Air Quality Standards with respect to above parameters tested.

\*\*\*End of Report\*\*\*

# Standards



**Shency Joy**  
Dy.TM-Chemical  
Checked by:



**Laiju P.N.**  
Laboratory Head  
Authorized Signatory

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K.J. Tower, Pathalam, Udyogamandal P.O., Ernakulam-683 501, Tel. 0484-2546660, 93 87 27 24 02, 90 74 34 14 43  
Web: www.sealabs.in, E-mail: seaalab@gmail.com



## TEST REPORT

<b>ULR No: TC540222000001936F</b>		
LRI No.:SEAAL22030584A	Date: 19-03-2022	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	<b>M/s Adani Vizhinjam Port Pvt Ltd</b> Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt : 12-03-2022

SAMPLE DETAILS			
Product Category	Atmospheric Pollution	Sample Code	EN22030217
Sample Name	Ambient Air	Sample Received on	14-03-2022
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	14-03-2022
Sampled by	Lab Authorized Sampler	Test Completed on	18-03-2022

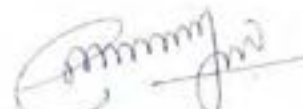
DETAILS OF SAMPLING			
Sampling Location	Govt.L P School, Perumala	Date of Sampling	12-03-2022
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	72 %
Latitude	8°41'3.76656"N	Longitude	76°55'34.74948"E

SAMPLING SITE DETAILS			
Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

TEST RESULTS- CHEMICAL PARAMETERS					
Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
1	Particulate matter (PM <sub>10</sub> )	IS 5182 Part 23: 2006	µg/m <sup>3</sup>	62.9	100 (Max)



**Shency Joy**  
**Dy.TM-Chemical**  
Checked by:

**Laiju P.N.**  
**Laboratory Head**  
Authorized Signatory

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Web: www.sealabs.in, E-mail: seaalab@gmail.com

**TEST REPORT****ULR No: TC540222000001936F**

LRI No.:SEAAL22030584A	Date: 19-03-2022	Page 1 of 1
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**TEST RESULTS- CHEMICAL PARAMETERS**

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
2	Particulate matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m <sup>3</sup>	33.7	60.0 (Max)
3	Sulphur dioxide (SO <sub>2</sub> )	IS 5182 Part 2: 2001	µg/m <sup>3</sup>	< 2.00	80.0 (Max)
4	Nitrogen dioxide (NO <sub>2</sub> )	IS 5182 Part 6: 2006	µg/m <sup>3</sup>	< 2.00	80.0 (Max)

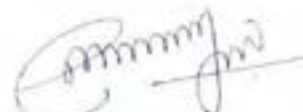
Remarks: The Air sample complies with National Ambient Air Quality Standards with respect to above parameters tested.

\*\*\*End of Report\*\*\*

# Standards



**Shency Joy**  
**Dy.TM-Chemical**  
Checked by:



**Laiju P.N.**  
**Laboratory Head**  
Authorized Signatory

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K.J. Tower, Pathalam, Udyogamandal P.O., Ernakulam-683 501, Tel. 0484-2546660, 93 87 27 24 02, 90 74 34 14 43  
Web: www.sealabs.in, E-mail: seaalab@gmail.com



## TEST REPORT

**ULR No: TC540222000001937F**

LRI No.:SEAAL22030585A	Date: 19-03-2022	Page 1 of 1
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### CUSTOMER DETAILS

Customer Name & Address	<b>M/s Adani Vizhinjam Port Pvt Ltd</b> Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt : 12-03-2022

### SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN22030218
Sample Name	Ambient Air	Sample Received on	14-03-2022
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	14-03-2022
Sampled by	Lab Authorized Sampler	Test Completed on	18-03-2022

### DETAILS OF SAMPLING

Sampling Location	Kovilvila Sree Mahavishnu Temple	Date of Sampling	12-03-2022
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	72 %
Latitude	8°39'42.20748"N	Longitude	76°56'36.23712"N

### SAMPLING SITE DETAILS

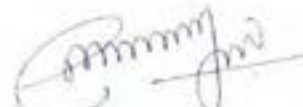
Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

### TEST RESULTS- CHEMICAL PARAMETERS

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
1	Particulate matter (PM <sub>10</sub> )	IS 5182 Part 23: 2006	µg/m <sup>3</sup>	40.2	100 (Max)



**Shency Joy**  
Dy.TM-Chemical  
Checked by:

**Laiju P.N.**  
Laboratory Head  
Authorized Signatory

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Web: www.sealabs.in, E-mail: seaalab@gmail.com

**TEST REPORT****ULR No: TC540222000001937F**

LRI No.:SEAAL22030585A	Date: 19-03-2022	Page 1 of 1
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**TEST RESULTS- CHEMICAL PARAMETERS**

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
2	Particulate matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m <sup>3</sup>	21.9	60.0 (Max)
3	Sulphur dioxide (SO <sub>2</sub> )	IS 5182 Part 2: 2001	µg/m <sup>3</sup>	< 2.00	80.0 (Max)
4	Nitrogen dioxide (NO <sub>2</sub> )	IS 5182 Part 6: 2006	µg/m <sup>3</sup>	< 2.00	80.0 (Max)

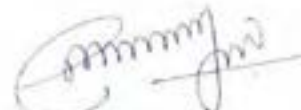
Remarks: The Air sample complies with National Ambient Air Quality Standards with respect to above parameters tested.

\*\*\*End of Report\*\*\*

# Standards



**Shency Joy**  
**Dy.TM-Chemical**  
Checked by:



**Laiju P.N.**  
**Laboratory Head**  
Authorized Signatory

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Web: www.sealabs.in, E-mail: seaalab@gmail.com



## TEST REPORT

<b>ULR No: TC540222000001938F</b>		
LRI No.:SEAAL22030586A	Date: 19-03-2022	Page 1 of 1


CUSTOMER DETAILS	
Customer Name & Address	<b>M/s Adani Vizhinjam Port Pvt Ltd</b> Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt : 12-03-2022

SAMPLE DETAILS			
Product Category	Atmospheric Pollution	Sample Code	EN22030219
Sample Name	Ambient Air	Sample Received on	14-03-2022
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	14-03-2022
Sampled by	Lab Authorized Sampler	Test Completed on	18-03-2022

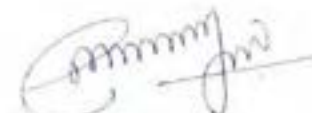
DETAILS OF SAMPLING			
Sampling Location	Operators Rest Room	Date of Sampling	12-03-2022
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	72 %
Latitude	8°39'17.88732"N	Longitude	76°55'39.9162"E

SAMPLING SITE DETAILS			
Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

TEST RESULTS- CHEMICAL PARAMETERS					
Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
1	Particulate matter (PM <sub>10</sub> )	IS 5182 Part 23: 2006	µg/m <sup>3</sup>	47.3	100 (Max)

  
**Shency Joy**  
 Dy.TM-Chemical  
 Checked by:



  
**Laiju P.N.**  
 Laboratory Head  
 Authorized Signatory

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K.J. Tower, Pathalam, Udyogamandal P.O., Ernakulam-683 501, Tel. 0484-2546660, 93 87 27 24 02, 90 74 34 14 43

Web: www.sealabs.in, E-mail: seaalab@gmail.com

**TEST REPORT****ULR No: TC540222000001938F**

LRI No.:SEAAL22030586A	Date: 19-03-2022	Page 1 of 1
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**TEST RESULTS- CHEMICAL PARAMETERS**

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARDS
2	Particulate matter (PM <sub>2.5</sub> )	IS 5182 Part 24:2019	µg/m <sup>3</sup>	25.6	60.0 (Max)
3	Sulphur dioxide (SO <sub>2</sub> )	IS 5182 Part 2: 2001	µg/m <sup>3</sup>	< 2.00	80.0 (Max)
4	Nitrogen dioxide (NO <sub>2</sub> )	IS 5182 Part 6: 2006	µg/m <sup>3</sup>	< 2.00	80.0 (Max)

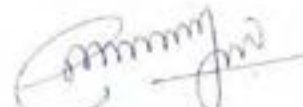
Remarks: The Air sample complies with National Ambient Air Quality Standards with respect to above parameters tested.

\*\*\*End of Report\*\*\*

# Standards



**Shency Joy**  
Dy.TM-Chemical  
Checked by:



**Laiju P.N.**  
Laboratory Head  
Authorized Signatory

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Web: www.sealabs.in, E-mail: seaalab@gmail.com

## **Annexure K: Noise Monitoring Report**



## TEST REPORT

ULR No: TC540222000001939F

LRI No.:SEAAL22030587A	Date: 19-03-2022	Page 1 of 1
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### CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt: 12-03-2022

### DETAILS OF MONITORING

Product Category	Atmospheric Pollution	Sample Code	EN22030220
Sample Name	Ambient Noise	Monitoring Commenced on	12-03-2022/ 06:00
Monitoring Location	Project Site	Monitoring Completed on	13-03-2022/ 06:00
Test Method	IS 9989:1981	Monitored by	Lab Authorized Sampler
Latitude	8°39'32.43852"N	Longitude	76°55'40.26533"E

### SAMPLING SITE DETAILS

Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

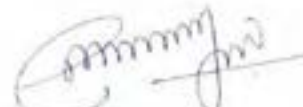
### MONITORING RESULTS - Leq

TIME	RESULTS dB(A)	TIME	RESULTS dB(A)	TIME	RESULTS dB(A)
06:00	38.2	14:00	51.2	22:00	37.0
07:00	41.0	15:00	51.6	23:00	36.4
08:00	45.3	16:00	52.8	24:00	39.0
09:00	48.9	17:00	53.2	01:00	39.8
10:00	51.2	18:00	47.7	02:00	39.4
11:00	54.4	19:00	44.1	03:00	40.1
12:00	51.6	20:00	40.2	04:00	39.0
13:00	50.8	21:00	39.7	05:00	40.9

### TEST RESULTS- CHEMICALPARAMETERS



Shency Joy  
Dy.TM-Chemical  
Checked by:

Laiju P.N.  
Laboratory Head  
Authorized Signatory

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vide Certificate No. TC - 5402 & "A" Grade Laboratory approved by KSPCB.

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Web: www.sealabs.in, E-mail: seaalab@gmail.com

**TEST REPORT****ULR No: TC540222000001939F**

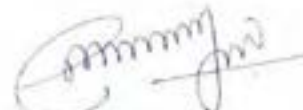
LRI No.:SEAAL22030587A	Date: 19-03-2022	Page 1 of 1
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Sl. No.	PARAMETERS	UNIT	RESULT	NAAQ STANDARDS (RESIDENTIAL AREA)
1	Ambient Sound Level (Leq) Day Time (06:00 to 22:00)	dB(A)	49.7	55 dB (A)
2	Ambient Sound Level (Leq) Night Time (22:00 to 06:00)	dB(A)	39.4	45 dB (A)

Remarks: The Noise level Monitoring complies with the Noise Pollution (Regulation and Control) Rules, 2000.

\*\*\*End of Report\*\*\*

# Standards

**Shency Joy**  
**Dy.TM-Chemical**  
Checked by:**Laiju P.N.**  
**Laboratory Head**  
Authorized Signatory

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Web: www.sealabs.in, E-mail: seaalab@gmail.com

## TEST REPORT

<b>ULR No: TC540222000001940F</b>		
LRI No.:SEAAL22030588A	Date: 19-03-2022	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	<b>M/s Adani Vizhinjam Port Pvt Ltd</b> Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt: 12-03-2022

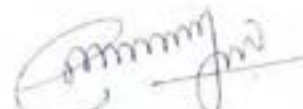
DETAILS OF MONITORING			
Product Category	Atmospheric Pollution	Sample Code	EN22030221
Sample Name	Ambient Noise	Monitoring Commenced on	12-03-2022/ 06:00
Monitoring Location	St: Johns Hospital, Manikkal	Monitoring Completed on	13-03-2022/ 06:00
Test Method	IS 9989:1981	Monitored by	Lab Authorized Sampler
Latitude	8°39'44.9024"N	Longitude	76° 54'56.30857"E

SAMPLING SITE DETAILS			
Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

MONITORING RESULTS - Leq					
TIME	RESULTS dB(A)	TIME	RESULTS dB(A)	TIME	RESULTS dB(A)
06:00	31.1	14:00	41.7	22:00	30.2
07:00	33.4	15:00	42.1	23:00	33.3
08:00	36.9	16:00	43.0	24:00	35.7
09:00	39.8	17:00	43.3	01:00	36.4
10:00	41.7	18:00	38.8	02:00	36.0
11:00	44.3	19:00	36.0	03:00	36.7
12:00	42.1	20:00	32.7	04:00	35.7
13:00	41.4	21:00	32.4	05:00	37.4



**Shency Joy**  
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**TEST REPORT**

<b>ULR No: TC540222000001940F</b>		
LRI No.:SEAAL22030588A	Date: 19-03-2022	Page 1 of 1

<b>TEST RESULTS- CHEMICALPARAMETERS</b>				
<b>Sl. No.</b>	<b>PARAMETERS</b>	<b>UNIT</b>	<b>RESULT</b>	<b>NAAQ STANDARDS (RESIDENTIAL AREA)</b>
1	Ambient Sound Level (Leq) Day Time (06:00 to 22:00)	dB(A)	40.2	55 dB (A)
2	Ambient Sound Level (Leq) Night Time (22:00 to 06:00)	dB(A)	36.0	45 dB (A)

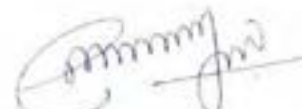
Remarks: The Noise level Monitoring complies with the Noise Pollution (Regulation and Control) Rules, 2000.

\*\*\*End of Report\*\*\*

# Standards



**Shency Joy**  
**Dy.TM-Chemical**  
Checked by:



**Laiju P.N.**  
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Web: www.sealabs.in, E-mail: seaalab@gmail.com

## TEST REPORT

<b>ULR No: TC540222000001941F</b>		
LRI No.:SEAAL22030589A	Date: 19-03-2022	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	<b>M/s Adani Vizhinjam Port Pvt Ltd</b> Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt: 12-03-2022

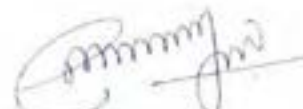
DETAILS OF MONITORING			
Product Category	Atmospheric Pollution	Sample Code	EN22030222
Sample Name	Ambient Noise	Monitoring Commenced on	12-03-2022/ 06:00
Monitoring Location	Govt.L P School, Perumala	Monitoring Completed on	13-03-2022/ 06:00
Test Method	IS 9989:1981	Monitored by	Lab Authorized Sampler
Latitude	8°40'52.36824"N	Longitude	76°55'50.28204"E

SAMPLING SITE DETAILS			
Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

MONITORING RESULTS - Leq					
TIME	RESULTS dB(A)	TIME	RESULTS dB(A)	TIME	RESULTS dB(A)
06:00	35.2	14:00	47.2	22:00	34.1
07:00	37.8	15:00	47.6	23:00	34.4
08:00	41.7	16:00	48.6	24:00	36.9
09:00	45.0	17:00	49.0	01:00	37.6
10:00	47.2	18:00	43.9	02:00	37.3
11:00	50.1	19:00	40.7	03:00	38.0
12:00	47.6	20:00	37.0	04:00	36.9
13:00	46.8	21:00	36.6	05:00	38.7



**Shency Joy**  
Dy.TM-Chemical  
Checked by:

**Laiju P.N.**  
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Authorized Signatory

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**TEST REPORT**

<b>ULR No: TC540222000001941F</b>		
LRI No.:SEAAL22030589A	Date: 19-03-2022	Page 1 of 1

<b>TEST RESULTS- CHEMICALPARAMETERS</b>				
<b>Sl. No.</b>	<b>PARAMETERS</b>	<b>UNIT</b>	<b>RESULT</b>	<b>NAAQ STANDARDS (RESIDENTIAL AREA)</b>
1	Ambient Sound Level (Leq) Day Time (06:00 to 22:00)	dB(A)	45.7	55 dB (A)
2	Ambient Sound Level (Leq) Night Time (22:00 to 06:00)	dB(A)	37.3	45 dB (A)

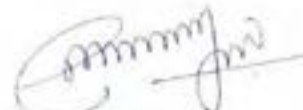
Remarks: The Noise level Monitoring complies with the Noise Pollution (Regulation and Control) Rules, 2000.

\*\*\*End of Report\*\*\*

# Standards



**Shency Joy**  
**Dy.TM-Chemical**  
Checked by:



**Laiju P.N.**  
**Laboratory Head**  
Authorized Signatory

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Web: www.sealabs.in, E-mail: seaalab@gmail.com



## TEST REPORT

<b>ULR No: TC540222000001942F</b>		
LRI No.:SEAAL22030590A	Date: 19-03-2022	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	<b>M/s Adani Vizhinjam Port Pvt Ltd</b> Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt: 12-03-2022

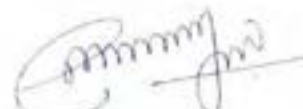
DETAILS OF MONITORING			
Product Category	Atmospheric Pollution	Sample Code	EN22030223
Sample Name	Ambient Noise	Monitoring Commenced on	12-03-2022/ 06:00
Monitoring Location	Kovilvila Sree Mahavishnu Temple	Monitoring Completed on	13-03-2022/ 06:00
Test Method	IS 9989:1981	Monitored by	Lab Authorized Sampler
Latitude	8°39'42.20748"N	Longitude	76°56'36.23712"N

SAMPLING SITE DETAILS			
Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

MONITORING RESULTS - Leq					
TIME	RESULTS dB(A)	TIME	RESULTS dB(A)	TIME	RESULTS dB(A)
06:00	28.9	14:00	38.7	22:00	28.0
07:00	31.0	15:00	39.0	23:00	32.3
08:00	34.3	16:00	39.9	24:00	34.6
09:00	37.0	17:00	40.2	01:00	35.3
10:00	38.7	18:00	36.1	02:00	35.0
11:00	41.1	19:00	33.4	03:00	35.6
12:00	39.0	20:00	30.4	04:00	34.6
13:00	38.4	21:00	30.0	05:00	36.3



**Shency Joy**  
Dy.TM-Chemical  
Checked by:

**Laiju P.N.**  
Laboratory Head  
Authorized Signatory

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**TEST REPORT**

<b>ULR No: TC540222000001942F</b>		
LRI No.:SEAAL22030590A	Date: 19-03-2022	Page 1 of 1

<b>TEST RESULTS- CHEMICALPARAMETERS</b>				
<b>Sl. No.</b>	<b>PARAMETERS</b>	<b>UNIT</b>	<b>RESULT</b>	<b>NAAQ STANDARDS (RESIDENTIAL AREA)</b>
1	Ambient Sound Level (Leq) Day Time (06:00 to 22:00)	dB(A)	37.2	55 dB (A)
2	Ambient Sound Level (Leq) Night Time (22:00 to 06:00)	dB(A)	35.0	45 dB (A)

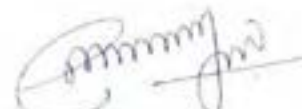
Remarks: The Noise level Monitoring complies with the Noise Pollution (Regulation and Control) Rules, 2000.

\*\*\*End of Report\*\*\*

# Standards



**Shency Joy**  
**Dy.TM-Chemical**  
Checked by:



**Laiju P.N.**  
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Web: www.sealabs.in, E-mail: seaalab@gmail.com

## TEST REPORT

<b>ULR No: TC540222000001943F</b>		
LRI No.:SEAAL22030591A	Date: 19-03-2022	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	<b>M/s Adani Vizhinjam Port Pvt Ltd</b> Manickal, Nedumangad Thiruvananthapuram District
Customer Reference	Test Request dt: 12-03-2022

DETAILS OF MONITORING			
Product Category	Atmospheric Pollution	Sample Code	EN22030224
Sample Name	Ambient Noise	Monitoring Commenced on	12-03-2022/ 06:00
Monitoring Location	Operators Rest Room	Monitoring Completed on	13-03-2022/ 06:00
Test Method	IS 9989:1981	Monitored by	Lab Authorized Sampler
Latitude	8°39'17.88732"N	Longitude	76°55'39.9162"E

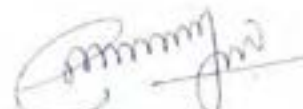
SAMPLING SITE DETAILS			
Re - Survey No	12010, Block No.29		
Village	Manickal	Taluk	Nedumangad
District	Thiruvananthapuram	State	Kerala

MONITORING RESULTS - Leq					
TIME	RESULTS dB(A)	TIME	RESULTS dB(A)	TIME	RESULTS dB(A)
06:00	32.6	14:00	43.7	22:00	31.6
07:00	34.9	15:00	44.0	23:00	35.0
08:00	38.6	16:00	45.0	24:00	37.5
09:00	41.7	17:00	45.4	01:00	38.3
10:00	43.7	18:00	40.7	02:00	37.9
11:00	46.4	19:00	37.6	03:00	38.6
12:00	44.0	20:00	34.3	04:00	37.5
13:00	43.3	21:00	33.9	05:00	39.3

TEST RESULTS- CHEMICALPARAMETERS
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**Shency Joy**  
Dy.TM-Chemical  
Checked by:

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**TEST REPORT****ULR No: TC540222000001943F**

LRI No.:SEAAL22030591A	Date: 19-03-2022	Page 1 of 1
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Sl. No.	PARAMETERS	UNIT	RESULT	NAAQ STANDARDS (RESIDENTIAL AREA)
1	Ambient Sound Level (Leq) Day Time (06:00 to 22:00)	dB(A)	42.2	55 dB (A)
2	Ambient Sound Level (Leq) Night Time (22:00 to 06:00)	dB(A)	37.9	45 dB (A)

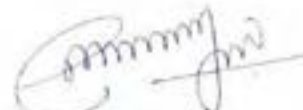
Remarks: The Noise level Monitoring complies with the Noise Pollution (Regulation and Control) Rules, 2000.

\*\*\*End of Report\*\*\*

# Standards



**Shency Joy**  
**Dy.TM-Chemical**  
Checked by:



**Laiju P.N.**  
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Authorized Signatory

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Web: www.sealabs.in, E-mail: seaalab@gmail.com

**Annexure L: Article 32 of Concession  
Agreement with GoK**

## ARTICLE 32

### ESCROW ACCOUNT

#### 32.1 Escrow Account

32.1.1 The Concessionaire shall, prior to the Appointed Date, open and establish an Escrow Account with a Bank (the “Escrow Bank”) in accordance with this Agreement read with the Escrow Agreement.

32.1.2 The nature and scope of the Escrow Account are fully described in the agreement (the “Escrow Agreement”) to be entered into amongst the Concessionaire, the Authority, the Escrow Bank and the Senior Lenders through the Lenders’ Representative, which shall be substantially in the form set forth in Schedule-S.

#### 32.2 Deposits into Escrow Account

The Concessionaire shall deposit or cause to be deposited the following inflows and receipts into the Escrow Account:

- (a) all funds constituting the Financial Package;
- (b) all Fee and any other revenues from or in respect of the Port, including the proceeds of any rentals, deposits, capital receipts or insurance claims; and
- (c) all payments by the Authority, after deduction of any outstanding Concession Fee:

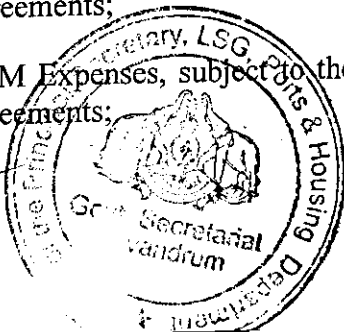
Provided that the Senior Lenders may make direct disbursements to the EPC Contractor in accordance with the express provisions contained in this behalf in the Financing Agreements.

#### 32.3 Withdrawals during Concession Period

32.3.1 The Concessionaire shall, at the time of opening the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the Escrow Bank instructing, inter alia, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:

- (a) all taxes due and payable by the Concessionaire for and in respect of the Port, excluding Port Estate Development;
- (b) all payments relating to construction of the Port, subject to and in accordance with the conditions, if any, set forth in the Financing Agreements;

- (c) O&M Expenses, subject to the ceiling, if any, set forth in the Financing Agreements;





- (d) O&M Expenses and other costs and expenses incurred by the Authority in accordance with the provisions of this Agreement, and certified by the Authority as due and payable to it;
- (e) Concession Fee due and payable to the Authority;
- (f) monthly proportionate provision of Debt Service due in an Accounting Year;
- (g) all payments and Damages certified by the Authority as due and payable to it by the Concessionaire, including repayment of Revenue Shortfall Loan;
- (h) monthly proportionate provision of debt service payments due in an Accounting Year in respect of Subordinated Debt;
- (i) any reserve requirements set forth in the Financing Agreements; and
- (j) balance, if any, in accordance with the instructions of the Concessionaire.

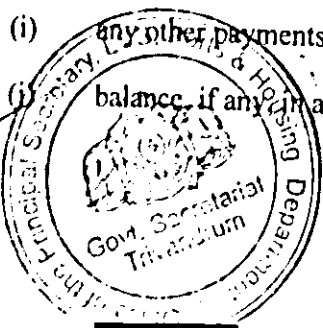
32.3.2 The Concessionaire shall not in any manner modify the order of payment specified in Clause 32.3.1, except with the prior written approval of the Authority.

#### 32.4 Withdrawals upon Termination

32.4.1 Notwithstanding anything to the contrary contained in this Agreement, all amounts standing to the credit of the Escrow Account shall, upon Termination, be appropriated in the following order:



- (a) all taxes due and payable by the Concessionaire for and in respect of the Port, excluding Port Estate Development;
- (b) 90% (ninety per cent) of Debt Due excluding Subordinated Debt;
- (c) outstanding Concession Fee;
- (d) all payments and Damages certified by the Authority as due and payable to it by the Concessionaire, including Premium and repayment of Revenue Shortfall Loan;
- (e) retention and payments relating to the liability for defects and deficiencies set forth in Article 40;
- (f) outstanding Debt Service including the balance of Debt Due;
- (g) outstanding Subordinated Debt;
- (h) incurred or accrued O&M Expenses;
- (i) any other payments required to be made under this Agreement; and
- (j) balance, if any, in accordance with the instructions of the Concessionaire;



  
Vishayam Port



Provided that no appropriations shall be made under Sub-clause (j) of this Clause 32.4.1 until a Vesting Certificate has been issued by the Authority under the provisions of Article 39.

32.4.2 The provisions of this Article 32 and the instructions contained in the Escrow Agreement shall remain in full force and effect until the obligations set forth in Clause 32.4.1 have been discharged.

**Half Yearly Compliance Report (HYCR)  
October 2021 to March 2022**

**Building Stone Quarry Project: Block No. 29, Re-Survey No. 120/10 at  
Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala**



**Adani Vizhinjam Port Private Ltd. (AVPPL)**