

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ODISHA HELD ON 20<sup>TH</sup> NOVEMBER, 2024**

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The SEAC meeting held on 20<sup>th</sup> November, 2024 at 04:00 PM through Video Conferencing (VC) in Google Meet under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

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|-------------------------------|---|-----------------------|
| 1. Sri Sashi Paul             | - | Chairman (through VC) |
| 2. Dr. K. Murugesan           | - | Member Secretary      |
| 3. Dr. Rabi Narayan Patra     | - | Member (through VC)   |
| 4. Dr. Chittaranjan Panda     | - | Member (through VC)   |
| 5. Prof. (Dr.) H.B. Sahu      | - | Member (through VC)   |
| 6. Prof. (Dr.) Abanti Sahoo   | - | Member (through VC)   |
| 7. Er. Fakir Mohan Panigrahi  | - | Member (through VC)   |
| 8. Prof. (Dr.) B.K. Satapathy | - | Member (through VC)   |
| 9. Dr. K.C.S Panigrahi        | - | Member (through VC)   |
| 10. Shri Jayant Kumar Das     | - | Member (through VC)   |
| 11. Dr. Ashok Kumar Sahu      | - | Member (through VC)   |

The compliances furnished by the proponents were verified by the members through e-mail and also proceedings of the meeting were confirmed by the members through e-mail. The decision of the committee on case-to-case basis as follows:

**ITEM NO. 01**

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S QUALITY CARE INDIA LIMITED FOR EXPANSION OF MULTI-SPECIALTY HOSPITAL BUILDING PROJECT AND INITIALLY THE APPROVED BUILT-UP AREA WAS 19,901.90 M<sup>2</sup> AT MOUZA - CHANDRASHEKARPUR, TEHSIL - BHUBANESHWAR, DISTRICT- KHURDHA OF SRI N SHIVA KUMAR - EC**

1. This proposal is for Environmental Clearance of M/s Quality Care India Limited for Expansion of Multi-Specialty Hospital Building Project and initially the approved Built-up area was 19,901.90 m<sup>2</sup> at Mouza - Chandrashekarpur, Tehsil-Bhubaneshwar, District - Khurdha of Sri N Shiva Kumar.
2. **Category:** This project falls under Category "B", Project or Activity 8(a) - Building and Construction projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. **Location and connectivity:** The proposed project is located at Plot No. 324 (Pt), Khata no. 619, Near Prachi Enclave, Mouza Chandrashekarpur, Tehsil- Bhubaneshwar, District-Khordha, Odisha by M/s Quality Care India Limited. The project is bounded by geo-coordinates: Latitude: 20°19'16.43"N; Longitude: 85°48'46.37"E bearing Toposheet no F45T15. The land use of the project is for hospital purpose. The nearest highway NH-16 is approx. 3.1 km (SE), NH-316A is approx. 9.4 km (ENE) and NH-316 is approx. 6.5 km (ESE). The nearest railway stations: East coast & Mancheswar Railway Station are about 1.5 km (E) and 3.3km (E) away from the project site. The nearest Airport is Biju

Proceedings of the SEAC meeting held on 20<sup>th</sup> November, 2024

*J Nayak*  
Environmental Scientist, SEAC

Patnaik International Airport which is at a distance of approx. 6 km (S) away from the project site.

4. The site is coming under Bhubaneswar Development Authority.
5. The total plot area is 10117.05sq.mt. / 2.49 Ac. / 1.011 ha. with total built-up area is 5,24,342.6 sq.mt.
6. **The Building Area Details of the Project in tabulated form:**

**Area statement**

S. No.	Particulars	Existing area(m <sup>2</sup> )	Proposed Area(m <sup>2</sup> )	Total Area (existing part+ proposed area) (m <sup>2</sup> )
1.	Total Plot Area (as per Document)	10,117.05 (2.49 acre)		
2.	Net Plot Area (as per Possession)	9615.60		
3.	Permissible Ground Coverage	2247.08	1599.16	3846.24
4.	Proposed Ground Coverage	2247.08	1598.79	3845.87
5.	<b>Total Permissible FAR (@2.39%)</b>	<b>22,953.38</b>		
	• Base FAR (@2.00)	19,231.20		
	• Purchasable FAR (@0.40)	3722.18		
6.	Proposed/Achieved FAR	14,088.39 (@1.46)	8,864.99 (0.921)	22,953.38 (@2.39)
7.	Non-FAR Area	2,983.98	5,574.03	8,558.01
8.	<b>Total Built Up Area (6+7)</b>	<b>17,072.37</b>	<b>14,439.02</b>	<b>31,511.39</b>
9.	Green area	1923.05 (@ 19.99% of the net plot area)		1923.05
10.	Maximum Building Height (m)	29.35	36.25	36.25

7. **Water requirement:** Fresh water requirement for the proposed part is 140 KLD which will be sourced from City Supply & Borewell.
8. **Waste water generation and management:** It is expected that total wastewater (existing + expansion) generated from the project will be approx. 197 KLD. The domestic sewage will be treated in onsite STP capacity of 285 KLD which will be reused for Flushing, Horticulture, HVAC Cooling, etc. The total wastewater or trade effluent (existing +expansion) generated from OPD, IPD, OT, Blood bank, labs & laundry will be treated in onsite ETP of 63 KLD capacity. Treated effluent from ETP will be further discharged into sewer line. It is expected that wastewater (domestic sewage) generated from the project will be approx. 85 KLD (@ 80% of fresh water, 100 % flushing water). The domestic sewage will be treated in onsite STP capacity of 105 KLD generating 77 KLD of recoverable water from STP which will be reused for Flushing, Horticulture, HVAC Cooling, etc. The wastewater (trade effluent) generated from OPD, IPD, OT, Blood bank, labs & laundry will be approx. 19 KLD, which will be treated in onsite ETP of 23 KLD capacity. Treated effluent from ETP will be further discharged into sewer line.

9. **Details of STP/ETP capacity:** 285 KLD (Total = Existing + expansion) of STP and 63 KLD (Total = Existing + expansion) of ETP is proposed for the project. Water will be extracted for City supply & Borewell and the permission for the same is in progress.
10. **Power requirement:** The total maximum demand is estimated as 1800 kVA (Total: Existing + expansion) that will be sourced State Electricity Board. During operation phase, there will be 4 nos. of 1800kVA capacity which includes (2 x 750 +2 x 1500 kVA) LSD DG sets for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion. The proposed Solar PV generation capacity of 5% of total electrical demand load of project. The total demand load of the project is 1800 kVA.
11. **Rainwater Harvesting:** The rain water harvesting proposed is 289.034 m<sup>3</sup> and no. of pits/tanks proposed is 4 pits.
12. **Parking Requirement:** Total parking area provided is 11,139.68 m<sup>2</sup> [Total (Existing + Proposed). Location of parking area to be provided is Basement Parking.
13. **Firefighting Installations:** It includes wet riser, Auxiliaries, hydrants Main (MSC class pipes) with Hydrant accessories like Fire Service Inlet, Fire Brigade Breaching (Siamese) Connections, Automatic Sprinkler system, hydraulically operated Deluge system (Drencher system), Fire extinguishers, Fire Buckets, Transformer Room, LT Panel Room, Underground and Terrace tanks, pumps etc.
14. **Green Belt Development:** Green belt will be developed over an area of 1923.05 sqm which is 19.9% of the total plot area. **Total no. of plants to be planted are 120 trees** out of 40 no. of trees are already planted and remaining 80 no. of trees need to be planted.
15. **Solid Waste Management:** During the operation phase, approx. 533 kg/day of total (existing +expansion) solid waste and 138 kg/day of total (existing + expansion) Biomedical Waste will be generated. Following arrangements will be made at the site in accordance with Solid Waste Management Rules, 2016.

#### Collection and Segregation of waste

- i) A door-to-door collection system will be provided for collection of domestic waste in colored bins from household units.
  - ii) The local vendors will be hired to provide separate-colored bins for dry recyclable and Bio-Degradable waste.
  - iii) For commercial waste collection, adequate number of colored bins (Green and Blue & dark grey bins – separate for Bio-degradable and non-Bio-degradable) are proposed to be provided at the strategic locations of the commercial area.
  - iv) Litter bin will also be provided in open areas like parks etc.
16. **Waste Treatment: Bio-Degradable waste** will be disposed through organic waste converter. STP sludge is proposed to be used for horticultural purposes as manure. Horticultural Waste is proposed to be composted and used for gardening. The cropped grass will be spread on green area. It will act as manure after decomposition. Recyclable waste like paper, plastic, metal etc. will be disposed through local approved recyclers. Recyclable and non-recyclable waste will be disposed through a local agency.

17. **Project Cost:** The estimated project cost is 205 Crores and cost for EMP is 153.75 Lakhs as Capital Cost and 47.43 Lakhs as Recurring cost.

18. **Environment Consultant:** The Environment consultant M/s **Grass Roots Research & Creation India (P) Ltd., Noida** along with the proponent made a presentation on the proposal before the Committee on 04.06.2024.

19. The SEAC in its meeting dated **04-06-2024** recommended the following:

**A. The proponent may be asked to submit the following for further processing of EC application:**

- a) The project is falling within the ESZ of Chandaka Dampara Wildlife sanctuary. Submit the application applied for NOC.
- b) Revisit the calculation of parking area and water consumption of patients, attendees and visitors based on realistic/actual figure with respect to present population and future population after expansion of the project.
- c) Copy of NOC/permission from concerned authority for discharge of additional wastewater to nearest drain.
- d) Increase the greenbelt upto 20% of total plot area.
- e) Copy of all statutory clearances obtained along with BDA approval.
- f) Provision for separate bin for collection of radioactive wastes, separate disposal method to be followed as per the guidelines along with permission from concerned authority for disposal of radioactive wastes.
- g) Submit Water balance separately for radioactive department.
- h) Comparative statement for water demand, wastewater generation and population present and future expansion.
- i) Provision should be kept for Quality check for discharge of effluents from ETP before final discharge.
- j) The green area should be minimum 20% of the land area of the project site. Total ground coverage area including internal roads needs to be 40% maximum of the land area of the project site.

**B. The proposed site shall be visited by Sub-Committee of SEAC to verify the followings**

- a) Environmental settings of the project site.
- b) Extent of construction activity and operational status of all the units.
- c) Road connectivity to the project site.
- d) Drainage network at the site.
- e) Greenbelt development in the existing plant.
- f) Solid waste management practice of the existing plant.
- g) Vacant land available.
- h) Any other issues including local issues.

20. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	The project is falling within the ESZ of Chandaka Dampara Wildlife sanctuary. Submit the application applied for NOC.	As per the NOC received from DFO, Chandaka Wildlife Division, the project site is not coming within the ESZ of Chandaka Dampara WLS. Therefore, NBWL clearance is not required. Copy of DFO NOC is enclosed as <b>Annexure-I</b> .	Annexure I is attached and complied.
2.	Revisit the calculation of parking area and water consumption of patients, attendees and visitors based on realistic/actual figure with respect to present population and future population after expansion of the project.	The population, water consumption and parking details are as per norms which are realistic. Future population after expansion has also been calculated as per norms.  Details enclosed as <b>Annexure –II</b> .	Parking - 11,139.68 m <sup>2</sup> (Existing - 5635.73 m <sup>2</sup> + Proposed - 5503.95 m <sup>2</sup> )
3.	Copy of NOC/permission from concerned authority for discharge of additional wastewater to nearest drain.	The Sewerage connection and discharge permission is enclosed as <b>Annexure-III (a)</b> . The drainage plan showing discharge location is enclosed as <b>Annexure- III (b)</b> .	<b>Annexure-III (a) is attached vide letter no 11902 dtd 06.03.2014</b> There is no recent letter for disposal of additional waste water.
4.	Increase the greenbelt upto 20% of total plot area.	As per the suggestion of SEAC, we have increased the green area to 1923.12m <sup>2</sup> (i.e., 20% of the net plot area). The landscape plan is enclosed as <b>Annexure-IV</b> .	<b>Annexure - IV is attached.</b>
5.	Copy of all statutory clearances obtained along with BDA approval.	The Copy of all statutory details attached as follows: <ul style="list-style-type: none"> <li>• Drainage NOC for Additional water: <b>Annexure- III(a)</b></li> <li>• The water supply permission :<b>Annexure-V</b></li> <li>• BDA &amp; BMC Approval: <b>Annexure-VI</b></li> </ul>	Annexure-III (a), Annexure-V and Annexure-VI is attached and complied.
6.	Provision for separate bin for collection of radioactive wastes, separate disposal method to be followed as per the guidelines along with permission from concerned authority for disposal of radioactive wastes.	<b>For Solid waste:</b> As suggested we will provide separate Bin for collection of Radioactive waste. As per CPCB Guidelines, Health Care Facilities generating radionuclides waste from treatment of Cancer patients and end-of-life equipment containing radio radionuclides will obtain authorization from AERB for its disposal. We will follow the provisions of Atomic Energy (safe Disposal of Radioactive Wastes)	PP has not yet obtained authorization from the competent authority for radioactive waste disposal.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC												
		Rules, 1987 and Obtain an authorization from the competent authority.													
7.	Submit Water balance separately for radioactive department.	<b>Water Balance:</b> We have already considered the effluent from OT, Labs and IPD in the ETP water cycle.	Not Submitted.												
8.	Comparative statement for water demand, wastewater generation and population present and future expansion.	The Comparative Statement of Water Demand, Wastewater and Population for Present and future expansion is presented in <b>Annexure- II.</b>	Annexure- II is attached and complied.												
9.	Provision should be kept for Quality check for discharge of effluents from ETP before final discharge.	As suggested, we will keep the provision for quality check for discharge of effluents from ETP before final discharge.	The PP has assured to comply to the given condition.												
10.	The green area should be minimum 20% of the land area of the project site. Total ground coverage area including internal roads needs to be 40% maximum of the land area of the project site.	As per suggestion of SEAC, we have increased the green area to 1923.12m <sup>2</sup> (i.e 20% of the net plot area). The landscape plan is enclosed as <b>Annexure-IV.</b> As suggested we have increased the ground coverage from 3845.87 m <sup>2</sup> (39.99% of Net plot area) to 3,846.24m <sup>2</sup> (40% of Net plot area).	Annexure-IV is attached and complied. As per suggestion of SEAC, PP have increased the green area to 1923.12m <sup>2</sup> (i.e., 20% of the net plot area).												
<b>Site Visit Point:</b>															
11.	Environmental settings of the project site.	The project site is devoid of any trees. 10 km study area: Chandaka Dampara WLS is 0.23 km (W) away and project site lies in the ESZ of Chandaka Dampara Wildlife Sanctuary. We have applied NBWL for the same. Nandankanan Wildlife Sanctuary is 7.15 km (N) away and the project site is outside the ESZ Zone. Following forests and rivers are present in study area – <table border="1" data-bbox="687 1637 1134 1955"> <thead> <tr> <th colspan="3">Forests</th> </tr> <tr> <th>S.No.</th> <th>Forests</th> <th>Distance and direction</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Ghatika PF</td> <td>5.4 km (SW) from the project site</td> </tr> <tr> <td>2.</td> <td>Medhashala</td> <td>9.4 km</td> </tr> </tbody> </table>	Forests			S.No.	Forests	Distance and direction	1.	Ghatika PF	5.4 km (SW) from the project site	2.	Medhashala	9.4 km	NBWL has been applied as the project site lies in ESZ of Chandaka Dampara Wildlife Sanctuary.
Forests															
S.No.	Forests	Distance and direction													
1.	Ghatika PF	5.4 km (SW) from the project site													
2.	Medhashala	9.4 km													

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent		Views of SEAC
			RF (WSW) from the project site	
		<b>Rivers</b>		
		<b>S.No.</b>	<b>Rivers</b>	<b>Distance and direction</b>
		1.	Bhargavi River	7.5Km (ESE) of project site.
		2.	Kuakhai River	5 Km (E) of project site.
		3.	Daya canal	3.5 Km (E) of project site.
		4.	Serua River	12.7 km (NE) of project site
		5.	Kushabhadra Nadi	8 km (ESE) of project site
		6.	Mahanadi River	14.1 km (NW) of project site
		7.	Deras Dam/ Reservoir	12.9 km (W) of project site
		8.	Jhumka Dam / Reservoir	10.5 km (W) of project site
		9.	Kanjia Lake	8.6 km (N) of project site
		10.	Puri Main Canal	6.7 km (E) of project site
12.	Extent of construction activity and operational status of all the units.	The built-up area of existing Hospital is 17,072.37m <sup>2</sup> which is in operation phase. There is no construction started in the		Complied.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		expansion part of the project.	
13.	Road connectivity to the project site.	The project site is well connected through the Care Hospital Road which is adjacent to the site in the North direction and nearest Highway NH-16 which is approx. 3.1 km (SE) away.	Complied.
14.	Drainage network at the site.	The Sewerage connection and discharge permission is enclosed as <b>Annexure-III (a)</b> . The drainage plan showing discharge location is enclosed as <b>Annexure- III (b)</b> .	<b>Annexure-III (a) is attached vide letter no 11902 dtd 06.03.2014</b> There is no recent letter for disposal of additional waste water.
15.	Greenbelt development in the existing plant.	The Landscape plan showing green area at the project site is enclosed as <b>Annexure- IV</b> . Evergreen tall and ornamental trees have been planted at site. No. of trees required = 1 tree/80 sq. m. of plot area = 9615.60/80 = 120 Nos. Total no. of trees planted at site = 40 nos. Balance no. of trees to be planted = 80 nos. We will plant balance trees at the project site.	Annexure- IV is attached and Complied.
16.	Solid waste management practice of the existing plant.	We have obtained permission for Biomedical wastes and Hazardous waste disposal. Copy of the same is enclosed as <b>Annexure- VII</b> .	Annexure- VII is attached and Complied.
17.	Vacant land available.	No	Complied
18.	Any other issues including local issues.	None	Complied

21. The proposed site was visited by the sub-committee of SEAC on **06.07.2024**. Following are the observations of the sub-committee:

- a) The proposed expansion was explained by the Architect in presence of PP and Consultant.
- b) The site is located at the back side of the existing building where, they propose to construct two buildings - One Cancer block and another multi-level parking.
- c) There has been no construction in the back side of site.
- d) The PP was asked to submit the following considering the total hospital (including proposed and existing):
  - i) Permission from the authority to allow discharge of excess treated water and storm water (If not obtained, they need to get it before construction work) to the existing drain at front.



- ii) Take up plantation (green belt) to plus 20% of the total hospital area. Quite a good number of plants already planted.
- iii) Parking to be considered for about 40% as several vehicles are parked outside. A revised lay out plan about parking of vehicles (for hospital staff and for patients, visitors etc.) to be submitted. If required one more floor in Parking building to be considered.
- iv) A comparative table of environmental settings/like- green belt, STP, Excess treated water, parking area (for existing building and after expansion) to be submitted.
- v) Green belt, solar energy production and stack height etc. to be as per norm.
- a) All other points asked during presentation to be complied along with statutory clearances.

22. The SEAC in its meeting held on dated **31-08-2024** decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	A comparative table of environmental settings/like- green belt, STP, Excess treated water, parking area (for existing building and after expansion) to be submitted.	A comparative table of environmental settings like green belt, STP, Excess treated water, parking area (for existing building and after expansion) is presented at <b>Annexure-I</b> .	A comparative table on green belt, STP, Excess treated water, parking area has been submitted.
2.	Parking to be considered for about 40% as several vehicles are parked outside. A revised lay out plan about parking of vehicles (for hospital staff and for patients, visitors etc.) to be submitted. If required one more floor in Parking building to be considered.	<p>The parking for Existing and Expansion part of Hospital is as per the Local Bye laws.</p> <p>Bye-laws have been revised w.r.t. parking. The existing parking is as per earlier bye-laws dated 26.05.18 as per which parking norms were @ 40% of FAR. The proposed parking is as per revised bye laws dated 10.08.20 as per which parking norms have changed to 30% of FAR. The earlier and revised bye-laws are enclosed as <b>Annexure-II (a) &amp; II (b)</b>.</p> <p>As suggested by SEAC, we have added one additional floor in the Multi-level Parking Block which has now become B+G+6.</p> <p><b>Existing Parking:</b>  Existing FAR area 14088.39 m<sup>2</sup>  Parking Area as per Bye laws= 40% of 14088.39 Sqm= 5635.73 m<sup>2</sup>  Open parking = 594.40 m<sup>2</sup>  Basement Parking = 1556.25 m<sup>2</sup></p> <p><b>Existing parking Area = 2150.65 m<sup>2</sup></b>  <b>Proposed Parking for Expansion:</b>  Total FAR area (Existing +proposed) =</p>	They have submitted the parking details and added another floor as per the recommendations of SEAC.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		8901.14 +14088.39 = 22,989.53 m <sup>2</sup> Total Required proposed parking as per Bye laws = 30% of 22,989.53 m <sup>2</sup> = <b>6896.859 m<sup>2</sup></b> Stilt parking = 4692.16 m <sup>2</sup> Open Parking = 197.71 m <sup>2</sup> <u>Proposed parking Area = 4889.87 m<sup>2</sup></u> Total Parking Area (Existing + proposed) = 2150.65 + 4889.87 = 7040.5 m <sup>2</sup> The revised parking plans are enclosed as <b>Annexure- III</b> . Therefore, there is sufficient parking space within the Hospital. The wrong parking being done by visitors on the roadside will be removed in coordination with local Administration authority.	
3.	Submit Water balance separately for radioactive department indicating the proposed method of disposal of the treated water. Relevant permission from the Atomic Energy Regulatory Board for the operation of the radio isotope / radio pharmaceutical department of the hospital also to be submitted.	We have already considered the effluent from OT, Labs and IPD in the water balance which will be treated in ETP. There is not additional waste water from Radiopharmaceuticals Department. As per CPCB Guidelines, Health Care Facilities generating radionuclides waste from treatment of Cancer patients and end-of-life equipment containing radio radionuclides are required to obtain permission for which PP has obtained approval from AERB. Copy enclosed as <b>Annexure- IV</b> .	They have submitted the permission obtained from AERB for radioactive waste management.
4.	Copy of drainage permission as per expansion as old drainage permission is enclosed which must be without the present needs.	Updated drainage permission is enclosed as <b>Annexure-V</b> .	They have submitted the Old NOC from PHED division for water supply and sewerage system in annexure-V. They have also submitted the corrigendum from BMC regarding discharge of untreated sewerage system.
5.	As per the NoC submitted from concerned DFO, the project is outside ESZ of sanctuary. But as per the clarification given to site visit report, NBWL clearance is applied as project	It is confirmed that the project site is not falling within the ESZ of Chandaka Dampara WLS as per the NOC received from DFO, Chandaka Wildlife Division.	---

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	in side ESZ of sanctuary. This is contradictory and need to be clarified.	Copy of DFO NOC is enclosed as <b>Annexure-VI</b> . Therefore, NBWL clearance is not required.	

Considering the information furnished and the presentation made by the consultant, **M/s Grass Roots Research & Creation India (P) Ltd., Noida** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – A** in addition to the following specific conditions.

- i) The PP needs to have sufficient recharge pit to store rain water.
- ii) The PP needs to provide STP and ETP separately and OWC for safe disposal/sale of STP sludge.
- iii) The PP needs to tie-up with common bio-waste treatment provider before any construction.
- iv) Stack height to be higher than the height of buildings and as per CPCB norm.
- v) All other clearances/permission like- fire, traffic etc. to be obtained and parking of 40% to be maintained.
- vi) The Proponent before implementation of the project shall convert the land to Gharabari and shall take the ownership of the land if not already taken.
- vii) The Proponent shall obtain permission/NOC from Executive Engg. (PHD) and / or from the appropriate authority for disposal of excess STP treated water to the nearest drain without which the Proponent will not start construction work. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be.
- viii) The proponent shall use solar energy at least to the tune of 5% of total power requirement as proposed.
- ix) The proponent shall obtain permission from concerned Fire Safety Authority.
- x) Trees located within the project area shall be transplanted to alongside the boundary green development area.
- xi) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.
- xii) The project proponent shall maximise utilisation of treated water in flushing, plantations and ground washings etc. as per need to reduce water discharge to drain. This shall be verified in future compliance report.
- xiii) The PP will not commence construction unless the drain lay out is finalized and permission given for the same by the authority to discharge excess treated water & storm water.

- xiv) Before starting the construction project physical properties as well as engineering properties of the soil along with its bearing capacity should be undertaken and the report should be submitted.
- xv) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

#### ITEM NO. 02

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF JARIPUT & JAYAMANGALPUR CLUSTER BLACK STONE QUARRY OVER AN AREA OF 20.965 ACRES OR 8.484 HA. HAVING KHATA NO. 296, 432 PLOT NO. 1112, 1112/1061, 1061, 1112/1 & 1632 IN VILLAGE JARIPUT & JAYAMANGALPUR UNDER TANGI TAHASIL OF KHORDHA DISTRICT OF TAHASILDAR TANGI- EC**

1. This proposal is for Environmental Clearance for Jariput & Jayamangalpur Cluster Black Stone Quarry over an area of 20.965 Acres or 8.484 Ha having Khata No.296,432 Plot No. 1112,1112/1061, 1061 , 1112/1 & 1632 in village Jariput & Jayamangalpur under Tangi Tahasil of Khordha District of Tahasildar Tangi.
2. **Category:** As per the EIA Notification dated 14th September 2006 and its subsequent amendments the proposed project falls under category B of Schedule in item 1 (a) – mining of minerals.
3. The mining plan was approved by Deputy Director Geology, Directorate of Geology, Bhubaneswar, Odisha vide letter no.-GXVII(g) 956/19-2224/DG-.Dt dated 30/03/2021.
4. Terms of Reference (TOR), was issued by SEIAA, Odisha, vide proposal Letter No.-1287/SEIAA, Bhubaneswar dated 05.05.2021.
5. Public Hearing was conducted on 17.12.2021 at Village community centre, Jariput, Khurda, Odisha. Issues raised were concerning Environment Pollution and its control and mitigation measures. Blasting, its adverse impact on human health, Agriculture field School going Children. Issues concerned local employment, Transportation road condition, CSR activity and peripheral development. Green belt will be affected and Gramya jungle like kaju jungle will be affected. Ground water impact due to over mining. Dust suppression on the road connecting to National Highway. Demarcation of lease hold area, excavation quality of minor mineral to be looked after by the village co-ordination committee along with officials of District Administration. CSR activity as per public hearing issues raised 15,00,000 lakhs as capital cost and 5,00,000 lakhs as recurring cost.
6. **Location and connectivity:** The site is located at Village-Jariput and Jayamangalpur, Tahasil-Tangi, District-Khordha, Khata No. & Plot No.-Khata No. 296, Plot No. 1112, 1061, & 1632, Kisam-Mundia. The geographical co-ordinates are Latitude: N19° 51'18.5" to N19° 51'33.9" Longitude: E85° 18' 31. 5" to E85° 18' 43.6". The project site falls under Topo sheet No. E45B5 of Survey map of India. The nearest village is Jariput about 1.50 km, Nearest Town/City-Khordha about 48 km, Nearest Railway Station-Kuhuri Railway Station-4.3 Km, Nearest Airport-Biju Patnaik International Airport at about 68.70 km, Nearest Highway-SH-1 about 10 km, Nearest NH-NH- 16 is 0.6 km, Nearest reserve Forest-Kuhuri Reserve Forest about 4 Km, Nearest distance of Approach Road-0.6k.m, Nearest water body-Pond at about 0.30 Km. there are No national parks and sanctuary within 10 km. it

falls under the Sismic Zone Zone – II as per IS: 1893 (Part-I): 2002. Nearest Habitation is Jariput about 1.50 km.

7. Total cluster area is 8.484 ha. Consisting of Jariput A, Jariput B, Jariput C, Jariput D, Jariput 6, Jariput 9, Jariput 10, Jayamangalpur – 1, Jayamangalpur – 2 & Jayamangalpur – 3 located at Village: Jariput & Jayamangalpur, Khata No. 296, Plot No.1112,1061 & 1632, Kizam Pahad, Tehsil: Tangi, District: Khordha, Odisha. Pahad Kissam.
8. **Total reserves and production:** As per MGQ certificate given by Competent Authority the proposed production is 3,60,000 m<sup>3</sup>/year.

As per Approved Mining Plan		As per Approved Mining Plan
<b>Geological Reserve</b>	<b>Mineable Reserve</b>	<b>Production</b>
9,41,485 m <sup>3</sup>	5,31,107 m <sup>3</sup>	3,60,000 m <sup>3</sup> /year

9. **Method of Mining:** Mining operations will be carried out by Semi-mechanized opencast mining method. The topsoil will be used for greenbelt development and mine waste will be stacked separately, will be used as road building material. Muffled blasting will be carried to reduce the ground vibration, fly rock etc. due to blasting. The capacity of the proposed production for Stone is 3,60,000 m<sup>3</sup>/year & capacity of 18,00,000 cum stone for five years.
10. **Bench geometry:** Conventional method of mining will be adopted in cluster-1 area. In the present plan period it is proposed to shape the quarry with bench heights of 3m to 6m (max.) the slope of individual bench will be maintained around 80° to 85° with ultimate pit slope of less than 45°.
11. **Transportation:** Mined out material will be loaded into the dumpers with the help of JCB and will be send to the nearby established crusher outside the lease area and finally the material of commercial use as per the demand of the market will be transported by Covered trucks / dumpers to its final destination.
12. **Waste generation and management:** The Cluster-1 area is partly covered with soil mixed rock boulders/pebbles followed by granite gneiss/charnockite/migmatite deposit. The soil to be generated will be stacked in the earmarked temporary soil stack of the individual QL holders and will be utilised for the plantation purpose to be undertaken around the respective hillock/patch and adjacent to haul roads of the same in Cluster-1. Moreover, as envisaged, waste to the tune of about 30% of excavation will be generated during mining part of which will be utilised by the respective Lessee for making of mine road and allied infrastructures. Around 2/3<sup>rd</sup> of the generated waste will be transported to the crusher site along with valuable building stone/road metal where these will be sorted out. The remaining 1/3<sup>rd</sup> of the total waste will be separated at the quarry head and will be stacked in the temporary waste dump of respective quarry lease and will be utilised by the lessee for making of mine road and allied infrastructures. If required, the portion of soil unsuitable for plantation and the wastes will be sold out to intending users for construction purpose after obtaining permission from concerned authority and payment of advance Royalty.

13. **Water requirement and wastewater management:** Total water requirement for the project will be 28 KLD, out of which 17 KLD will be required for drinking and domestic purpose, 10 KLD for dust suppression and 1 KLD for plantation purpose. Water requirement will be met from nearby available water resource and drinking water will be sourced from tanker.

14. **Baseline Study conducted** – Baseline study of the study area was conducted during Pre-monsoon from 1st March 2021 to 31st May 2021.

- **Air:** The concentrations of PM 10 and PM 2.5 for all the 8 AAQM stations were found between 57.6 to 87.9  $\mu\text{g}/\text{m}^3$  and 23 to 35.2  $\mu\text{g}/\text{m}^3$  respectively. The concentrations of SO<sub>2</sub> and NO<sub>x</sub> were found to be in range of 8.2 to 12.6  $\mu\text{g}/\text{m}^3$  and 14 to 21.6  $\mu\text{g}/\text{m}^3$  respectively.
- **Noise:** The noise levels varied in the study area during day time from 71.2 dB(A) Leq to 49.4 Leq dB(A). The night time noise level in the study area is in the range of 66.5 dB (A) Leq to 39.2 Leq dB (A).
- **Ground water monitoring:** The ground water analysis for all the 8 sampling stations. All the samples meet the desirable standards (pH ranges from 6.87 to 7.76). TDS in samples ranges from 700 mg/L to 850 mg/L. All the samples meet the permissible limit of 2000 mg/L. Total Hardness in the water ranges from 305 mg/L to 420 mg/L. All the samples meet the permissible limit of 600 mg/L. Calcium content in the water ranges from 74.4 mg/L to 102.4 mg/L, all the samples meet the permissible limit of 200 mg/L. Magnesium content in the water ranges from 25.7 mg/L to 42.2 mg/L. All the samples meet the permissible limit of 100 mg/L.
- **Surface water monitoring:** The surface water analysis for all the 8 sampling stations. All samples were colorless meeting desirable norms (<5 Hazen). All samples meet the desirable standards (pH ranges from 6.95-7.48). TDS in samples ranges from 213 mg/L to 347 mg/L. Total hardness in the water ranges from 125 mg/L to 158 mg/L. Calcium content in the water ranges from 84 mg/L to 112 mg/L. Magnesium content in the water ranges from 24 mg/L to 58 mg/L.
- **Soil monitoring:** Organic Matter ranges from 0.41% to 1.51 % in the soil samples. Nitrogen is found to be in moderate amount as it ranges from 210 mg/kg to 1284 mg/kg and Phosphorous in less amount i.e. from 32 mg/kg to 640 mg/kg, whereas the Potassium is found to be ranging from 228 mg/kg to 450 mg/kg.

15. **Greenbelt:**

Plan Period	Location	Area (Ha.)	No of saplings	Remarks
1 <sup>st</sup> year	Peripheral Safety Zone of Cluster-1A	0.54	250	Plantation will be undertaken by individual lessees of the cluster in the supervision of District administration.
2 <sup>nd</sup> year	Peripheral Safety Zone of Cluster-1A	0.54	250	
3 <sup>rd</sup> year	Peripheral Safety Zone of Cluster-1A	0.54	250	
4 <sup>th</sup> year	Peripheral Safety Zone of Cluster-1A	0.54	250	
5 <sup>th</sup> year	Peripheral Safety Zone of Cluster-1A	0.54	250	
Total		2.7	2500	

16. **Solid Waste Management:** The waste generated from mines shall be dumped in the proposed area earmarked in the plan. The materials shall be transported to the dumping site by tippers. The dump shall be built in one terrace covering a height about 3 meters in total over an area of 0.701 hectares in the first five years. It will be built by advancing method. The ultimate dump slope will be maintained at 45° towards the garland drain outside the periphery of the dump followed by settling tanks to avoid wash offs. Moreover, dump slopes will also be utilized for plantation in order to prevent damage to the dumps by the surface run-off (rain) water. During the plan period over 0.669 ha of land in the north-eastern side of the M.L area is proposed for waste dump which will be stabilized, with plantation. Surface run-off water flowing from the dump will be allowed to filter through retaining wall and released water will pass through garland drain and settling tank. Quarry water will be canalized through peripheral drain and settling tank to release clean water.

17. **Manpower requirement:** A total of 570 workers will be employed in the proposed mine.

Designation	Number
Mine Manager / Mine permit Manager/ Officials	15
Skilled Labor	100
Semi-skilled	155
Unskilled	300
Total	570

18. **Project cost:** The approximate cost of the project comes around ₹1.50 crore, Capital Cost- ₹ 27,30,000, Recurring Cost- ₹12,77,000 per annum.

Particulars	Capital Cost	Recurring Cost per year
<b>Pollution Control</b>		
Dust Suppression by water sprinkler	-	1,00,000
Pollution Monitoring (Air, Noise, soil and water)	-	1,80,000 (Air, Noise, soil and water Quarterly)
Greenbelt & Afforestation along Approach road	4,50,000	2,17,500
Occupational health and safety	2,75,000	80,000
PPE for workers	3,50,000	1,25,000
Maintenance of roads	1,55,000	75,000
CSR activity as per required in public hearing	15,00,000	5,00,000
<b>Total</b>	<b>27,30,000</b>	<b>12,77,000</b>

19. **Environment Consultant:** The Environment consultant **M/s Green Circle Inc. Vadodara** along with the proponent made a presentation on the proposal before the Committee.

23. The SEAC in its meeting held on dated **17-05-2024** decided to take decision on the proposal after receipt of the following information / documents from the proponent: The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	The PP shall submit the precautionary measures to be adopted for control of ground vibration and fly rocks.	The following safety measures will be adopted to mitigate for control of ground vibration and fly rocks. <ul style="list-style-type: none"> <li>• Drilling machines will be equipped with wet drilling arrangements.</li> <li>• Controlled and Muffled Blasting techniques will be adopted to control fly rocks, dust fumes etc.</li> <li>• Rock Breaker is proposed to be used in place of secondary blasting for breaking of oversize boulders.</li> <li>• Explosive charge per hole and per delay will be maintained as per DGMS guidelines. The details of impacts and mitigation measures adopted for ground vibration was also described in point no.4.5.2.3, chapter-4 of Page No-159 of EIA/EMP report prepared for this project.</li> </ul>	Complied.
2.	Submit the detailed report of total no. of quarries in the proposed cluster duly certified from competent authority with supporting documents. Previous EC details of all quarries.	Jariput and Jayamangalpur Black Stone Cluster is a newly proposed mine cluster located at village: Jariput and Jayamangalpur Tehsil – Tangi, Dist – Khordha, Odisha. In this Cluster, a total of 10 numbers of quarries with total cluster area of 20.965 Acres or 8.484 ha area. A Certificate regarding Cluster details from the Concerned Authority is enclosed as <b>Annexure-I</b> .	They have submitted the detailed report of total no. of quarries in the proposed cluster.
3.	Furnish a copy of DSR as proof of the numbers of quarries.	The details of quarries in this Cluster was mentioned in the approved DSR, from Serial no-75 to 84 at page No-37 to 38 of approved DSR. The copy of the approved DSR is enclosed as <b>Annexure-II</b> .	Complied.
4.	The proponent shall follow proper guidelines during blasting and preventive measures to be taken to avoid cracks in houses of nearest habitation.	There are no habitation exists within 1.00 Km radius form the proposed Cluster. Proper safety measures mentioned in the approved Mining Plan and EIA/EMP report will be followed. AS per DGMS Gidelines, all safety measures for Drilling, Blasting will be maintained. Proper mitigation measures will be followed to control Noise, Air, Water, Dust Pollution (Referred to page No-162 to 166 of Cluster EMP report, Chapter-111)	Complied.



Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
5.	Since some of the quarries are filled with water, the PP shall explore the possibility of utilization of the rain water stored in existing quarries to meet the water demand. Additionally, the PP may plan to use one or more quarries to store the surface runoff during monsoon and use this water to meet the water demand instead of depending upon the nearby ponds.	Two Number of quarries were filled with Surface run off of nearby quarried. The water will be used in Plantation purpose and also for dust suppression purpose. This water accumulation is seasonal only. Proper planning will be made by the Lessee for utilization of this accumulated water after the bidder finalization.	Complied.
6.	Submit the EMP budget individually for each mine present in the cluster.	The detailed Budgetary measures now have been attached in a separate sheet ( <b>Annexure-III</b> )	Complied.
7.	Distance of the nearest habitation from the ML area boundaries of each of the mines in the cluster to be given.	<ol style="list-style-type: none"> <li>1. Areal distance of Jariput village to Jariput Stone Quarry – A – 1.36km.</li> <li>2. Areal distance of Jariput village to Jariput Stone Quarry – B – 1.48km.</li> <li>3. Areal distance of Jariput village to Jariput Stone Quarry – C – 1.40km.</li> <li>4. Areal distance of Jariput village to Jariput Stone Quarry – D – 1.48km.</li> <li>5. Areal distance of Jariput village to Jariput Stone Quarry – 6 – 1.29km.</li> <li>6. Areal distance of Jariput village to Jariput Stone Quarry – 9 – 1.55km.</li> <li>7. Areal distance of Jariput village to Jariput Stone Quarry – 10 – 1.60km.</li> <li>8. Areal distance of Jariput village to Jayamangalpur Stone Quarry – 1 – 1.15km.</li> <li>9. Areal distance of Jariput village to Jayamangalpur Stone Quarry – 2 – 1.28km.</li> <li>10. Areal distance of Jariput village to Jayamangalpur Stone Quarry – 3 – 1.30km.</li> </ol>	Complied.
8.	Permission for usage of Surface water to be taken from concerned authority.	Permission for use of surface water will be taken by the individual Lessee from the concerned Authority after the finalization of Bidder for the each quarry. The copy of the permission will be submitted at your good office.	---

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Green Circle Inc., Vadodara** on behalf of the proponent, the SEAC approved the EIA/EMP report in cluster approach and recommended the following:

- a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for **Jariput & Jayamangalpur Cluster Black Stone Quarry** without referring to SEAC with specific conditions as per **Annexure – B** after receipt of individual applications from the

Proceedings of the SEAC meeting held on 20<sup>th</sup> November, 2024

*J. Nayak*  
Environmental Scientist, SEAC

lessee in cluster along with following documents.

- i) Filled in form-I of individual lease
- ii) Prefeasibility report of individual lease
- iii) EMP of individual lease.
- iv) Approved Mining Plan of individual lease.
- v) Report on vibration study.
- vi) DLC status of the lease area from concerned DFO as certified by the concerned Tahasildar.
- vii) An Undertaking by the lessee not to use wagon drilling blasting to be submitted. Accordingly, specific condition to be stipulated in EC of individual lease.
- viii) No storage and usage of blasting materials/explosives inside the lease area without license/permission/authorization from competent Authority as per Indian Explosives Rules, 1983 shall be ensured by the lessee. An undertaking to this effect shall be submitted by the lessee. Accordingly, specific condition to be stipulated in EC of individual lease.
- ix) An undertaking to obtain NOC from CGWA and permission from WR department, Govt. Of Odisha for use of ground water. Accordingly, specific condition to be stipulated in EC of individual lease.
- x) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the stone quarry for ensuring that working personnel are not affected by silicosis.
- xi) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure.
- xii) A condition on SOP for blasting and safety on management of flying rock to be implemented and detail risk and hazard management procedure shall be followed by the lessee as per the **Annexure – C**.
- xiii) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.
- xiv) All the permanent and temporary dumps shall be provided with garland drains, retaining walls and settling ponds.

### ITEM NO. 03

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S VIPUL LAVANYA DEVELOPERS LIMITED FOR RESIDENTIAL APARTMENT PROJECT. THE PLOT AREA IS 34,345.38 M<sup>2</sup> (8.487 ACRE) WITH TOTAL BUILT-UP AREA 4,38,493.55 M<sup>2</sup> LOCATED AT PLOT NO. 1532 (P), KHATA NO- 571 OF MOUZA- PAIKARAPUR, P.S.- TAMANDO, TEHSIL- BHUBANESWAR, DISTRICT KHURDA OF SMT. RATNAMALA SWAIN - TOR**

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental

clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.

2. This proposal is for Terms of Reference (ToR) for obtaining Environmental Clearance of M/s Vipul Lavanya Developers Limited for Residential apartment project. The plot area is 34,345.38 m<sup>2</sup> (8.487 Acre) with total built-up area 4,38,493.55 m<sup>2</sup> site is located at Plot No. 1532 (P), Khata no- 571 of Mouza - Paikarapur, P.S.- Tamando, Tehsil- Bhubaneswar, District Khurda of Smt. Ratnamala Swain.
3. **Category:** As per the EIA notification 2006, and its subsequent amendments, proposed project falls in category B under schedule of Item 8 (b): Township & Area Development.
4. **Location and connectivity:** The project site is located at Plot No. 1532 (P), Khata no- 571 of Mouza- Paikarapur, P.S.- Tamando, Tehsil- Bhubaneswar, District- Khurda, Odisha. The geographical co-ordinates of project site are 20°16'10.50"N and 85°45'11.08"E. The site is connected through Ghatika road. Nearest Highway is NH-16 which is 3.7 km in SE direction, NH-316 is at approx. 11.3 km towards SE direction from the project site. The nearest Railway Station is Sarkantra Railway Station is about 6.4 km (SE) away from the project site. Biju Patnaik International Airport is at 4.8 km (E) from project site.
5. The site is coming under Bhubaneswar Development Authority. The plot area is 34,345.38 m<sup>2</sup> (8.487 Acre) with total built-up area 4,38,493.55 m<sup>2</sup>.
6. **The Building Area Details of the Project in tabulated form:**

**Table 1: Detailed Area Statement**

S. No.	Particulars	Total Area (m <sup>2</sup> )
1.	Total Plot Area	34,345.38
2.	Permissible Ground Coverage (@40% of plot area)	13,738.152
3.	Proposed Ground Coverage (@31% of plot area)	10,645.81
4.	Permissible F.A.R (@7 of plot area)	2,40,417.66
5.	Total Proposed FAR area (@6.998 of plot area)	2,40,355.01
6.	Non-FAR Area	1,98,138.54
7.	<b>Total Built Up Area (5 + 6)</b>	<b>4,38,493.55</b>
8.	Green Area (@30.70%)	10,543.30
9.	Maximum Height of the building (m)	135.6

7. **Water Requirement and wastewater management:** During operation phase, the source of water will be ground water. The total water requirement for the project will be approx. 1,206 KLD out of which domestic water demand is 1,162 KLD. The freshwater requirement will be 768 KLD including make-up water for swimming pool. It is expected that the project will generate approx. 1,099 KLD of wastewater. The wastewater will be treated in onsite STP of 1,250 KL capacity. The treated effluent will be reused for flushing & horticulture. Surplus treated effluent will be discharged to external sewer.
8. **Power Requirement:** The power supply will be through TP Central Odisha Distribution Limited (TPCODL). The total maximum demand is estimated as 15310 kVA. 10% i.e., 1531 kVA energy will be saving from total energy load (5% i.e., 766 kVA through solar

and 5% i.e., 766 kVA through LED and other conservation measures). Solar energy will be utilized for street lighting, solar blinkers and signage to reduce electricity consumption. There is provision of 5 nos. of DG sets of 2500 kVA each capacity (total 12500 kVA) for power back up. The DG set will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion as per CPCB norms.

9. **Rainwater Harvesting:** 22 no. of pits proposed for artificial ground water recharge.
10. **Parking Requirement:** Proposed Parking Area =1,08,028.52 m<sup>2</sup>. Total 2,940 ECS parking is proposed.
11. **Fire Fighting Installation:** Firefighting measures will be adopted as per the guidelines of NBC. External yard hydrants shall be installed around all buildings in the complex in galvanized steel fire house cabinet (weatherproof). All external yard hydrants shall be at one meter height from finished ground level as per NBC at a distance of 60 m along the road. External fire hydrants shall be located such that no portion of any building is more than 45 m from a hydrant and the external hydrants are not vulnerable to mechanical or vehicular damage.
12. **Green Belt Development:** Green Belt will be developed over an area of 10,543.30 m<sup>2</sup> i.e. 30.7% of the plot area. Total 450 Nos. of plants to be planted and 3m spacing between plants and it will be 2 tier plantation.
13. **Solid Waste Management:** During the operation phase, waste will comprise domestic as well as horticultural waste. The solid waste generated from the project shall be approx. 4,608 kg per day (@ 0.5 kg per capita per day for residents, @ 0.15 kg per capita per day for the visitor, 0.25 kg per capita per day for the staff members and landscape waste @ 0.2 kg/acre/day).
14. **Baseline study of the project area was conducted during March 2024 to May 2024.**
15. **Project Cost:** The estimated Project cost is 720 Crores (Land and Development Cost) and cost form EMP is 186.7 lakhs.
16. **Environment Consultant:** The Environment consultant M/s Grass Roots Research & Creation India (P) Ltd., Noida along with the proponent made a presentation on the proposal before the Committee.
17. The Committee observed the following:

In this proposal the major criteria is Transplantation of 90 big trees from the construction area to green belt. The possibility needs to be verified through a site visit prior to grant of TOR. The layout plan will undergo drastic changes even with transplanting to green belt area as the current layout proposed has very less area available even for normal green belt plantation. The transplantation plan needs to be submitted by the PP (as this is a technical issue requiring information with regard to size of trees, type, equipment and technology to be used, the company to be hired and its capability, survival rate and its contingency plan etc. It may so happen that it may not be feasible to grant TOR without knowing the above and a site visit.

18. The SEAC in its meeting held on dated **26-07-2024** recommended the following:

**A.** The proponent may be asked to submit the following before grant of ToRs:

- i) Reportedly, 90 nos of trees are present in the proposed project area. Hence the PP shall comply with the detailed process, technique, equipment to be used, plan of transplantation etc. to transplant those trees in the greenbelt area. Otherwise, PP shall explore to revise the layout without cutting the trees or revise the layout accordingly to avoid any tree cutting and maintaining greenbelt.

**B.** Proposed site shall be visited by sub-committee of SEAC to evaluate feasibility of high rise building with 90 big trees on board and their transplantation with factors associated and additional requirements for Building Project.

**C.** Following specific ToRs shall be stipulated for conducting detailed EIA study while grant of ToRs.

- i) PP shall decrease the freshwater (776KLD) demand, revisit the water balance calculation. Apply first for PHED water supply, if not allowed then apply for NOC/ permission from CGWA for the use of ground water.
- ii) PP shall increase the number of entry and exit gates in the project premises as the total population estimated is 10000nos.
- iii) Traffic study report vetted by reputed institute.
- iv) All statutory clearances for project need to be applied and submitted.
- v) Layout map showing the treated water fallout to nearest public drain and its distance. Copy of permission of the concerned authority of the drain / sewer to discharge the treated water and storm water from project to the nearby drain.
- vi) Detailed plan for solid waste management.
- vii) Specify clearly the road connectivity available to the proposed project site.
- viii) Fire disaster management plan.
- ix) Detailed calculation of renewable energy/solar energy along with roof top solar plan layout.
- x) Clear site layout showing all features of the project and distance from road.
- xi) Structural Stability certificate from appropriate authority as per BDA guidelines be submitted and vetted from reputed institute.
- xii) Detailed calculation of Rain Water Harvesting and Layout showing Rainwater Harvesting pits.
- xiii) Reduce discharge of treated water to drain by planting more trees.
- xiv) The greenbelt to be provided along the outer periphery of the plot along the boundary the spacing to be increased to 2m x 2m or more to accommodate more trees (including the transplanted trees) and should be planted on a hierarchical pattern.
- xv) The concept of vertical garden may also be considered apart from landscaping,

potted plants, Parks & Gardens.

- xvi) The water Treatment Plant, Waste Water Treatment Plant, STP, DG set's location to be marked in the layout plan.
- xvii) Adequate overhead portable water tank to be provided as per the norms apart from Treated Waste Water tank for use in dual plumbing system for the flush in the toilet.
- xviii) For parking of various types of vehicle adequate provision of basement, Stilt, Open area and Mechanical parking may be considered.
- xix) Provision of lift with ventilation, lighting and AC from lowest basement to terrace roof top to be provided.
- xx) Efforts for Energy Conservation in the project as per Bureau of Energy Conservation in line with Energy Conservation Act, 2003 to be submitted for the project.
- xxi) Disaster Management Plan for the project may be prepared and submitted as per Disaster Management Act, 2005.
- xxii) The EMP cost proposed may be revisited due to transplantation and maintenance of big trees inside the project area.

19. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Reportedly, 90 nos of trees are present in the proposed project area. Hence the PP shall comply with the detailed process, technique, equipment to be used, plan of transplantation etc. to transplant those trees in the greenbelt area. Otherwise, PP shall explore to revise the layout without cutting the trees or revise the layout accordingly to avoid any tree cutting and maintaining greenbelt.	With regard to the observations of SEAC, our submission is as below: We understand the value of trees and shall use our utmost care in keeping them live We shall arrange a joint inspection of recounting the number of trees in association with Forest department to derive an action plan and present to SEAC during EC application We shall involve a transplant expert and organization conducting such operation (from the panel constituted by MOEF or some other Govt Dept.) and follow the policy if any. Further, if some trees are not found feasible for transplant will be cut with prior permission and required compensations as applicable will be abide by us We shall submit the details of above along with types, number of trees, transplantation plan, agency involved etc. during EC presentation. Efforts will be taken for all transplantation for green belt at site as	To be decided by SEAC.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		<p>suggested by SEAC.  As transplantation will involve fund, we agree to revise the cost of environmental measure up to 50 lakh or more based on details to be worked out and presented during EC application  Based on the above, we request SEAC to grant us ToR.</p>	

24. The proposed site was visited by the sub-committee of SEAC on **16.08.2024**. Following are the observations of the sub-committee:

- a) The site is located at side of Ghatikia – CET road. Representatives of PP and Consultant were present.
- b) PP explained the layout with plan of buildings and also shown the storm water drain and informed presence of Sewerage line below the ground.
- c) There is compound from all sides and the land is filled with trees. Many of the trees are also bigger in size and located spreading the site. PP informed that there are about 90 trees. The sub-committee could not enter inside due to compound wall of the site. However, the site was visible from outside.

**Based on the above, the following are the observations/recommendation and PP needs to comply suitably:**

- i) The trees are not to be cut rather transplanted as green belt of the site.
- ii) Fire corridor to be planned after allowing sufficient space/area for green belt from boundary, considering Transplantation.
- iii) Since many big trees are present making the area green, it is essential that these are to be Transplanted to greenbelt near boundary and if required, layout may be changed to provide appropriate space for the transplantation of trees taking care of the soil stability.
- iv) A detailed program/procedure for transplantation to be submitted stating: Mechanism of Transplantation, Agency to be involved, Equipment / Machinery to be employed, Cost of transplantation with justification, Survival plan, timeline etc. to be worked out and submitted.
- v) The transplantation agency may be considered from the empanelled list of Forest Department (if any) and or by appropriate professional.
- vi) Detailed budget to be recast for the Environment measures including that of Transplantation. The cost of environment management accordingly to be revised.
- vii) Since it is a mega residential project, a PEMC (Project Environment Management Cell) to be constituted and informed to the authorities.
- viii) Since population of complex would be high (10000 plus) with floating population of over 1000 at any point of time (as explained by PP), sufficient visitor parking, walking track, Two STPs (in case one is out of order), safety provisions and fire management in building with control systems, three Gates minimum for each entry & exit, grey and black water management etc to be provided in details.

- ix) Certificate with regard to adequacy of STPs to be submitted as per norm from appropriate authority.
  - x) Quantification of treated water generated and allowed to drain to be monitored by metering system as per allowed norm (as population is high)
  - xi) Soil testing and erosion control to be under taken as per NBC.
  - xii) Video and Photos of Transplantation process to be submitted for verification.
- d) All points need to be complied along with revised plan if any by the PP (specially points identified at 'c')
- e) All other points asked during meeting also need to be addressed.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Grass Roots Research & Creation India (P) Ltd., Noida**, the SEAC prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – D** for conducting detailed EIA study.

- i) PP shall decrease the freshwater (776KLD) demand, revisit the water balance calculation. Apply first for PHED water supply, if not allowed then apply for NOC/ permission from CGWA for the use of ground water.
- ii) No trees to be cut or transplanted before getting EC. Transplantation to be taken up on submitting compliance in TOR and on recommendations of SEAC during EC presentation.
- iii) As actual no. of trees looks more, PP may take up a joint inspection of Forest department to draw out the detailed plan. Forest department to be informed about the conditions of transplantation stipulated by SEAC/SEIAA in TOR before such inspection, which could form a part of EIA study.
- iv) All compliances given by PP as a reply to site visit to be incorporated in EIA report.
- v) PP shall increase the number of entry and exit gates in the project premises as the total population estimated is 10000 nos.
- vi) Traffic study report vetted by reputed institute.
- vii) All statutory clearances for project need to be applied and submitted.
- viii) Layout map showing the treated water fallout to nearest public drain and it's distance. Copy of permission of the concerned authority of the drain / sewer to discharge the treated water and storm water from project to the nearby drain.
- ix) Detailed plan for solid waste management.
- x) Specify clearly the road connectivity available to the proposed project site.
- xi) Fire disaster management plan.
- xii) Detailed calculation of renewable energy/solar energy along with roof top solar plan layout.
- xiii) Clear site layout showing all features of the project and distance from road.
- xiv) Structural Stability certificate from appropriate authority as per BDA guidelines be



submitted and vetted from reputed institute.

- xv) Detailed calculation of Rain Water Harvesting and Layout showing Rainwater Harvesting pits.
- xvi) Reduce discharge of treated water to drain by planting more trees.
- xvii) The greenbelt to be provided along the outer periphery of the plot along the boundary the spacing to be increased to 2m x 2m or more to accommodate more trees (including the transplanted trees) and should be planted on a hierarchical pattern.
- xviii) The concept of vertical garden may also be considered apart from landscaping, potted plants, Parks & Gardens.
- xix) The water Treatment Plant, Waste Water Treatment Plant, STP, DG set's location to be marked in the layout plan.
- xx) Adequate overhead portable water tank to be provided as per the norms apart from Treated Waste Water tank for use in dual plumbing system for the flush in the toilet.
- xxi) For parking of various types of vehicle adequate provision of basement, Stilt, Open area and Mechanical parking may be considered.
- xxii) Provision of lift with ventilation, lighting and AC from lowest basement to terrace roof top to be provided.
- xxiii) Efforts for Energy Conservation in the project as per Bureau of Energy Conservation in line with Energy Conservation Act, 2003 to be submitted for the project.
- xxiv) Disaster Management Plan for the project may be prepared and submitted as per Disaster Management Act, 2005.
- xxv) The EMP cost proposed may be revisited due to transplantation and maintenance of big trees inside the project area.
- xxvi) The trees are not to be cut rather transplanted as green belt of the site.
- xxvii) Fire corridor to be planned after allowing sufficient space/area for green belt from boundary, considering Transplantation.
- xxviii) Since many big trees are present making the area green, it is essential that these are to be Transplanted to greenbelt near boundary and if required, layout may be changed to provide appropriate space for the transplantation of trees taking care of the soil stability.
- xxix) A detailed program/procedure for transplantation to be submitted stating: Mechanism of Transplantation, Agency to be involved, Equipment / Machinery to be employed, Cost of transplantation with justification, Survival plan, timeline etc. to be worked out and submitted.
- xxx) The transplantation agency may be considered from the empanelled list of Forest Department (if any) and or by appropriate professional.
- xxxi) Detailed budget to be recast for the Environment measures including that of Transplantation. The cost of environment management accordingly to be revised.
- xxxii) Since it is a mega residential project, a PEMC (Project Environment Management Cell) to be constituted and informed to the authorities.

Proceedings of the SEAC meeting held on 20<sup>th</sup> November, 2024

*Jwajak*  
Environmental Scientist, SEAC

- xxxiii) Since population of complex would be high (10000 plus) with floating population of over 1000 at any point of time (as explained by PP), sufficient visitor parking, walking track, Two STPs (in case one is out of order), safety provisions and fire management in building with control systems, three Gates minimum for each entry & exit, grey and black water management etc to be provided in details.
- xxxiv) Certificate with regard to adequacy of STPs to be submitted as per norm from appropriate authority.
- xxxv) Quantification of treated water generated and allowed to drain to be monitored by metering system as per allowed norm (as population is high)
- xxxvi) Soil testing and erosion control to be under taken as per NBC.
- xxxvii) Video and Photos of Transplantation process to be submitted for verification.

#### ITEM NO. 04

#### **PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. Z ESTATES PRIVATE LIMITED FOR PROPOSED (B+G+9) STORIED BUILDING FOR DEVELOPMENT OF EWS HOUSING SCHEME UNDER MODEL - 1 AMENDED HFA POLICY - 2015 OVER AN BUILT-UP AREA 45024.64 SQM PLOT NO. - 164(P), 170(P), 156(P), 210(P), KHATA NO. - 855, MOUZA - BARAMUNDA, BHUBANESWAR, DIST - KHURDA OF SRI TAPAN KUMAR MOHANTY - EC**

1. This proposal is for Environmental Clearance of M/s. Z Estates Private Limited for Proposed (B+G+9) Storied Building for Development of EWS Housing Scheme Under Model-1 Amended HFA Policy-2015 over a built-up area 45024.64 sqm Plot No.- 164(P), 170(P), 156(P), 210(P), Khata No.- 855, Mouza- Baramunda, Bhubaneswar, Dist- Khurda of Sri Tapan Kumar Mohanty.
2. **Category:** This project falls under Category "B", Project or Activity 8(a): Building & Construction Projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. **Location and connectivity:** The proposed site is located at Mouza- Bermunda, Bhubaneswar, Dist- Khurda, Odisha. The Geographical co-ordinate of the project site is: Latitude- 20°16'24.78"N & Longitude- 85°47'19.45"E. The project site is well connected with National Highway NH-16 at a distance of approx 0.6 Km in East direction. The nearest railway station is Bhubaneswar Railway station at a distance of approx 5.8 Km in South East direction. The nearest airport is Biju Patnaik Airport at a distance of approx. 3.1 Km in South East direction from project site.
4. The site is coming under Bhubaneswar Municipal Corporation (BMC).
5. **Statutory clearances obtained:**
  - BDA has handover the land vide letter no. 14571/BDA, dated 03.05.2023.
  - Water permission from Ground Water
6. The total plot area is 9874.247sqm / 2.44 Ac. /0.99 Ha. with total built-up area 41909.92 sqm.
7. **Area Statement:**

Particular	Permissible	Proposed
Plot Area	Total Plot Area- 9874.247 sqm	
Ground Coverage		3582.377 sqm (36.28%)
<b>Total Built up Area</b>	--	<b>41909.92 sqm</b>
Total FAR Area	--	33507.85 sqm
FAR	4.0	3.35
Maximum Height	--	30 m
Road Area	--	3552.4 sqm
Basement Parking Area	3304.264 sqm	7591.77 sqm
Total Parking		7591.77 sqm
Green Belt Area	1974.85 sqm (20%)	2196.09 sqm (22.24 %)
Green Pavers	--	183.4 sqm
Maximum No. of Floor	--	B+G+9
Power/Electricity Requirement & Sources	--	2332.0 KW Source: TPCODL
No. of DG sets	--	1 x 500 KVA
Solar Energy	--	116.6 KW (5%)
Water requirement & Sources	--	185.0 KLD (Source: Ground Water)
Waste Water Generation	--	242.0 KLD
Sewage Treatment & Disposal	--	STP Capacity- 250 KLD
Solid Waste Generation	--	985.0 kg/day
No. of Dwelling Unit	--	400 Nos.
Estimated Population- Residential, Floating/visitors	--	Residential- 2000 Nos. Floating- 200Nos.

8. **Water requirement:** Fresh make up of 185.0 m<sup>3</sup>/day will be required for the project which will be sourced from Ground Water.

Sl. No.	Description	Total Population	Per Capita Consumption (ltr/day)		Water Requirement		
					Domestic	Flushing	Total
1.	Residential Building	2000 nos	Fresh (90)	Flushing (45)	180.0	90.0	270.0
2.	Floating	200 nos	Fresh (25)	Flushing (20)	5.0	4.0	9.0
<b>TOTAL</b>					185.0	94.0	279.0

9. **Wastewater details:** Total waste water generated from the residential building is 242.0 KLD which is treated in STP of Capacity 250 KLD. Out of which 230m<sup>3</sup>/day will be recycled within the project for flushing (94m<sup>3</sup>/day), landscaping (14.5m<sup>3</sup>/day), dust suppression (11.8m<sup>3</sup>/day) and 109.7m<sup>3</sup>/day (summer) and 136.0m<sup>3</sup>/day (non-monsoon) will become surplus which will be discharged to drain.

Details	Water (KLD)
Water requirement for domestic purpose	185.0

Wastewater generated from domestic use (@ 80 % of domestic water requirement)	148.0
Water requirement for Flushing Purpose	94.0
Wastewater generated from Flushing (@ 100 % of flushing requirement)	94.0
Total Wastewater generated	148+94 = 242.0
Sewage Treatment Plant Capacity	250.0
STP Loss (5 % of wastewater generation)	12.0
Recycled water form STP @ 95 % of wastewater generated	230.0
Landscaping	14.5
Dust Suppression	11.8

10. **Rainwater harvesting details:** Total 12 nos. of Rainwater harvesting pits will be provided for storage of rain water of quantity 262.24 cum.
11. **Parking details:** Total parking area provided is 7591.77 Sq.mt. and total 237 nos. of ECS and location of parking area is Basement.
12. **Power Requirement:** Total Power requirement of the proposed building is 2332.0 KW, Source is TPCODL, 2 x 500 KVA DG Sets is provided. Total Solar Power Generation is 116.7 KW which is 5.0% of total power required in project.
13. **Firefighting Installations:** Fire Fighting will be provided as per NBC Norms.
14. **Solid waste generation:** Solid waste generated and its management is as follows:

S. No.	Category	Counts (heads)	Waste generated (kg/day)
1.	Residential	2000 @ 0.15 kg/day	900.0
2.	Floating	200 @ 0.10 kg/day	30.0
3.	STP sludge		55.0
Total Solid Waste Generated			985.0 kg/day

15. **Greenbelt:** Greenbelt is developed over an area of 2196.09 sqm which is 22.24% of the total plot area. Total 124 nos. of plants to be planted with 3 tier plantations.
16. **Project cost:** The estimated project cost is 75.0 Crores and cost for EMP is 1.7 Crores.
17. **Environment Consultant:** The Environment consultant M/s. **Centre for Envotech & Management Consultancy Pvt. Ltd, Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee on 17.05.2024.
18. The SEAC in its meeting held on dated **17-05-2024** recommended the following:
- A. The proponent may be asked to submit the following for further processing of EC application:
- The proponent shall submit the documents for the land and change the kissam of land to 'Gharabari'.
  - Clarification regarding whether the approach road for usage by the project proponent is a government road or private road.

- iii) NOC/ permission from concerned department for discharge of excess treated water to the nearby existing drain.
- iv) Submit the agreement letter with Bhubaneswar Development Authority for approval of construction.
- v) Explore possibilities for reducing the water discharge to drains.
- vi) Submit the authorized letter with Bhubaneswar Municipal Corporation for taking up of all the organic waste generated. Else there should be provision of Organic Waste Converter within the premises.
- vii) Submit the relevant document on the bylaws for provision of parking space that is followed by the proponent.
- viii) Submit the document of handing over of the land by the Government to the proponent for taking up of the EWS provision.
- ix) Details of changes made in presentation w.r.t online documents submitted in Parivesh Portal.
- x) NOC/Permission to be obtained from CGWA for usage of ground water.

**B. The proposed site shall be visited by Sub-Committee of SEAC to verify the followings**

- a) Environmental settings of the project site.
- b) Extent of construction activity and operational status of all the units.
- c) Road connectivity to the project site.
- d) Drainage network at the site.
- e) Greenbelt development in the existing plant.
- f) Solid waste management practice of the existing plant.
- g) Vacant land available.
- h) Any other issues including local issues.

19. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	The proponent shall submit the documents for the land and change the kissam of land to 'Gharabari'.	Since this is a government land allotted by Bhubaneswar Development Authority (BDA) through development agreement the conversion is not applicable.	The PP intimates that BDA has allocated the land and conversion is not applicable.
2.	Clarification regarding whether the approach road for usage by the project proponent is a government road or private road.	This is a government road. As the proposed site is coming under Bhubaneswar Development Authority (BDA) and hand over to Z-Estate Pvt. Ltd. for development of EWS/Affordable housing project.	The PP intimates that the approach road is a government road and it is handed over to the PP for EWS project.
3.	NOC/ permission from concerned	The EIDP plan will be submitted after	The PP intimates

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	department for discharge of excess treated water to the nearby existing drain.	getting building plan approval from BMC.	that they will submit EIDP plan after BMC building plan approval.
4.	Submit the agreement letter with Bhubaneswar Development Authority for approval of construction.	Development agreement between Bhubaneswar Development Authority (BDA) & Z-Estate Pvt. Ltd. is attached in <b>Annexure-1</b> .	Annexure-1 is attached and complied.
5.	Explore possibilities for reducing the water discharge to drains.	Only Excess Storm water shall be discharged to Main drain.	The unit intimated that they will discharge excess storm water to main drain.
6.	Submit the authorized letter with Bhubaneswar Municipal Corporation for taking up of all the organic waste generated. Else there should be provision of Organic Waste Converter within the premises.	The EIDP plan will be submitted after getting approval from BMC. Concern letter shall be submitted only before getting Occupancy certificate, after handing over the project to BDA.	The PP intimates that they will submit EIDP plan after BMC approval and the authorized letter for collection of organic waste and getting project handed over to BDA.
7.	Submit the relevant document on the bylaws for provision of parking space that is followed by the proponent.	Provision of parking has been provided as per clause no 37 (OFF STREET PARKING) TABLE NO-10 SUB CLAUSE NO-iii of ODA (PLANNING AND BUILDING STANDARDS) RULES, 2020. (For the residential apartments and housing projects, for the dwelling units in EWS/LIG category: Parking requirement shall be calculated at minimum of 10% of total built-up area of such dwelling units.	PP has intimated that Parking requirement shall be calculated at minimum of 10% of total built-up area of such dwelling units. No relevant documents has been provided on the bylaws for provision of 10% parking space under EWS project.
8.	Submit the document of handing over of the land by the Government to the proponent for taking up of the EWS provision.	Bhubaneswar Development Authority (BDA) has allotted the land to Z-Estate Pvt. Ltd. for development of EWS unit. Handling over document is attached in <b>Annexure-2</b> and Development agreement between Bhubaneswar Development Authority (BDA) & Z Estate Pvt. Ltd. is attached in <b>Annexure-1</b> .	Annexure 1 & 2 is attached and complied.
9.	Details of changes made in presentation w.r.t online documents submitted in Parivesh Portal.	Detail area statement is attachment in <b>Annexure-3</b> .	Annexure-3 is attached and complied.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
10.	NOC/Permission to be obtained from CGWA for usage of ground water.	Ground Water permission will be submitted before applying for Occupancy. During construction phase, we will not be using any ground water for construction purpose.	PP intimated that they will submit NOC/Permission from CGWA before applying for occupancy.

20. The proposed site was visited by the sub-committee of SEAC on 17.06.2024. Following are the observations of the sub-committee:

- a) The land has an approach road. There is no construction activities taken up.
- b) There is a drain at about 50 mts from the land. PP informed that they will taken permission to discharge the excess treated water through constructing drain/pipe at road side from their land to the nearby drain.
- c) PP was asked to submit the following if not submitted:
  - i) Permission for discharge of excess treated water and storm water to the nearby drain along with permission to construct drain at road side or through Pipeline.
  - ii) All statutory permission including NOC from airport authority, fire, structure and stability etc.
  - iii) Greenbelt layout with minimum 20%.
  - iv) All other points asked during presentation to be complied.

21. The SEAC in its meeting held on dated 31-08-2024 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	There is a drain at about 50 mts from the land. PP informed that they will be take permission to discharge the excess treated water through constructing drain/pipe at road side from their land to the nearby drain. NOC/ Permission for discharge of excess treated water and storm water to the nearby public drain along with permission to construct drain at road side or through Pipeline.	The waste water will be discharged to nearest municipal drain which is 50 meter from project site. Drainage plan of the proposed building is attached in <b>Annexure-1</b> . Drainage plan has been vetted by Bhubaneswar Municipal Corporation (BMC) vide letter No. 35021, dated 27.08.2024. BMC letter regarding drainage is attached in <b>Annexure-2</b> .	Complied.
2.	All statutory permission including NOC from airport authority, fire, structure and stability etc.	Height Clearance has been obtained from Airport Authority of India vide letter No. BHUB/EAST/B/030223/744186, dated 16.01.2024. Height Clearance NoC is attached in <b>Annexure-3</b> . Fire Safety Recommendation has been obtained from Odisha Fire & Emergency Service vide recommendation No.	Complied.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		RECOMM1204130012024002168, dated 21.06.2024. Fire Safety Recommendation is attached in <b>Annexure-4</b> . Structural Stability of the building is vetted by Indian Institute of Technology (IIT), Guwahati vide letter No. IITG/CE/HS/LIG, dated 09.08.2024. Structural Stability certificate is attached in <b>Annexure-5</b> .	
3.	The unit intimated that they will discharge excess storm water to main drain in ADS which is contradictory with site visit report.	Drainage plan has been vetted by Bhubaneswar Municipal Corporation (BMC) vide letter No. 35021, dated 27.08.2024. BMC letter regarding drainage is attached in <b>Annexure-2</b> .	---
4.	PP intimated that they will obtain NOC/Permission from CGWA before applying for occupancy.	Ground Water application has already been submitted to CGWA on 26.09.2024. CGWA application copy is attached in <b>Annexure-6</b> .	Complied.
5.	No relevant document has been submitted on the bye laws for provision of parking space i.e., 10% of total built-up area is for parking space for such dwelling units.	As per BDA bye laws, the parking space required for EWS unit is 10% of total built-up area. BDA bye laws is attached in <b>Annexure-7</b> .	Complied. In point no.(iii)
6.	The PP intimates that they will submit EIDP plan after BMC approval and the authorized letter for collection of organic waste and getting project handed over to BDA. An undertaking to this effect shall be submitted.	EIDP plan showing drainage network is attached in Annexure-1 and an undertaking regarding collection of organic waste is attached in <b>Annexure-8</b> .	Complied.
7.	Copy of application submitted for grant of NoC/Permission from CGWA for usage of ground water. Permission / NOC from CGWA for withdrawal of the required quantity of ground water needs to be obtained.	Ground Water application has already been submitted to CGWA on 26.09.2024. CGWA application copy is attached in <b>Annexure-6</b> .	Complied.

Considering the information furnished and the presentation made by the consultant, **M/s Centre for Envotech & Management Consultancy Pvt. Ltd, Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – E** in addition to the following specific conditions.

- i) The Proponent before implementation of the project shall convert the land to Gharabari and shall take the ownership of the land if not already taken.
- ii) The Proponent shall obtain permission/NOC from Executive Engg. (PHD) and / or from the appropriate authority for disposal of excess STP treated water to the nearest drain without which the Proponent will not start construction work. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be.



- iii) The proponent shall use solar energy at least to the tune of 5% of total power requirement as proposed.
- iv) The proponent shall obtain permission from concerned Fire Safety Authority.
- v) The commercial block to be used only for the residents of that apartment as mentioned by PP.
- vi) Trees located within the project area shall be transplanted to alongside the boundary green development area.
- vii) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.
- viii) The project proponent shall maximise utilisation of treated water in flushing, plantations and ground washings etc. as per need to reduce water discharge to drain. This shall be verified in future compliance report.
- ix) The PP will not commence construction unless the drain lay out is finalized and permission given for the same by the authority to discharge excess treated water & storm water.
- x) Before starting the construction project physical properties as well as engineering properties of the soil along with its bearing capacity should be undertaken and the report should be submitted.
- xi) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

**ITEM NO. 05**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR KALINGADOLA SAND BED, OVER AN AREA 6.639 HA, KHATA NO- 270, PLOT NO- 575 AT- KALINGADOLA, TAHASIL- DIGAPAHANDI, DIST- GANJAM OF SRI PRAVA RANJAN MISHRA - EC**

1. The Project Proponent didn't present the proposal as the Replenishment Study Report was not submitted. The Proposal was defer to next meeting. The project proponent via E-mail on dated 11/11/2023 has informed that as per the decision of SEAC committee, the proposal shall be considered after submission of Replenishment Study Report. Since EDS was not raised, the Project Proponent had requested to facilitate the uploading of the Replenishment Study Report in the portal. The SEAC in its meeting held on dated 20-11-2023 decided to take decision on the proposal after receipt of Replenishment Study Report. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	The proposal shall be considered after submission of Replenishment Study Report. Since EDS has not been raised, the Project Proponent has requested to facilitate	Replenishment study report submitted	The replenishment of Sand has been calculated by volumetric survey method and amount of sand deposited in the post monsoon season was calculated to be

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	uploading of the Replenishment Study Report in the portal as discussed in last meeting. The SEAC decided to take decision on the proposal after receipt of Replenishment Study Report.		41827 cum.

2. The Committee observed the following:

- a) **Measurement error:** 100 m X 100 m grid has been used for the volumetric survey and no details are given regarding accuracy of the measurement. The RLs of the grid points based on which the replenishment levels have been reported are also not mentioned.
- b) Satellite coordinates of the ML area boundary based on DGPS survey has not been reported.
- c) The riverbed sand replenishment study report is prepared by M/s Earth & Environment, Bhubaneswar. As per the above-mentioned report field data for pre and post monsoon periods have been collected in May and November respectively. There is no mention of the dates as well as year of collection of these field data. No information is available regarding surveying instruments used and the process of carrying out the survey.
- d) As per the "Standard operating procedure (SOP) for study of rate of replenishment of sand using drone survey" submitted by ORSAC vide letter No. ORSAC/PR/0951/21/2588 dated 02<sup>nd</sup> June 2023 the RLs of the center points of 10 m X 10m of the ML area measured for replenishment study is to be reported. (Paragraph 4 page 7).

3. The SEAC in its meeting held on dated **29-12-2023** decided that the proponent shall be called for a detailed presentation for consideration of EC and also to clarify the observation of SEAC at para 2.

4. The Project Proponent gave a detailed presentation in SEAC Meeting dated **10-07-2024**.

5. This proposal is for Environmental Clearance of Kalingadola Sand Bed, over an area 6.639 Ha., Khata No- 270, Plot No- 575 At - Kalingadola, Tahasil - Digapahandi, Dist - Ganjam of Sri Prava Ranjan Mishra.

6. **Category:** As per the EIA notification 2006, and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a) - Mining of Minerals.

7. Mining lease granted by Tahasildar, Digapahandi Letter No.630, Dtd. 05.02.2021 and successful bidder name is M/s. Premex, Plot No- 652, IRC Village, Nayapalli, Bhubaneswar, District Khurda.

8. Mining Plan was approved by Joint Directorate of Geology South Zone, Berhampur, letter No. 1016/SZ, Dtd. 29.07.2020.

9. This is a new mine and Mining lease is an identified sairat source in the DSR page No.- 71, Para Serial No.28.
10. **TOR details:** Terms of Reference (TOR) was issued by SEIAA, Odisha vide proposal letter No. 1350/SEIAA, Dtd. 24.05.2021.
11. **Public hearing details:** Public hearing was held on Dtd. 27.07.2022 and Mouza Kalingadola which is adjacent to Kapileswar Temple, Kalingadola village under Digapahandi Tahasil, Ganjam District. Issues raised during public hearing are control of road dust by blacktopping, excavation of sand from Bada Sahi to NuaSahi along the river bank shall be restricted, transportation of sand will not be allowed in the road passing through the village rather the lessee shall use outside road for it, development of Kapileswar Swamy Temple, construction of proper guard wall /stone pitching of river embankment, local employment, subsidize price of minor minerals, speed of transporting vehicles shall be controlled to prevent accident.
12. **Location and Connectivity** – The proposed project is located at Plot No- 575, Khata No- 270, Village- Kalingadola, under Digapahandi Tahasil of Ganjam District bounded by Latitude: 19° 13' 37.72"N To 19° 13' 55.25"N Longitude: 84° 32' 57.00" E To 84° 33' 16.25" E, bearing Toposheet No: E45A11 & E45A12, Kisam- River, (SH29) - 2.6 km, (NH16)- 21.2 km, Airport Bhubaneswar – 208 km, Water Bodies- Ghodahad Dam- 30.8 km, Mahulia Reserve Forest- 126 km, Road Bridge- 1.6 km, River Embankment- 1.6 Km, Electric Transmission Pole- 2.4 km, Nearest Habitation- 2.5 km. , Distance of Lakhari wild life sanctuary is 23 kms away from the proposed project.
13. **Total Reserves:** As estimated, Geological Reserve is 74335 CUM and Mineable Reserve is 62740 CUM of the proposed project.
14. **Mining method:** Manual method of mining is proposed for the project. Production capacity is 7000 CUM per Annum. Total production in 5 years 35000 CUM. Transportation is through Tipper/Tractor.
15. **Water requirement:** Total water requirement for the proposed project is 3 KLD.
16. **Baseline study details:** Baseline study was conducted during 1st Oct 2021 to 31st Dec 2021.
17. **Greenbelt development:** 100 saplings over an area 0.150 Ha is proposed for greenbelt development for the project.
18. **Manpower:** 18 Nos of manpower are required for the proposed project.
19. **Project cost:** Estimated cost of the proposed project is 18 Lacs & EMP cost is 1.3 Lacs.
20. **Environment Consultant:** The Environment consultant M/s Green Circle Inc., Vadodara, Gujarat along with the proponent made a presentation on the proposal before the Committee.
21. The SEAC in its meeting held on dated **10-07-2024** decided to take decision on the proposal after receipt of the following information / documents from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
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Proceedings of the SEAC meeting held on 20<sup>th</sup> November, 2024

*J Nayak*  
Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
6.	The SEAC observed that Compliance of Specific ToR conditions is not satisfactory. Hence, submit revise Compliance Report of Specific ToR conditions.	Specific ToR Compliance report is enclosed herewith as <b>Annexure- A</b>
7.	PP shall revise the EMP budget as per the requirement of the dust suppression measures.	The PP revised the EMP Budget and enclosed herewith as <b>Annexure- B</b>
8.	Revisit the calculation of total mineable area after excluding the concave area part of river along with submission of revise sketch map of lease area.	The calculation of total mineable area after excluding the concave area part of river along with submission of revise sketch map of lease area is enclosed as <b>Annexure- C.</b>
9.	<p>The Project Proponent needs to clarify the observations of SEAC on following points (on submitted RSR through ADS):</p> <p>a) <b>Measurement error:</b> 100 m X 100 m grid has been used for the volumetric survey and no details are given regarding accuracy of the measurement. The RLs of the grid points based on which the replenishment levels have been reported are also not mentioned.</p> <p>b) Satellite coordinates of the ML area boundary based on DGPS survey has not been reported.</p> <p>c) The riverbed sand replenishment study report is prepared by M/s Earth &amp; Environment, Bhubaneswar. As per the above-mentioned report field data for pre and post monsoon periods have been collected in May and November respectively. There is no mention of the dates as well as year of collection of these field data. No information is available regarding surveying instruments used and the process of carrying out the survey.</p> <p>d) As per the "Standard operating procedure (SOP) for study of rate of replenishment of sand using drone survey" submitted by ORSAC vide letter No. ORSAC/PR/0951/21/2588 dated 02<sup>nd</sup> June 2023 the RLs of the center points of 10 m X 10m of the ML area measured for replenishment study is to be reported. (Paragraph 4 page 7).</p>	Revised the Replenish Study Report enclosed herewith as <b>Annexure- D</b>
10.	The ADS submitted by the project proponent on the replenishment study is seen to be different from that presented by the environment consultant M/s Green Circle Inc., Vadodara, Gujarat in the SEAC meeting held on 10th July 2024. The ADS is stating volumetric survey without furnishing any details of the survey methodology whereas UAV / drone photogrammetry survey was presented in the above-mentioned SEAC meeting. The reasons for this reported change in survey methodology need to be explained.	The proponent enclosed herewith the revised Replenishment Study Report as <b>Annexure- D</b>
11.	<p>The Project Proponent needs to submit the following distance from proposed quarry:</p> <p>a) Distance of lease area from existing Baghalati dam.</p> <p>b) Distance of Kalingadala Megalift scheme of Water Resources Department near Kantajori nalla.</p>	<p>a) Baghalati dam is 27.8 km</p> <p>b) Kalingadala Megalift scheme of water department near Kantajori nalla is 5.2 km</p>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	c) Distance of Batrada nalla barrage proposed by water department near Bidyadharpur. d) Distance from Poichandia existing weird. e) Distance from existing Kalingadala weird.	c) Batrada nalla barrage proposed by water department near Bidyadharpur is 23.5 km d) Poichandia existing weird is 32.4 km e) Kalingadola weird is 4.1 km

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Green Circle Inc., Vadodara, Gujarat** on behalf of the proponent, the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per **Annexure – F** in addition to the following specific conditions:

- a) Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining as per **Annexure-G**.
- b) Sand extraction shall be limited to quantity and depth as per replenishment study report for only the first year of mining. Regular replenishment study as per guidelines to be conducted and report to be submitted.
- c) Provision of Bio-toilet shall be made at the site.
- d) Avenue plantation and plantation on both sides of the haulage road in consultation with/ on the advice of concerned Forest Department, Government of Odisha & W.R. Department Government of Odisha as well.
- e) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

  
**MEMBER SECRETARY SEAC**

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S QUALITY CARE INDIA LIMITED FOR EXPANSION OF MULTI-SPECIALTY HOSPITAL BUILDING PROJECT AND INITIALLY THE APPROVED BUILT-UP AREA WAS 19,901.90 M<sup>2</sup> AT MOUZA - CHANDRASHEKARPUR, TEHSIL - BHUBANESHWAR, DISTRICT- KHURDHA OF SRI N SHIVA KUMAR - EC**

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**PART A - SPECIFIC CONDITIONS:**

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of fire fighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

**TOPOGRAPHY AND NATURAL DRAINAGE**

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially.
8. Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project.

**WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE**

9. As proposed, fresh water requirement from ground water shall not exceed 140 KLD.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring

that there is no impact on other users.

11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 04 nos. shall be provided.
17. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

#### **SOLID WASTE MANAGEMENT**

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
23. A certificate from the competent authority handling municipal solid wastes, indicating the

existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.

### SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 285KLD. The treated effluent from STP shall be reused for flushing, landscaping, floor & car washing.
25. Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
30. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.
31. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and "Nala" before commencement of any activity at the project site.

### ENERGY

32. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
33. Energy conservation measures like installation of CFLs / LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.



34. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.
35. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.
36. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.
37. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.

#### AIR QUALITY AND NOISE

38. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, morram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, morram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
39. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
40. **Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.**
41. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.
43. Ambient noise levels shall conform to residential standard both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

#### **GREEN COVER**

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m<sup>2</sup> of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 1923.12sqm (20% of total plot area) shall be provided for green area development.

#### **TOP SOIL PRESERVATION AND REUSE**

45. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

#### **TRANSPORT**

46. A comprehensive mobility plan, as per Ministry of Urban Development best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
- Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
  - Traffic calming measures
  - Proper design of entry and exit points.
  - Parking norms as per local regulation
47. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.
48. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.
49. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. Speed of the vehicles shall be restricted upto 15 kmph by erecting speed bumps at regular intervals at project site and proper signage shall be provided for guided vehicular movement and speed restrictions.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. The Traffic Management Plan prepared by the proponent shall be duly validated and certified by the State Concerned Competent Authority and shall have also their consent before implementation.

#### **ENVIRONMENT MANAGEMENT PLAN**

58. An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.

#### **OTHERS**

59. Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

#### **PART B – GENERAL CONDITIONS**

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. The SEIAA, Odisha 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 Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
7. These stipulations would be enforced among others under the provisions of the 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 the EIA Notification, 2006.
8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which 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 Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The

- clearance letter shall also be put on the website of the company by the proponent.
11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
  12. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR  
DECORATIVE STONE MINES & STONE QUARRY**

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**A. Specific conditions**

1. The Project Proponent shall obtain consent from the State Pollution Control Board, Odisha and effectively implement all the conditions stipulated therein.
2. Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted; All the old age people of the surrounding villages may be provided medical facilities.
3. Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass through the villages. The Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.
4. Project Proponent shall ensure the safeguard and wellbeing of villagers and school, regular health monitoring of all residents in the area and the compliance Report shall be submitted to the Regional office of the Ministry and SEIAA, Odisha.

**B. Standard conditions**

1. A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA, Odisha 5 years in advance of final mine closure for approval.
2. No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Odisha.
4. No change in the calendar plan including excavation, quantum of mineral and waste should be made.
5. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.
6. Mining shall be carried out as per the provisions outlined in the approved mining plan as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS).
7. Protection of vegetation in the surrounding areas, and proper storage of solid waste, subgrade ore and their use have to be given priority during mining operation.
8. Digital processing of the entire lease area using remote sensing technique shall be

carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office and SEIAA, Odisha.

9. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board.
10. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. The monitoring shall be carried out four times in a year pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board.
11. Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.
12. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.
13. Sufficient number of Gullies to be provided for better management of water. Regular Monitoring of pH shall be included in the monitoring plan and report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
14. There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.
15. The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors.
16. The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation shall be followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic

parameters and allows only species adapted to that micro climate.

17. The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. 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 and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20 m 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 and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
18. 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. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.
19. Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department and as per CPCB Guidelines. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
20. The Project Proponent shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, Project Proponent should implement the directions of the Hon'ble Supreme Court with regard to acquiring grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling and plantation of such trees should be promoted.
21. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.
22. As per the Company Act, the CSR cost should be 2 % of average net profit of last three years. Hence CSR expenses should be as per the Company Act/Rule for the Socio



Economic Development of the neighborhood Habitats which could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

23. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
24. Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
25. Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
26. The project authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
27. The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.
28. A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.
29. State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.
30. The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at [www.environmentclearance.nic.in](http://www.environmentclearance.nic.in) and a copy of the same should be forwarded to the Regional Office.
31. The SEIAA, Odisha may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
32. Any appeal against this 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.
33. The above mentioned stipulated conditions shall be complied in a time-bound manner. Failure to comply with any of the conditions mentioned above may result in cancellation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

## 5.5. HAZARDS AND RISK MANAGEMENT

### 5.5.1 Explosives

Blasting is done by means of explosives which are hazardous during of handling, storage and blasting.

#### 5.5.1.1. Storage and Handling

The Applicant is advised to store the explosives as per the Indian Explosives Act, 1958 and the Explosive Rules, 1983. Necessary permissions should be obtained from the Joint Controller of Explosives to store and uses of explosives in the quarry in the magazine permit under Form - 23 or Agreement shall be made with holder of Form - 22 who can supply and fire explosives as per safety practices. However blasting in the mine or quarry shall be done as per the MMR, 1961 under the supervision of Mines Blaster certificate holder, appointed under Reg. 160 of Metalliferous Mines Regulations, 1961.

#### 5.5.1.2. Blasting

Poorly designed shots can result in misfires early ignition and flying rock. Safety can be ensured by planning for round of shots to ensure face properly surveyed, holes correctly drilled, direction logged, the weight of explosion for good fragmentation. Blast design, charge and fire around of explosives should be carried out by a trained person.

#### 5.5.1.3. Drilling

Slipping and Falling of labours from the edge of a bench during drilling is possible. Part of training should include instructions to face towards the open edge of the bench so any inadvertent backward step is away from the edge. Suitable portable rail fencing which can be erected between the drilling operations and the edge of the mine can be provided. Attachment of a safety line to the drilling rig and provide harness for the driller to wear can be done. Newer drill machines are provided with cabin which controls noise level within cabins. Driller operators should be protected with ear protection.

### 5.5.2. Loading

Possible risks during loading of mined rocks are falling of rock on the driver, plant toppling aver due to uneven ground, failure of hydraulic system, fires, fall while gaining access to operating cabin, electrocution in Draglines, failure of wire ropes in Dragline. In order to overcome these risks:



- Operator cabin should be of suitable strength to protect the driver in event of rock fall.
- Electrical supply to dragline should be properly installed with adequate earth continuity and earth leakage protection.
- Wire rope should be suitable for work undertaken and be examined periodically.
- Ensure that loaders are positioned sufficiently away from face edges

### 5.5.3. Transportation

Brake failure, lack of all-around visibility from driver position, vehicle movements particularly while reversing, rollover, Vibrations, Noise, Dust and improper / no signalling are some of the factors causing risk. This can be avoided by following measures:

- Visibility defects can be eliminated by the use of visibility aids such as closed circuit television and suitable mirrors.
- Edge protection is necessary to prevent inadvertent movement.
- Seatbelt to protect driver in event of vehicle rollover.
- Good maintenance and regular testing necessary to reduce possibility of brake failure.
- Avoid driving at the edge of roadway under construction
- Heavy earth moving equipment and vehicle drivers and those giving signals should be well trained.

### 5.5.4. Unstable face

Chances of Rock fall or slide exists. Regular examination of face must be done and remedial measures must be taken to make it safe if there is any doubt that a collapse could take place. Working should be advanced in a direction taken into account the geology such that face and quarry side remain stable.

### 5.5.5. General safety measures

Provisions of the Mines Act, Rules and Regulations orders made there under shall be complied with, so that the safety of the mine, machinery and persons will be ensured. Permission, relaxation or exemption wherever required for the safe and scientific mining of the deposit will be obtained from the Department of Mine Safety. Copy of Agreement for handling of Explosives under License Holder at Proposed site is given in additional document.

- Safety kits should be located in easily accessible place with major first aid materials in it.
- Entry of any unauthorized person into mine and plant areas shall be completely prohibited
- Arrangements for fire fighting in the mine's office complex and mining area

*(Handwritten signature)*

- Provision of all the safety appliances such as safety boot, helmets, goggles, ear plugs etc. shall be made available for the employees
- Mining will be undertaken in coexistence with the requirements of the Mining Plan which shall be updated from time to time
- Handling of explosives, charging and blasting shall be undertaken only by a competent person
- Adequate safety equipment shall be provided at the explosive magazine

All the mining equipment shall be maintained as per the guidelines of the manufacturer.

A handwritten signature in black ink, appearing to be 'S. S. S.', is written over a circular stamp. The stamp contains some illegible text or a logo.

**STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR TOWNSHIP/ AREA DEVELOPMENT PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT**

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- 1) Examine details of land use as per Master Plan and land use around 10 km radius of the project site. Analysis should be made based on latest satellite imagery for land use with raw images. Check on flood plain of any river.
- 2) Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/ villages and present status of such activities.
- 3) Examine baseline environmental quality along with projected incremental load due to the project.
- 4) Environmental data to be considered in relation to the project development would be (a) land, (b) groundwater, (c) surface water, (d) air, (e) bio-diversity, (f) noise and vibrations, (g) socio economic and health.
- 5) Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area. Any obstruction of the same by the project
- 6) Submit the details of the trees to be felled for the project.
- 7) Submit the present land use and permission required for any conversion such as forest, agriculture etc.
- 8) Submit Roles and responsibility of the developer etc for compliance of environmental regulations under the provisions of EP Act.
- 9) Ground water classification as per the Central Ground Water Authority.
- 10) Examine the details of Source of water, water requirement, use of treated waste water and prepare a water balance chart.
- 11) Rain water harvesting proposals should be made with due safeguards for ground water quality. Maximize recycling of water and utilization of rain water. Examine details.
- 12) Examine soil characteristics and depth of ground water table for rainwater harvesting.
- 13) Examine details of solid waste generation treatment and its disposal.
- 14) Examine and submit details of use of solar energy and alternative source of energy to reduce the fossil energy consumption. Energy conservation and energy efficiency.
- 15) DG sets are likely to be used during construction and operational phase of the project. Emissions from DG sets must be taken into consideration while estimating the impacts on air environment. Examine and submit details.
- 16) Examine road/rail connectivity to the project site and impact on the traffic due to the proposed project. Present and future traffic and transport facilities for the region should be analysed with measures for preventing traffic congestion and providing faster trouble free system to reach different destinations in the city.
- 17) A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.
- 18) Examine the details of transport of materials for construction which should include source and availability.
- 19) Examine separately the details for construction and operation phases both for

Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.

- 20) Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster.
- 21) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 22) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 23) **The prescribed TOR would be valid for a period of four years for submission of the EIA/EMP report.**

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S Z ESTATES PRIVATE LIMITED FOR PROPOSED (B+G+9) STORIED BUILDING FOR DEVELOPMENT OF EWS HOUSING SCHEME UNDER MODEL - 1 AMENDED HFA POLICY - 2015 OVER AN BUILT-UP AREA 45024.64 SQM PLOT NO. - 164(P), 170(P), 156(P), 210(P), KHATA NO. - 855, MOUZA - BARAMUNDA, BHUBANESWAR, DIST - KHURDA OF SRI TAPAN KUMAR MOHANTY - EC**

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**PART A - SPECIFIC CONDITIONS:**

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of fire fighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

**TOPOGRAPHY AND NATURAL DRAINAGE**

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially.
8. Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project.

**WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE**

9. As proposed, fresh water requirement from ground water shall not exceed 185 KLD.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available.

This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.

11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 12 nos. shall be provided.
17. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

#### **SOLID WASTE MANAGEMENT**

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.



23. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.

#### SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 250 KLD. The treated effluent from STP shall be reused for flushing, landscaping, floor & car washing.
25. Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
30. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.
31. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and "Nala" before commencement of any activity at the project site.

#### ENERGY

32. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
33. Energy conservation measures like installation of CFLs / LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.

34. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.
35. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.
36. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.
37. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.

#### AIR QUALITY AND NOISE

38. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, morram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, morram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
39. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
40. **Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.**
41. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.
43. Ambient noise levels shall conform to residential standard both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

#### **GREEN COVER**

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m<sup>2</sup> of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 219609 sqm (22.24 % of total plot area) shall be provided for green area development.

#### **TOP SOIL PRESERVATION AND REUSE**

45. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

#### **TRANSPORT**

46. A comprehensive mobility plan, as per Ministry of Urban Development best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
  - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
  - Traffic calming measures
  - Proper design of entry and exit points.
  - Parking norms as per local regulation
47. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.
48. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.
49. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. Speed of the vehicles shall be restricted upto 15 kmph by erecting speed bumps at regular intervals at project site and proper signage shall be provided for guided vehicular movement and speed restrictions.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. The Traffic Management Plan prepared by the proponent shall be duly validated and certified by the State Concerned Competent Authority and shall have also their consent before implementation.

### ENVIRONMENT MANAGEMENT PLAN

58. An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.

### OTHERS

59. Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

#### **PART B – GENERAL CONDITIONS**

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. The SEIAA, Odisha 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 Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
7. These stipulations would be enforced among others under the provisions of the 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 the EIA Notification, 2006.
8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which 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 Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The

clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
12. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

**STANDARD ENVIRONMENTAL CLEARANCE CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR SAND MINING**

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**Stipulated Conditions:**

1. The project proponent should carry out River bed sand mining manually by engaging local laborers in force to check over exploitation of sand at the source.
2. Any change in the plan or quantity to be produced shall require prior approval of SEIAA.
3. There shall be a 'no working zone' to protect the embankment on both sides, road or rail bridge in the vicinity, if any, dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. 10 % of the width of river shall be left intact along the embankments on both sides as 'no mining zone'. Further, no mining shall be allowed within 200 m of any existing structures dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. In case of River Bridge, this no mining zone shall extend upto a minimum stretch of 200 meters from the bridge and it may extend upto 500 meters in sensitive locations. The lease area shall be accordingly curtailed to carve out the actual sand mining area within the leasehold. Exact map of the lease area, and the 'no mining zone' shall be drawn to scale, showing the DGPS coordinates of all corner points, and the location of the bridge, embankment, extraction route & other structures; and such map has to be submitted to SEIAA by the project proponent through the Tahasildar within three months of the date of issue of the EC. The quantum of sand allowed to be extracted will be worked out on the basis of the actual working area.
4. The lease area and the actual working area shall be demarcated on the ground by erecting durable masonry /concrete pillars by the project proponent.
5. The project proponent shall take prior statutory and regulatory clearance as required from the concerned authorities in respect of the project, before carrying out any operation.
6. Mining is not permissible within the water channel or stream flow area. No stream shall be diverted for the purpose of mining and no natural water course shall be obstructed. The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non monsoon period. There shall be no sand mining in the river during the rainy season or when there is flow of water in the river.
7. Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purpose.
8. The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
9. No transportation of the minerals shall ordinarily be allowed on any road passing through villages/habitations/forest land without prior explicit permission. Transportation

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of minerals through existing rural roads can be allowed only by the concerned Govt. Department/BDO and only after required strengthening, such that the carrying capacity of road is increased to handle the sand truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project. No movement on any road is allowed on existing village road network without appropriately increasing the carrying capacity of such roads. Project proponent shall ensure that the road may not be damaged due to transportation of the mineral and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and traffic density. Plying of sand extraction trucks may be allowed on roads / path ways passing close to schools, temples, hospitals and such other public places only with prior written permission of competent authority.

10. Vehicles hired for transportation of sand from the site should be in good condition and should have pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
11. The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar may collect an appropriate road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of sand transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of sand trucks.
12. The project proponent shall take all precautionary measures against causing damage to flora and fauna of the locality. The PP shall plant and nurse to full establishment a minimum of 50 number of saplings of native tree species along the approach roads, river banks and in community areas in consultation with the Gram Panchayat.
13. Water spray should be made on the road/extraction paths to control dust emission during transportation of sand.
14. The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.
15. Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and shall be spent according to the plan proposed. Year wise progress of implementation of EMP shall be reported to the SEIAA, Odisha and OSPCB along with the compliance report.
16. The proponent shall take necessary measures to ensure that there is no adverse impact of the mining operations on the human habitation if any, existing nearby.
17. It shall be mandatory for the project management to submit quarterly compliance reports on the status of implementation of the above stipulated environmental safeguards to the SEIAA, Odisha / SPCB, Odisha/ Regional Office of the MoEF&CC, Bhubaneswar, in hard and soft copies on 1<sup>st</sup> day of January, April, July, October of each calendar year, failing which EC is liable to be revoked.



18. River Bank stabilization shall be made through stone patching. Plantation of adequate number native species on river banks and both sides of haulage roads shall be made.
19. During transportation of sand, all traffic safety measures shall be taken to avoid any kind of accidents.
20. Bio - toilet provision shall be made.
21. Stone patching on river bank with plantation in-between and the ramp construction shall be done in consultation with and advice of concerned W.R.Deptt, Government of Odisha.
22. Necessary sprinkling on Haulage Road and Avenue plantation shall be done.
23. At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.
24. The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non- compliance and also ensure that the project proponent submits quarterly compliance reports.
25. The concerned Regional Office of the MoEF&CC/ SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF&CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.
26. A copy of the clearance letter shall be sent by the proponent to concerned Gram Panchayat /Panchayat Samiti /Zilla Parisad /Municipal Corporation / Urban Local Body as the case may be.
27. Project proponent shall obtain Consent to Operate from the OSPCB and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the State Pollution Control Board.
28. The SEIAA, Odisha may revoke or suspend this EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.
29. The Project Proponent (lease holder) shall inform the SEIAA of any change in ownership of the mining lease. In case, there is any change in ownership or mining lease is transferred, then mining operation can be carried out only after transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.
30. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this environment clearance besides attracting penal provisions in the Environment (Protection) Act, 1986.

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31. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.
32. This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
33. 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.

## Annexure - G

### ESSENTIAL PHYSICAL CRITERIA AS PER ENFORCEMENT AND MONITORING GUIDELINES FOR SAND MINING, JANUARY 2020 OF MOEF&CC, GOVT. OF INDIA

SI. No.	Essential Criteria	Reference
1.	"No Mining Zone": 1/4th the part of the river width (excluding 3/4th the central part of the river width) on both sides of the river towards the river bank	4.1.1 (Para - e) Page - 16
2.	a) Distance between two clusters : $\geq 2.5$ km b) Area of mining lease area is a cluster: $\leq 10$ ha.	4.1.1 (Para - k) Page - 19
3.	Concave River Bank : No extraction of sand	
4.	No mining if a) Upstream: Lease is 1 km from major Bridge and high ways or $5(x)$ of the Bridge / public civil structure / water intakes point subject to lease is located at a minimum 250 meter distance. Where $x$ = Span of the bridge. b) Downstream side: Lease is 1 km from the major bridge and Highways Or $10x$ of the bridge / public civil structure / water intake point Subject to lease is located at a minimum distance of 500 meter where $x$ = span of the bridge	4.3 (Para - h) Page - 23
5.	Mining depth : $\leq 3$ meter (maximum 3 meter)	4.3 (Para - m) Page - 24
6.	Mining distance from river bank: $1/4^{\text{th}}$ of the river width, But subject to not less than 7.5 meter	4.31 (Para - m) Page - 24
7.	Area for removal of minerals : $\leq 60\%$ of mine lease area	4.3 (Para - s) Page - 25
8.	Minable sand per ha. Available for actual mining : $\leq 60,000$ MT/Annum	
9.	Regular replenishment study and replenishment rate	

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