

MINUTES OF 83rd MEETING OF EXPERT APPRAISAL COMMITTEE (INFRASTRUCTURE-2) HELD DURING 28th FEBRUARY & 2nd MARCH, 2022.

VENUE: Through Video Conferencing

DATE: 28th February & 2nd March, 2022

PROCEEDINGS

83.1 Opening Remarks of the Chairman: The Chairman and Members extended warm welcome with each other and other participants of the meeting. The Chairman of the EAC (Infra 2), Dr. N.P. Shukla, designated Dr. H.C. Sharatchandra as the interim Chairman for the 83rd EAC meeting. Thereafter, the meeting was opened to start proceeding as per the agenda adopted for this meeting.

83.2 Confirmation of Minutes of 82nd Meeting of Expert Appraisal Committee (Infrastructure-2) held during 15-16th February, 2022.

The Expert Appraisal Committee (Infrastructure-2), hereinafter called the EAC, was informed that no representation has been received regarding projects considered in 82nd meeting and that minutes of 82nd meeting of EAC were under process for confirmation and approval. The typo errors, if any noticed during processing of these cases may be corrected in the light of facts and figures provided by the respective Project Proponent.

83.3 Consideration of Proposals (Day I): The EAC considered proposals as per the agenda adopted for Day-I of 83rd meeting. The details of deliberations held and decisions taken in the meeting are as under:

AGENDA ITEM NO. 83.3.1

Construction of New Greenfield Airport at Shimoga, Sogane Village limit in Shivamogga Taluka, Shivamogga District, Karnataka by Executive Engineer PWD & IWTD Special Division Shimoga – Terms of Reference

(IA/KA/MIS/253526/2022; F. No. 21-27/2022-IA-III)

The Project Proponent (Executive Engineer PWD & IWTD Special Division Shimoga) along with his consultant 'M/s. ABC Techno Labs India Private Limited', started a presentation on the key parameters and salient features of the project to the EAC (Infra-2). However, the consultant got disconnected from the meeting and could not complete the presentation. Accordingly, the Committee decided to defer the project as absent case.

AGENDA ITEM NO. 83.3.2

Proposed expansion of existing hospital complex project with increase in built-up area from 53,246.10 sqm. to 1,40,907.42 sqm. at Puliyanoor Village, Kozhuvanal Panchayat, Meenachil Taluk, Kottayam District, Kerala by M/s Palai Diocesan Medical Education Trust – Environmental Clearance

(IA/KL/MIS/255914/2022; F. No. 21-25/2022-IA-III)

1. The Project Proponent (M/s. Palai Diocesan Medical Education Trust) along with his consultant 'M/s. Environmental Engineers & Consultants Pvt. Ltd.', made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Survey Nos. 86/5-1, 86/4, 86/7, 86/3-2, 86/3, 86/3-1, 87/7, 87/4, 85/1-1, 85/4, 87/5-1-1, 100/6, 85/6, 87/2, 88/5, 87/6, 85/3, 86/6-1, 88/6-2, 86/5-2, 86/1, 88/6, 88/4, 87/1, 86/6, 88/11-1, 87/3-1, 100/8, 100/7, 98/2, 100/5, Puliyanoor Village, Kozhuvanal Panchayat, Meenachil Taluk, Kottayam District, Kerala.
- ii. The project is an Expansion.
- iii. Earlier, Environmental Clearance was issued by the then MoEF vide File No. 21-25/2011-I.A.III dated 12.03.2012 for 700 bedded hospital with built-up area of 67,721.29 sqm. and plot area of 9.88 ha. The validity of the aforesaid EC expired on 11.03.2019. Within the validity period, the actual construction carried out at site is only for a built-up area of 53,246.10 sqm. with 280 beds. The occupancy permission of the building was obtained from Kozhuvanal Grama Panchayat in 2019 and the hospital is functioning.
- iv. Now, it is proposed to construct new buildings within the existing hospital with additional built-up area of 87,661.32 sqm. and thereby the cumulative built-up area will be 1,40,907.42 sqm. (Existing 53,246.10 sqm. + Proposed 87,661.32 sqm.) and 1,180 Beds (Existing 280 beds + Proposed 900 beds) with total land area of 10.0771 ha. and hence, this application is made under Expansion Category.
- v. Certified Compliance Report (CCR) was issued by Integrated Regional Office (IRO), MoEF&CC, Bangalore vide File No. EP/12.1/2011-12/18/KER/277 dated 12.01.2022 wherein the status of compliance of the project is rated as "Satisfactory".
- vi. After expansion, the total plot area will be 1,00,771 sqm. (10.0771 ha.) and total construction (Built-up) area will be 1,40,907.42 sqm. Maximum height of the building is 45 m. Facilities proposed in the project are as follows:
 - a. 1,180 bedded Hospital,
 - b. Accommodation for hospital admin (total strength 30 nos.),
 - c. Retirement Villas (25 villas),

- d. Doctors Apartments (105 Apts.),
- e. Nurses quarters (200 Rooms),
- f. Auditorium cum Commercial (2,000 persons),
- g. Bystander block (90 units) with additional supporting infrastructure facilities.

vii. The details of buildings are as follows:

S. No.	Building Block Nos. & Name	Max. No. of Floors	Built-up area (sqm.)
Existing Buildings & facilities			
A	Existing Hospital Building	B + G + 6 floors	51,515.46
B	STP room	Ground floor	171.59
C	Manifold (Medical Gas Plant)	Ground floor	124.0
D	Accommodation for hospital admin	G + 2 floor	827.45
E	Laundry room	Ground floor	607.60
	TOTAL (A)		53,246.10
Proposed Buildings & facilities			
1.	New Hospital Building	G+7 floors	43,481.32
2.	Palliative care Building	G+7 floors	3,717
3.	ADART (Alcohol and Drug Addiction Rehabilitation Treatment) Building	G+7 floors	3,717
4.	Auditorium cum Commercial Building above MLCP	Basement 1 & 2 + G+1 floor	10,200
5.	Retirement villas	G+1 floor	6,505
6.	Kitchen Building	G+1 floor	450
7.	Bystander Building	G+14 floors	4,650
8.	Accommodation for hospital admin	G+1 floor	1,000
9.	Doctor's quarters	G+14 floors	7,435
10.	Nurse's quarters	G+14 floors	5,576
11.	Services Building (Electrical)	Ground floor	465
12.	Crematorium building	Ground floor	465
	TOTAL (B)		87,661.32
TOTAL BUILT-UP AREA (A + B)			1,40,907.42

- viii. During construction phase, total water requirement is expected to be 46 KLD which will be met by recycled water from portable STP/Stored rain water (tank) for construction purposes and well water for meeting the domestic water requirement expected to be 7 KLD. During the construction phase, portable STP will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labour force.

- ix. During operational phase, total water demand of the project is expected to be 1,051 KLD and the same will be met by 478 KLD fresh water from stored rain water tank/well water and 573 KLD recycled water. Wastewater generated (611 KLD) will be treated in STP of total 740 KLD capacity. There is an existing STP with capacity of 480 KLD. The STP capacity needs to be enhanced or additional STP to be installed for additional sewage load from the new buildings. 550 KLD of treated wastewater will be generated which will be completely recycled and re-used for flushing (349 KLD), for gardening (32 KLD), for boiler (40 KL). and for make-up water requirement for cooling towers attached with the HVAC system (129 KLD). For treatment of effluent of 25 KL from laboratory & laundry, ETP with 30 KL capacity would be installed. 23 KLD treated water will be generated from the ETP which will also be completely recycled and re-used for cooling towers attached with the HVAC system.
- x. About 2.6 tons/day solid waste will be generated in the project. The biodegradable waste (1.3 tons/day) will be processed in organic waste converter (existing) and bio-bin system (proposed) and the non-biodegradable waste generated (1.3 tons/day) will be handed over to authorized local vendor. An area equivalent of about 650 sqm. for about 15 days storage of non-biodegradable waste would be provided. About 826 kg/day of Biomedical waste will be disposed-off through Kerala State Pollution Control Board authorized agency (M/s Indian Medical Association Goes Eco Friendly, IMAGE). The hazardous waste i.e., the used oil from D.G. sets, discarded oil filters and discarded batteries and stored separately and will be disposed to CPCB/SPCB authorized vendors. E-waste will be disposed as per E Waste (Management & Handling) Rules.
- xi. There is existing old laundry structure with total built-up area of about 607.60 sqm. and old shed/structure of about 70 sqm. built-up area existing within the site and which will be demolished for the development of the proposed site. The salvageable materials from the demolition debris would be recovered. The remaining demolition debris and the construction debris would be used for site preparatory works.
- xii. The total power requirement (connected load) during operation phase will be 9,621 kW (Existing 3,721 kW + Proposed 5,900 kW) and will be met from Kerala State Electricity Board (KSEB) & DG Sets (Existing 750 kVA x 2 nos + Proposed 1,250 kVA x 4 nos. + 1,000 kVA x 1 no. + 750 kVA x 1 no.) as a standby power back up arrangement.
- xiii. Rooftop rainwater of buildings will be collected in RWH tank of 4 ML total capacity (2 ML existing + 2 ML proposed) for harvesting after filtration.
- xiv. Parking facility for 1,800 Cars + 2,700 two wheelers + 10 ambulances is proposed to be provided against the requirement of 1,784 Cars + 2,676 two wheelers (according to local norms).
- xv. The total installed solar power plant capacity after the completion of project will be 1,205 kWp (205 kWp existing + 1,000 kWp proposed).

- xvi. Total area for landscaping area proposed is 30,049 sqm. (about 30% of total plot area).The landscape includes development of an exclusive area for horticulture therapy for which a medicinal garden is part of landscape plan. 25 trees will be cut for the project. 423 trees are already planted within the existing hospital complex and it is proposed to plant additional 1,177 trees within the site adding up to 1,600 trees within the site.
- xvii. The construction will be carried out in phases. The site around each building to be constructed will be barricaded from the existing hospital so that the construction activity will not impact the functioning of the existing hospital.
- xviii. The total excavated earth is about 1,07,000cu.m. which will be completely utilized within the site. The excavated topsoil (50,000 cu.m.) will be preserved for landscaping. The remaining excavated soil will be used for backfilling work (39,000 cu.m.) and internal road construction work (18,000 cu.m.).
- xix. The project is not located in Critically Polluted area.
- xx. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xxi. Puliyanloor village is not included in the list of Villages in ESA of the Western Ghats as per Appendix 3 of the report of the High Level Working Group (HLWG) on Western Ghats.
- xxii. Forest Clearance is not required.
- xxiii. No court case is pending against the project.
- xxiv. CRZ Clearance is not required.
- xxv. Expected timeline for completion of the project - About 84 months.
- xxvi. Investment/Cost of the project is ₹ 750 Crores.
- xxvii. Employment potential - About 100 persons during construction phase and about 3,500 persons during operation phase.
- xxviii. Benefits of the project – The project would provide better health infrastructure facilities & supporting infrastructure facilities to the people. Direct and indirect employment opportunities; The potential for employment and access to new services may draw people to the area around the project. There will be an increase in economic activity and employment for the local community, local skills development. Employment opportunities generation and revenue to the State.

2. The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

3. *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, decided to defer the proposal and asked the project proponent to provide the following additional information:*

- i. Submit a copy of the Occupancy Certificate obtained from Kozhuvanal Grama Panchayat in 2019.
- ii. Form 1A provides details of radioactive waste management, while it was stated during presentation that there is no radioactive treatment proposed in the hospital and hence no radioactive waste will be generated. The same needs to be clarified and corrected accordingly.
- iii. Clarify the proposed solar power generation capacity (962 kWp or 1000 kWp) along with percentage contribution.
- iv. Provide the breakup of wastewater treatment details and STPs specifying the proposed facilities in the area separated by the road.
- v. Examine and clarify the site suitability for proposed crematorium.
- vi. Resubmit Form-1 and Form-1A with correct details.

AGENDA ITEM No. 83.3.3

Proposed expansion of Group Housing Project “Sikka Kimaya Greens” with increase in built-up area from 62079.82 sqm. to 71140.9 sqm. at IIE, Sahastradhara Road, Dehradun, Uttarakhand by M/s. G.R. Realcon Pvt. Ltd. – Reconsideration for Environmental Clearance (absent case)

(IA/UK/MIS/251664/2014; F. No. 21-5/2022-IA-III)

1. The EAC noted that the proposal was deferred in its 81st meeting held on 31st January, 2022 as absent case.

2. The Project Proponent (M/s. G.R. Realcon Pvt. Ltd.) along with his consultant ‘M/s Earthvision India Associate Consultants’, made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Plot No. 18 & 19, IIE, Sahastradhara Road, Dehradun Taluk and District, Uttarakhand.
- ii. The project is an Expansion.
- iii. Earlier, Environmental Clearance was issued by SEIAA, Uttarakhand vide letter No. 550-8(28)/2014 dated 30.08.2014 for plot area of 8,211 sqm. and total built-up area of 42,846.37 sqm. Later, Corrigendum was issued by SEIAA, Uttarakhand vide letter No.460/SEIAA dated 14.08.2020, for change in built-up area to 62,846.37 sqm. and change in capacity of STP to 150 KLD. Now, expansion is proposed with increase in built-up area from 62,079.82 sqm. to 71,140.9 sqm.
- iv. The project has obtained certified compliance report from Integrated Regional Office, Dehradun vide Letter File No. NC-RO/ENV/CON/24/2015/1433 dated 14.01.2022.
- v. The total area of project is estimated 18,211 sqm. (or 4.50 acres). The built-up area of the Executive Apartment Project is 71,140.9 sqm. The details of the proposed expansion are given as follows:

S. No.	Particulars	Existing Capacity	Proposed Expansion	Total Capacity after Expansion
1	Total Site Area	18211.00 sqm.		18211.00 sqm.
2	Built up Area	62846.37 sqm.	8294.53 sqm.	71140.9 sqm.
3	Green Area	5463.3 sqm.	-	5463.3 sqm.
4	Ground Coverage	6363.72 sqm.	-	6363.72 sqm.
5	No of Towers	8 nos.	1 nos.	9 nos.
6	Max Height of Building	27 m	3 m increase	30 m
7	Nos. of Basement	2 nos.	-	2 nos.
8	Road and Parking Area	25m/18655.11 sqm.	-	25m/18655.11 sqm.
9	Electricity	2150 KVA	-	2150 KVA
10	Water consumption during construction (KLD)	10 KLD	-	10 KLD
11	Water consumption during operation	270 KLD	-	270 KLD
12	WasteWater Generation during operation phase	216 KLD	-	216 KLD
13	Manpower (Operational)	200 nos.	-	200 nos.
14	Resident Population	2000 person	-	2000 person
15	Cost of Project	200 Crore	-	200 Crore
16	DG Set	1500 KVA	-	1500 KVA

vi. The project components are given as follows:

S.No.	Particular	Area	No. of Units	Total Area
1.	Studio Luxury Apartment +1 BR+1 Living /Dining+ Kitchen	775	18	13950
2	2 Bhk +2T (A)	1150	1	1150
3	2 Bhk+2 Toilet	1159	93	10778.7
4	2 Bhk +2T (B)	1227	1	1227
5	3 Bhk+2 Toilet	1390	32	4448.0
6	3Bhk +2 Toilet (New)	1531	18	2755.8
7	3Bhk+2 Toilet+ Servant toilet	1535	72	11052.0
8	2 Bhk+Servant+2 Toilet	1820	18	3276.0

9	3 Bhk 3 Toilet	1820	9	1638.0
10	3 Bhk + Servant+ Study+ 3 Toilers	2275	42	9555.0
11	4 Bhk Premium + Servant + 3 Toilet +Bar Private Lift Lobby	2645	3	793.5
12	4 Bhk Premium + Servant+3 Toilet + Private Lift Lobby+ Bar	2775	64	17760
13	3 Bhk(Penthouse)	3620	7	2534.0
14	4 Bhk(Penthouse)	6083	1	608.3
15	4 Bhk(Penthouse)	6090.81	1	609.08
16	3 Bhk + Servant+Study+3 Toilet Double Basement	6940	1	694.0
17	4 Bhk(Penthouse)	7951	1	795.1
18	5 Bhk(Penthouse)	8710.04	1	871.0
19	Villas	1339.7	1	1339.7
Grand Total			383	71140.9

- vii. During construction phase the water is being sourced through water tankers. Wastewater generated during the construction is being disposed off through soak pits.
- viii. The total water requirement during the operation phase will be approx. 282 KLD and will be procured from Uttarakhand Jal Sansthan/borewell. The wastewater generated in operation phase (216 KLD) will be treated in a STP of 250 KLD capacity and the treated sewage (172 KLD) will be reused for toilet flushing (70 KLD), horticulture (35 KLD) & D.G. cooling (1 KLD). The surplus treated water (66 KLD) will be sent to sewer line which is being constructed for this area which will be integrated in the main city sewer network
- ix. During the operation phase, the solid waste generated from project will be 1000 kg/day comprising of biodegradable wastes (about 600 kg/day), recyclable wastes (about 300 kg/day) and inert wastes (about 100 kg/day). The biodegradable organic wastes will be treated inside the premises by organic waste converter. Recyclable wastes and non-recyclable wastes will be disposed through Govt. approved agency. 40kg/day of Sludge generated from the STP plant will be dried and later will be used as manure for green belt development.
- x. The total demand load is estimated 2150 KVA. Power will be supplied by Uttarakhand Power Corporation Ltd. Power backup for the group housing project will be through 3 no. of DG sets of total capacity 1,500 KVA (1 x 250 + 1 x 500 + 1 x 750 KVA each) capacity.
- xi. All internal lighting shall be BEE star rated and solar lit, at least to an extent of 25%. Solar street light controllers will be used for automatic dusk to dawn operation of street lights. A minimum of 50% hot water requirement shall be met by solar water heating systems.
- xii. Total of 3 Rain Water Harvesting pits are being proposed for artificial rain water recharge within the project premises.
- xiii. Parking for 601 ECS will be provided.
- xiv. The project is not located in Critically Polluted area.
- xv. NBWL Clearance is not required.
- xvi. The project falls in territorial limits of Doon Valley Notification, 1989.

- xvii. Forest Clearance is not required.
- xviii. No court case is pending against the project.
- xix. CRZ Clearance is not required.
- xx. Investment/Cost of the project is ₹200 Crores.
- xxi. Employment potential - About 200 persons.

3. The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Uttarakhand, it required appraisal at Central level by sectoral EAC.

4. The EAC also noted that the project has obtained certified compliance report from Integrated Regional Office, Dehradun vide Letter File No. NC-RO/ENV/CON/24/2015/1433 dated 14.01.2022. As per the aforesaid report based on site visit conducted on 07.01.2022, the project is in construction phase, and only 65% of work has been completed.

5. *The EAC observed major discrepancies and gaps in the information submitted by the project proponent in Form 1, Form 1A, Presentation and EC issued by SEIAA, Uttarakhand vide letter No. 550-8(28)/2014 dated 30.08.2014. Accordingly, the EAC (Infra-2) decided to defer the proposal and asked the project proponent to provide the following additional information:*

- i. The total plot area as per existing EC issued by SEIAA, Uttarakhand vide letter No. 550-8(28)/2014 dated 30.08.2014 is only 8,211 sqm., whereas the instant proposal mentions the existing plot area as 18,211.00 sqm. The Corrigendum issued by SEIAA, Uttarakhand vide letter No.460/SEIAA dated 14.08.2020 also does not mention any change in plot area. Hence, clarify the discrepancy with adequate supporting documents.
- ii. The previous EC issued by SEIAA, Uttarakhand vide letter No. 550-8(28)/2014 dated 30.08.2014 mentions that height of the building can't exceed 21m as laid down in the bylaws of MDDA (Housing Department, State Government Order No -2009/V2011-55/2006 T.C. dated 17th Nov, 2011). Submit NOC from Housing Department, State Government/Government Order permitting increase in height of the building beyond 21m as proposed for the expansion.
- iii. The total water requirement is mentioned as 323 KLD with fresh water requirement as 282 KLD in presentation whereas total water requirement is mentioned as 282 KLD in Form 1 and Form 1A. Water balance diagram mentions fresh water requirement as 270 KLD. Recycled water requirement adds up to 111 KLD in Form 1A and presentation, whereas it adds upto only 106 KLD in the water balance diagram. STP capacity is mentioned as 270 KLD in Form 1 and as 250 KLD in Form 1A and presentation. Accordingly, clarify the discrepancies in water requirement specifying total water requirement, fresh water requirement and recycled water requirement, and revise the water balance diagram.

- iv. Project requirements submitted in Form 1A comparing existing capacity with proposed expansion and total capacity after expansion needs to be clarified. Existing height of building is mentioned as 27 m while previous EC dated 30.08.2014 permits height only upto 21 m. Existing built-up area is mentioned as 62,846.37 sqm., however, application mentions expansion with increase in built up area from 62,079.82 sqm. Power requirement, water requirement, waste generation, STP capacity, manpower, population, cost etc. have not been updated with respect to the proposed expansion. Accordingly, the details submitted in comparison statement should be verified and resubmitted clearly mentioning the existing parameters, proposed expansion and total capacity after expansion.
- v. Submit copy of authorisation of competent authority for Mr. Vinay Singh who attended the meeting on behalf of PP.
- vi. Provide details of landscape development including tree cutting and plantation proposed.
- vii. Capital cost for waste management is specified as nil (How about the cost for OWC?). Also, the capital cost for Environment Management is given as 100 lakhs in Form 2 and as 160 lakhs in Form 1A and presentation. Accordingly, verify and resubmit the environmental costs.
- viii. Clarify the project benefits.
- ix. Status of construction activity completed as per existing ECAs on date.
- x. Resubmit Form 1 and Form 1A with correct information.

AGENDA ITEM NO. 83.3.4

Proposed Integrated Educational Hub Project with built-up area of 61,399 sqm. at Pinarayi Village & Grama Panchayat, Thalassery Taluk, Kannur District, Kerala to be developed by M/s Institute of Human Resources Development (IHRD), Government of Kerala – Environmental Clearance

(IA/KL/MIS/258031/2022; F. No. 21-28/2022-IA-III)

1. The Project Proponent (M/s. Institute of Human Resources Development (IHRD), Government of Kerala) along with his consultant 'M/s Environmental Engineers & Consultants Pvt. Ltd.', made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Resurvey Nos. 2/1, 4/1 & 4/2, Pinarayi Village & Grama Panchayat, Thalassery Taluk, Kannur District, Kerala.
- ii. The project is new.

- iii. The total plot area is 52,326 sqm. (5.2326 ha.), FAR area is 37,675 sqm. (@ 0.72) and total construction (Built-up) areas 61,399 sqm. Integrated Educational Hub consists of Civil Services Academy (1000 students), State Institute of Hotel Management (660 students), IHRD College of Applied Science (1,100 students), Polytechnic (720 students), ITI (720 students), with supporting infrastructure facilities. The project will comprise of 10 buildings. Maximum height of the building is 30 m. The details of building are as follows:

S. No.	Name of Building	Profile	Built-up area (sqm.)
1.	Civil Services Academy	Level-1, Level-2, Ground + 3 floors	8,983
2.	State Institute of Hotel Management	Level-1, Level-2, Level-3, Ground + 4 floors	14,599
3.	Institute of Human Resources Development	LG + Ground + 3 floors	7,546
4.	Polytechnic	Basement + LG + Ground + 4 floors	11,202
5.	ITI	Basement + LG + Ground + 4 floors	11,202
6.	Auditorium (600 seats)	Ground Floor	4558
7.	Canteen Block (300 seats)	Ground + 1 floor	877
8.	Library	Ground Floor	641
9.	Campus facilitation centre & store	Ground + 1 floor	734
10.	Guest house (20 rooms)	Ground + 2 floors	1,057
Total			61,399

- iv. Application has been submitted for Environmental Clearance based on the Order issued by High Court of Kerala at Ernakulam [on writ petition W.P.(C) No. 3097 of 2016 (S)] dated 17.09.2020 and 23.11.2020, staying the amendment to the EIA Notification, 2006 dated 22.12.2014 (which provides exemption to educational institutions having built-up area \geq 20,000 sqm. and less than 1,50,000 sqm. from the requirement of prior EC).
- v. During construction phase, total water requirement is expected to be 55 KLD which will be met by recycled water from portable STP /stored rain water (tank) for construction purposes and well water/ Kerala Water Authority (KWA) supply for meeting the domestic water requirement expected to be 11 KLD. During the construction phase, portable STP will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labor force.
- vi. During operational phase, total water demand of the project is expected to be 321 KLD and the same will be met by 123 KLD fresh water from stored rain water tanks/pond/KWA/well water(3 nos. wells & a pond existing at site) and 198 KLD recycled water.

Wastewater generated (220 KLD) will be treated in STP of total 264 KLD capacity. 198 KLD of treated wastewater will be generated which will be completely recycled and re-used for flushing (153 KLD) and for gardening (45 KLD).

- vii. About 850 kg/daysolid waste will be generated in the project. The biodegradable waste (about 425 kg/day) will be processed in bio-bin facility and the non-biodegradable waste generated (about 425 kg/day) will be handed over to authorized local vendor. An area of about 200 sqm. is earmarked for storage of the non-biodegradable waste. The hazardous waste i.e., the used oil from D.G. sets, discarded oil filters and discarded batteries and stored separately and will be disposed to CPCB / SPCB authorized vendors.
- viii. There is one old structure (about 100 sqm. built-up area) located within the site and which is to be demolished.
- ix. The total power requirement during operation phase is 1,600 kW (connected load) and will be met from Kerala State Electricity Board (KSEB) & DG Sets (1,000 kVA x 3 nos.) as a standby power back up arrangement.
- x. Rooftop rainwater of buildings will be collected in RWH tanks of total capacity 250 KL (50 KL x 5 Nos) for harvesting after filtration.
- xi. Parking facility for 160 cars + 100 two wheelers is proposed to be provided against the requirement of 160 cars + 100 two wheelers respectively (according to local norms). Provision for charging for electrically operated vehicles (20%) is proposed in each parking floor.
- xii. On-grid solar power generation of 409 kWp is proposed which is about 26% of connected power load.
- xiii. Proposed energy saving measures would save about 35% of power.
- xiv. Total area for landscaping area proposed is 22,239 sqm. (about 43% of total plot area). 300 trees will be cut and at least 3,000 trees are proposed to be planted as part of green belt development.
- xv. The project is not located in Critically Polluted area.
- xvi. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xvii. Pinarayi village is not included in the list of Villages in ESA of the Western Ghats as per Appendix 3 of the report of the High Level Working Group (HLWG) on Western Ghats.
- xviii. Forest Clearance is not required.
- xix. No court case is pending against the project.
- xx. CRZ Clearance is not required.
- xxi. Expected timeline for completion of the project - About 36 months.
- xxii. Investment/Cost of the project is ₹140 Crores.
- xxiii. Employment potential - About 450 persons during operation phase.
- xxiv. Benefits of the project - Due to the development of proposed Integrated Educational Hub project, different types of the institutional/educational facilities will be developed within the project vicinity. Employment opportunity to the local population. There will be an increase in economic activities and employment for

the local community, local skills development. Due to the project, there will be increase in the revenue to the Government.

2. The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

3. *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity while considering for accord of environmental clearance:*

- i. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 123 KLD during operational phase.
- ii. As proposed, wastewater shall be treated in the onsite STP having total 264 KLD capacity. Atleast 198 KLD of treated water from the STP shall be recycled and re-used for flushing (153 KLD) and for gardening (45 KLD). There shall be no discharge of treated water outside the project premises, as committed.
- iii. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
- iv. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be 22,239 sqm. As proposed, at least 3,000 trees shall be maintained within the site during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm. of land should be planted and maintained. The existing trees will be counted for this purpose. Plantations to be ensured species (cut) to species (planted). 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.
- v. No tree can be felled/transplanted unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
- vi. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e., planting of 10 trees for every 1 tree that is cut) shall be done

- and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
- vii. 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. As proposed, RWH tank of 124 KL capacity shall be provided by PP for rain water harvesting after filtration.
 - viii. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste, as per SWM Rules, 2016. As committed, biodegradable waste shall be utilized through the Bio-Gas generation plant/bio-bin unit to be installed within the site. Inert waste shall be disposed off as per norms at authorized site. The recyclable waste shall be sold to authorized vendors/recyclers. Construction & Demolition (C&D) waste shall be segregated and managed as per C&D Waste Management Rules, 2016.
 - ix. 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. 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.
 - x. The PP shall provide electric charging points in parking areas for e-vehicles as committed.
 - xi. As committed, solar energy installation of 409 kWpcapacity to meet atleast26% of the total power requirement shall be implemented.
 - xii. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/clearances under any other Acts/Regulations or Statutes as applicable to the project.

AGENDA ITEM NO. 83.3.5

Proposed Institute of Medical Sciences and Multi-Specialty Hospital Project with ancillary facilities withtotal built-up area of 1,35,072 sqm. at Koovappady Village & Panchayath, Kunnathunadu Taluk, Ernakulam District, Kerala to be developed by M/s BMH Care Hospital Ltd. – Environmental Clearance

(IA/KL/MIS/257617/2022; F. No. 21-30/2022-IA-III)

1. The Project Proponent(M/s BMH Care Hospital Ltd.) along with his consultant 'M/s. Environmental Engineers & Consultants Pvt. Ltd.', made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Re-survey No. 225/2, 225/3-1, 225/2/2, 226/5/1/2, 226/5/1/3, 226/5/1/4, 226/5/1/1, 226/5/2, 189/1-2, 189/2, 224/4, 224/5, 397/1-2, 397/1-3, Koovappady Village & Panchayath, Kunnathunadu Taluk, Ernakulam District, Kerala.
- ii. The project is new.
- iii. The project was earlier accorded Environmental Clearance (EC) in the name of M/s Sree Narayana Gurukulam Charitable Trust by SEIAA, Kerala vide Order No. 54/SEIAA/KL/7582/2012 dated 23.05.2013, for a built-up area of 1,35,072 sqm. with 1050 beds and other facilities for the same location and for the same plot area. Construction activity for hospital building was carried out at the site with built-up area about 25,000 sqm. and currently there is no construction at site. The aforesaid EC expired on 23.05.2020. The instant proposal for Institute of Medical Sciences and Multi-Specialty Hospital project is on the same land use as earlier approved by SEIAA. Also this existing structure will be retained.
- iv. The total plot area is 80,393 sqm. and total construction (Built-up) area is 1,35,072 sqm. Maximum height of the building is 35 m. The details of building are as follows:

S. No.	Building Name	No. of Floors	Total Built-up Area (sqm.)
1.	Hospital Building (Block A)	B1, B2 + G + 8 Floors	40,917
2.	Hospital Building (Block B)	B1 + G + 9 Floors	18,800
3.	Hospital Building (Block C)	G + 8 Floors	17,400
4.	Hostel Block (Girls) 1000 Students	G + 6 Floors	10,110
5.	Hostel Block (Boys) 500 Students	G + 6 Floors	5,050
6.	Residential Building (A) 80 units	G + 5 Floors	12,950
7.	Residential Building (B) 100 Studio Apartments	G + 6 Floors	9,045
8.	Academy Block	B1, B2 + G + 7 Floors	20,800
Total			1,35,072

- v. During construction phase, total water requirement is expected to be 71 KLD which will be met by recycled water from portable STP / stored rain water (tank) for construction purposes and well water / Kerala Water Authority (KWA) supply for meeting the domestic water requirement expected to be 14 KLD. During the construction phase, portable STP will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labor force.
- vi. During operational phase, total water demand of the project is expected to be 788 KLD (and the same will be met by 360 KLD fresh water from stored rain water tank/KWA/well water and 428 KLD recycled water (416 KLD from STP + 12 KLD from ETP). Wastewater generated (462 KLD) will be treated in STP of total 555 KLD capacity. 416 KLD of treated wastewater from STP will be completely recycled and re-used for flushing(232 KLD), for gardening(32 KLD), for boiler (20 KLD) and for make-up water requirement for cooling towers attached with the HVAC system(132 KLD). About 13 KLD of wastewater generated from lab and laundry requirement will be treated in an ETP of 20 KLD capacity. About 12 KLD of treated water will be generated from the ETP, which will be completely recycled and reused for make-up water requirement for cooling towers attached with the HVAC system.
- vii. About 1,100 kg/day solid waste will be generated in the project. The biodegradable waste (550 kg/day) will be processed in bio-bin system and the non-biodegradable waste generated (550 kg/day) will be handed over to authorized local vendor. An area equivalent of about 275 sqm. for about 15 days storage of non-biodegradable waste would be provided. About 650 kg/day of Biomedical waste will be disposed-off through a Kerala State Pollution Control Board authorized agency (M/s Indian Medical Association Goes Eco Friendly, IMAGE). The hazardous waste i.e., the used oil from D.G. sets, discarded oil filters and discarded batteries and stored separately and will be disposed to CPCB / SPCB authorized vendors.
- viii. There are old temporary structures within the existing hospital campus which would be demolished.
- ix. The total power requirement during operation phase is 6,978 kW (connected load) and will be met from Kerala State Electricity Board (KSEB) & DG Sets(1,250 kVA x 4 nos. + 750 kVA x 4 nos.) as standby arrangement.
- x. Rooftop rainwater of buildings will be collected in RWH tanks of total 400 KL (50 KL x 8 no.) and pond having total 3 ML capacity.
- xi. Parking facility for 1,400 Cars + 1750 Two-wheelers + 4 ambulances is proposed to be provided against the requirement of 1,392 Cars + 1,747 two wheelers (according to local norms). Provision for charging for electrically operated vehicles (20%) is proposed in each parking floor.
- xii. On grid solar power generation of 1,250 kWp is proposed to meet about 18% of the total connected load.
- xiii. Proposed energy saving measures would save about 25% of power.

- xiv. The total excavated soil will be about 17,000 cu.m. The excavated earth of 8,000 cu.m. will be preserved for landscaping purposes and 6,000 cu.m. will be used for backfilling purposes, 3,000 cu.m. will be used for internal road construction purposes.
- xv. Total area for landscaping is about 30,000 sqm. 117 trees will be cut and it is proposed to plant about 2,174 tree species within the site & the project vicinity in consultation with the local authority.
- xvi. The project is not located in Critically Polluted area.
- xvii. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xviii. Koovappady village is not included in the list of Villages in ESA of the Western Ghats as per Appendix 3 of the report of the High Level Working Group (HLWG) on Western Ghats.
- xix. Forest Clearance is not required.
- xx. No court case is pending against the project.
- xxi. CRZ Clearance is not required.
- xxii. Expected timeline for completion of the project - About 60 months.
- xxiii. Investment/Cost of the project is ₹ 545 Crores.
- xxiv. Employment potential - About 800 persons during operation phase.
- xxv. Benefits of the project – The project would provide better health infrastructure & medical education facilities to the people. Direct and indirect employment opportunities; The potential for employment and access to new services may draw people to the area around the project. There will be an increase in economic activity and employment for the local community, local skills development. Employment opportunities generation and revenue to the State.

2. The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

3. *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, decided to defer the proposal and asked the project proponent to provide the following additional information:*

- i. Submit a copy of the land ownership documents in evidence of transfer of the property from M/s Sree Narayana Gurukulam Charitable Trust to M/s BMH Care Hospital Ltd.
- ii. Submit certified compliance report from concerned IRO with reference to the previous issued EC dated 23.05.2013.
- iii. Form 1 states that there is no structure/building existing at site, hence no demolition is required. However, it was presented that there are old temporary structures within the existing hospital campus which would be demolished. Clarify the same and submit details of demolition proposed, if any.

AGENDA ITEM NO. 83.3.6**Proposed Hospital Building with Multi Level Car Parking, with total built-up area of 39,640 Sqm. at Kasaba Village, Kozhikode Municipal Corporation, Kozhikode Taluk & District, Kerala by M/s Baby Memorial Hospital Ltd. – Environmental Clearance****(IA/KL/MIS/257643/2022 F. No. 21-29/2022-IA-III)**

1. The Project Proponent (M/s Baby Memorial Hospital Ltd.) along with his consultant 'M/s. Environmental Engineers & Consultants Pvt. Ltd.', made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Survey Nos. 1221/12, 1221/7, 1221/9, 1221/10, 1221/11, 1221/16, 99/1A (RS. 5/24/1223/2B1), 95/7 (RS. 5/24/1221/12 & 5/24/1221/7), Kasaba Village, Kozhikode Municipal Corporation, Kozhikode Taluk & District, Kerala.
- ii. The project is new.
- iii. The total plot area is 6,804 sqm. FAR (proposed) is 23,800 sqm. and total construction (Built-up) area is 39,640 sqm. The proposed project will comprise of 190 Bedded Hospital building with Multi Level Car Parking and supporting infrastructure facilities. The hospital shall be a standalone facility (separated from adjacent hospital) with separate entry and exit. Maximum height of the building is 38.55 m. The details of building are as follows:

Building Block	Max. No. of Floors	Max. Height (m)	Built-up area (sqm.)
Hospital	Basement 1, 2 + Ground + 10 floors	38.55	34,000
MLCP	Ground + 14 floors	31.60	5,640
Total			39,640

- iv. During construction phase, total water requirement is expected to be 48 KLD which will be met by recycled water from portable STP/stored rain water (tank) for construction purposes and well water/Kerala Water Authority (KWA) supply for meeting the domestic water requirement expected to be 7 KLD. During the construction phase, portable STP will be provided for disposal of wastewater. Temporary sanitary toilets will be provided during peak labor force.
- v. During operational phase, total water demand of the project is expected to be 138 KLD and the same will be met by 75 KLD fresh water from stored rain water tank/KWA/well water and 63 KLD recycled water (57 KLD from STP and 6 KLD from ETP). Wastewater generated (63 KLD) will be treated in STP of total 80 KLD capacity. 57 KLD of treated wastewater from STP will be completely recycled and

- re-used for flushing (40 KLD), for gardening (4 KLD), for boiler (8 KLD) and for make-up water requirement for cooling towers attached with the HVAC system (5 KLD). About 7 KLD of wastewater generated from lab and laundry requirement will be treated in an ETP of 10 KLD capacity. About 6 KLD of treated water will be generated from the ETP, which will be completely recycled and reused for make-up water requirement for cooling towers attached with the HVAC system.
- vi. About 300 kg/day solid waste will be generated in the project. The biodegradable waste(150 kg/day) will be processed in bio-bin system and the non-biodegradable waste generated (150 kg/day) will be handed over to authorized local vendor. An area equivalent of about 75 sqm. for about 15 days storage of non-biodegradable waste would be provided. Hazardous waste (used oil & discarded batteries attached to D.G. sets) will be stored in the designated services area and will be disposed to CPCB / SPCB authorized vendors. About 150 kg/day of Biomedical waste will be generated which will be disposed-off through Kerala State Pollution Control Board authorized agency (M/s Indian Medical Association Goes Eco Friendly, IMAGE).
 - vii. The use of unsealed radioisotopes regularly give rise to radioactive waste, which has to be disposed of in a responsible and safe manner. The waste includes disposable containers (vials, syringes etc.) partially decayed or surplus unsealed sources. The radioactive waste would be stored in a “Decay Room” and the radiation level checked through “Dose Calibrator”.All the radiation safety guidelines of Atomic Energy Regulatory Board (AERB) Bhabha Atomic Research Centre(BARC) with regard to the disposal of radioactive waste would be followed. A radiation safety officer will be employed to ensure the radiation safety guidelines.
 - viii. There are 3 old houses & a shed (with cumulative built-up area of about 125 sqm.) existing within the site and which will be demolished for the development of proposed site.The salvageable materials from the demolition debris would be recovered.The remaining demolition debris and the construction debris would be used for site preparatory works.
 - ix. The total excavated/soil/cutting of earth is about 6,660 cu.m. The excavated Topsoil (2,000 cu.m.) will be preserved for landscaping. The remaining excavated soil will be used for backfilling work (2,000 cu.m.) and internal road construction work (2,660 cu.m.).
 - x. The total power requirement during operation phase is 1,200 kW (connected load) and will be met from Kerala State Electricity Board (KSEB) & DG Sets (630 kVA x 3 nos.) as a standby power back up arrangement.
 - xi. Rooftop rainwater of buildings will be collected in RWH tanks of 200 KL total capacity for harvesting after filtration.
 - xii. Parking facility for 470 cars + 100 two wheelers is proposed to be provided against the requirement of 265 cars + 67 two wheelers (according to local norms). Provision for charging for electrically operated vehicles (20%) proposed in each parking floors.

- xiii. On grid solar power generation of 120 kWp is proposed to meet 10 % of the total connected load.
- xiv. Proposed energy saving measures would save about 20% of power.
- xv. Total area for landscaping proposed is about 2,000 sqm. (about 47% of the plot area). 25 trees will be cut and it is proposed to plant about 350 trees within the site.
- xvi. The project is not located in Critically Polluted area.
- xvii. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xviii. Kasaba village is not included in the list of Villages in ESA of the Western Ghats as per Appendix 3 of the report of the High Level Working Group (HLWG) on Western Ghats.
- xix. Forest Clearance is not required.
- xx. No court case is pending against the project.
- xxi. CRZ Clearance is not required.
- xxii. Expected timeline for completion of the project - About 36 months.
- xxiii. Investment/Cost of the project is ₹ 200 Crores.
- xxiv. Employment potential - About 700 persons.
- xxv. Benefits of the project – The project would provide better health infrastructure facilities to the people. Direct and indirect employment opportunities; The potential for employment and access to new services may draw people to the area around the project. There will be an increase in economic activity and employment for the local community, local skills development. Employment opportunities generation and revenue to the State.

2. The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

3. *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity while considering for accord of environmental clearance:*

- i. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 75 KLD during operational phase.
- ii. As proposed, wastewater shall be treated in an onsite STP of total 80 KLD capacity and ETP of 10 KLD capacity. Atleast 57 KLD of treated water from the STP and 6 KLD of treated water from the ETP shall be recycled and re-used for flushing (40 KLD), for gardening (4 KLD) and for boiler (8 KLD) and for make-up water requirement for cooling towers attached with the HVAC system (11 KLD). There shall be no discharge of treated water outside the project premises, as committed.

- iii. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
- iv. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be 2,000 sqm. As proposed, at least 350 trees shall be maintained within the site during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm. of land should be planted and maintained. The existing trees will be counted for this purpose. Plantations to be ensured species (cut) to species (planted). 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.
- v. No tree can be felled/transplanted unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
- vi. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e., planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
- vii. 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. As proposed, RWH tank of 200 KL capacity shall be provided by PP for rain water harvesting after filtration.
- viii. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste, as per SWM Rules, 2016. As committed, biodegradable waste shall be utilized through the Bio-Gas generation plant/bio-bin unit to be installed within the site. Inert waste shall be disposed off as per norms at authorized site. The recyclable waste shall be sold to authorized vendors/recyclers. Construction & Demolition (C&D) waste shall be segregated and managed as per C&D Waste Management Rules, 2016. Bio-medical wastes shall be disposed as per Bio-Medical Waste (Management & Handling) Rules, 2016. The radiation safety guidelines of Atomic Energy Regulatory Board (AERB) Bhabha Atomic Research Centre (BARC) with regard to the management and disposal of radioactive waste shall be followed.
- ix. The PP shall provide electric charging points in parking areas for e-

- vehicles as committed.
- x. As committed, solar energy installation of 120 kWp capacity to meet atleast 10% of the connected load shall be implemented.
 - xi. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/clearances under any other Acts/Regulations or Statutes as applicable to the project.

AGENDA ITEM NO. 83.3.7

Proposed building construction project consisting of a multiplex complex [Group J, KMBR, an integrated entertainment and shopping center, cinema hall with multi-cinema screens with seating capacity of 900 seats, food court with seating capacity of 200 seats & Multi Level Car Parking (MLCP)] with total built up area of 30,264.85 sqm. at Pathaikkara Village, Perinthalmanna Municipality, Perinthalmanna Taluk, Malappuram District, Kerala by M/s Secura Developers Pvt. Ltd. – Reconsideration for Environmental Clearance

(IA/KL/MIS/250216/2022; F. No. 21-131/2021-IA-III)

1. The EAC noted that the proposal was deferred in its 80th meeting held during 20-21st January, 2022 and the project proponent was asked to provide the following additional information:

- i. Submit the break-up of built-up area for the proposed project components along with building height details.
- ii. Clarify the quantity of solid waste generated in the project.

2. The Project Proponent (M/s. Secura Developers Pvt. Ltd.) along with his consultant 'M/s. Environmental Engineers & Consultants Pvt. Ltd.', made a presentation and provided the following information:

- i. The break-up of built-up area for the proposed project component along with building height of each component is given below:

Project Components	Max. No. of Floors	Max. Height (m)	Built-up area (sqm.)
Commercial Block	Basement + LG + UG + 1st floor to 4th floor + terrace	30	21,515
Multi-Level Car Parking(MLCP) Block	Ground + 4 floors	18	8,750
TOTAL			30,265

- ii. The quantity of solid waste generated in the project is expected to be 466 kg/day.

3. The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

4. *The EAC found that the response to the queries are satisfactory. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity while considering for accord of environmental clearance:*

- i. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 57 KLD during operational phase.
- ii. As proposed, wastewater shall be treated in the on-site STP having total 100KLD capacity. At least 69 KLD of treated water from the STP shall be recycled and re-used for flushing (60 KLD), for gardening (1KLD) and for cooling towers attached with the HVAC System (8 KLD). There shall be no discharge of treated water outside the project premises, as committed.
- iii. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
- iv. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be 1,103.84 sqm. As proposed, at least 421 trees shall be maintained within the site & the project vicinity in consultation with the local authority, during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm. of land should be planted and maintained. The existing trees will be counted for this purpose. Plantations to be ensured species (cut) to species (planted). 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.
- v. No tree can be felled/transplanted unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
- vi. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of

- 1:10 (i.e., planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
- vii. 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. As proposed, RWH tank of 124 KL capacity shall be provided by PP for rain water harvesting after filtration.
 - viii. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste, as per SWM Rules, 2016. As committed, biodegradable waste shall be utilized through the Bio-Gas generation plant/bio-bin unit to be installed within the site. Inert waste shall be disposed off as per norms at authorized site. The recyclable waste shall be sold to authorized vendors/recyclers. Construction & Demolition (C&D) waste shall be segregated and managed as per C&D Waste Management Rules, 2016.
 - ix. 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. 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.
 - x. The PP shall provide electric charging points in parking areas for e-vehicles as committed.
 - xi. As committed, solar energy installation of 268 kWpcapacity to meet atleast10.91% of the total power requirement shall be implemented.
 - xii. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/clearances under any other Acts/Regulations or Statutes as applicable to the project.

Consideration of Proposals on Day-II (2nd March, 2022): The EAC considered proposals as per the agenda adopted for Day-II of 83rd meeting. The details of deliberations held and decisions taken in the meeting are as under:

AGENDA ITEM NO. 83.4.1

Installation of a Common Hazardous Waste Incinerator of 500 kg/hr capacity in existing CBWTF facility located at UPSIDC, MG Road Industrial Area, Hapur, Uttar Pradesh by M/s Environ Waste Connections LLP – Environmental Clearance

(IA/UP/MIS/256774/2018; F. No. 21-31/2022-IA-III)

1. The Project Proponent (M/s. Environ Waste Connections LLP) along with his consultant 'M/s. Gaurang Environmental Solutions Pvt. Ltd.', made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Plot No. BN: 102-104, Phase-III, UPSIDC, MG Road Industrial Area, Tehsil Dhaulana, Hapur, Uttar Pradesh.
- ii. The project is an expansion case.
- iii. Earlier, the facility had obtained environmental clearance from SEIAA, Uttar Pradesh vide letter no. 713/Parya/SEAC/4134-4488/2018 dated 05.03.2019, for two BMW incinerators of capacities 300 kg/hr each, (one dry static incinerator and one rotary kiln incinerator). However, only the dry static incinerator has been installed and is operational. Now, the project proponent proposes to install one 500 kg/hr common hazardous waste incinerator (rotary kiln) in place of the 300 kg/hr BMW incinerator.
- iv. Certified compliance of the same has been obtained from MoEF&CC-IRO, Lucknow vide File No.-VII/Env/SCL-UP/2196/432 dated 21.12.2021. Action Taken Report has been submitted vide letter dated 28.12.2021.
- v. The project was issued standard Terms of Reference (ToR) by MoEF&CC, New Delhi vide letter no. 21-30/2021-IA-III dated 05.05.2021. The baseline data collection was done during pre-monsoon season (March-May 2021).
- vi. The proposed project is exempted from public hearing as per OM dated 16.05.2014, as the site is located in MG Road Industrial Area, Hapur.
- vii. The total plot area is 3,058.12 sqm. In place of a Rotary kiln based incinerator (BMW) of capacity 300 Kg/Hr (as per EC obtained earlier), a HW incinerator of capacity 500 Kg/Hr (rotary kiln based) will be installed for incineration of hazardous waste. The details of the proposed expansion are given as follows:

S. No.	Particulars	Existing	Proposed	Total
1.	Plot area	3058.12 sqm. (0.30 ha)	-	3058.12 sqm. (0.30 ha)

2.	Nature and Size of the Project	(CBWTF): <ul style="list-style-type: none"> • Dry static incinerator: 300 kg/hr • Rotary kiln incinerator: 300 kg/hr • Autoclave: 2 x 250 kg/hr • Shredder: 2 x 250 kg/hr • Ash pit: 1 no. • Sharp Pit: 1 no. 	(TSDF): <ul style="list-style-type: none"> • Rotary kiln based hazardous waste incinerator: 500 kg/hr 	<ul style="list-style-type: none"> • Dry static incinerator: 300 kg/hr (CBWTF) • Rotary kiln hazardous waste incinerator: 500 kg/hr (TSDF) • Autoclave: 2 x 250 kg/hr • Shredder: 2 x 250 kg/hr • Ash pit: 1 no. • Sharp Pit: 1 no.
3.	Project cost	₹ 5.50 Crore	₹ 10.0 Crore	₹ 15.50 Crore
4.	Cost of EMP			
	Capital cost	₹ 86.5 Lakh	₹ 165.5 Lakh	₹ 252 Lakh
	Recurring cost	₹ 25.8 Lakh	₹ 39.1Lakh	₹ 64.9 Lakh
5.	Water demand	10 KLD	5 KLD	15 KLD
	Source	Ground water		
6.	Wastewater generation	7.0	2.7	9.7
	Industrial effluent	5.5	2.5	8.0
	Domestic sewage	1.5	0.2	1.7
7.	ETP	10 KLD	-	10 KLD
8.	Modular STP	-	2.5 KLD	2.5 KLD
9.	Power demand &	125 kVA	-	125 kVA
	Source	Uttar Pradesh Power Corporation Limited (UPPCL)		
10.	Power Backup (DG set)	125 kVA	Existing DG will be replaced with 160 kVA	160 kVA
11.	Manpower	38 persons	8 persons	46 persons

- viii. The total daily water requirement of the project after the proposed expansion will be 15 KLD (existing 10 KLD + proposed 5 KLD). The total daily fresh water demand of 7 KLD will be met from ground water and 8 KLD treated water from ETP. NOC has been obtained from CGWA for groundwater abstraction. Effluent generation of 8 KLD is envisaged from scrubber, quenching, floor & vehicle washing & laboratory, which will be treated in the proposed MBBR based ETP of 10 KLD capacity. Domestic wastewater (1.7 KLD) will be treated in a modular STP of capacity 2.5 KLD. Treated water from STP and ETP will be completely recycled and reused for quenching & scrubbing water make-up, green belt and firefighting, container washing, floor & vehicle washing etc. The unit will maintain Zero Liquid Discharge (ZLD).
- ix. Municipal solid waste (approx. 2 Kg/day) will be collected, segregated using color coded bins and handed over to municipal waste collection system for final disposal to municipal corporation waste disposal site.

- x. Hazardous wastes generated at site like incinerator ash, ETP Sludge, used/spent oil etc. will be handled & stored as per Hazardous & Other Waste (Management and Trans boundary Movement) Rules, 2016 and will be disposed as per guidelines as follows:

S. No.	Hazardous Waste	Category	Disposal Method
1	ETP Sludge	35.3	Treatment in hazardous waste Incinerator
2	Sludge Salt generated from Spray quencher	37.1	Treatment in hazardous waste Incinerator
3	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	33.1	Send to authorized recycler
4	Contaminated cotton rags or other cleaning material	33.2	Treatment in hazardous waste Incinerator
5	Ash from incinerator and flue gas cleaning residue	37.2	Send to authorized TSDF Site
6	Used oil or spent oil	5.1	Send to authorized recycler
7	Wastes or residues containing oil	5.2	Send to authorized recycler

- xi. The power requirement for project after expansion will be 125 kVA and will be sourced from Uttar Pradesh Power Corporation Limited (UPPCL). Power back-up will be provided through 1 No of DG Set of capacity 160 kVA to be used only in case of power failure.
- xii. A 5 kW grid tied roof mounted Solar Photovoltaic Power Plant (SPVPP) for solar power generation is proposed.
- xiii. 01 nos underground rain water collection tank (3m x 3m x 3m) will be constructed for rain water harvesting.
- xiv. The existing green belt has been done over an area of 1,216.46 sqm. (12%). Additional 810.98 sqm. (8%) of open area will be used for green belt development and (13%) plantation will be done outside the project boundary (along with boundary wall, both side of front road, divider of front road etc.). Thus, the total land area in the green belt will be 2,027.44 Sq. m. (20%) after proposed expansion. Green area proposed is 550.93 sqm. (18.02%). Total 1,500 trees will be planted in the core as well as buffer zone. 138 trees are proposed within the plant boundary, out of which 131 trees have already been planted. Remaining 1,369 nos. of trees will be planted in the buffer zone.
- xv. The project is not located in Critically Polluted area.
- xvi. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xvii. Forest Clearance is not required.
- xviii. CRZ Clearance is not required.
- xix. There is one litigation on the project vide case no. MISC. BENCH No. - 10505 of 2021 at Lucknow

- xx. Investment/Cost of the project - The total estimated Capital Cost of the project is ₹15.50 Crore (existing ₹5.50 Crore + Proposed ₹10.0 Crore).
- xxi. Employment potential: About 46 persons.
- xxii. Benefits of the project: The proposed project will enable industries to dispose off their Hazardous waste, which can't be treated by their existing in-house infrastructure, in a scientific manner. Hence, availing the service of the proposed HW incinerator would help the industries to be more compliant from the environmental regulatory standpoint. In addition to the employment generation, the project will also generate associated indirect livelihood for the local population through ancillary activities like material supply during construction, etc. Adequate funds shall be allocated to implement environment management plan including the funds to support and improve the socio-economic conditions of the surrounding population.

2. The EAC noted that the project/activity is covered under category 'A' of item 7(d) 'Common hazardous waste treatment, storage and disposal facilities (TSDFs)' as well as category 'B' of item 7(da) 'Bio-Medical Waste Treatment Facilities' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at Central level by sectoral EAC.

3. *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, decided to defer the proposal and asked the project proponent to provide the following additional information:*

- i. It is observed that the PP has not mentioned the pending litigation in the online application submitted vide Form-2 on Parivesh Portal. Submit the details of pending litigation along with all relevant orders and documents.
- ii. Discrepancies were noted in the green belt development details submitted in EIA Report. Also, atleast 33% of the project area shall be considered for development of green belt with dense plantation using appropriate techniques in consultation with the forest department/horticulture department/experts/consultants etc., to counter air pollution. Accordingly, revised green belt development plan shall be submitted with revised layout specifying the area for proposed plantation.
- iii. Submit revised EMP budget considering the proposed changes.

AGENDA ITEM NO. 83.4.2

Installation of Common Hazardous Waste Incinerator of capacity 10 MT/day at Plot No. D-26, UPSIDC, Sikandrabad Industrial Area, District Bulandshahr, Uttar Pradesh by M/s Sheetala Waste Management – Amendment in Environmental Clearance

(IA/UP/MIS/256070/2022; F. No. 21-26/2022-IA-III)

1. The Project Proponent (M/s Sheetala Waste Management) along with his consultant 'M/s Gaurang Environmental Solutions Pvt. Ltd.', made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located in notified industrial area at Plot No. D-26, UPSIDC, Sikandrabad Industrial Area, District Bulandshahr, Uttar Pradesh.
- ii. The proposal is for Amendment in Environmental Clearance issued by MoEF&CC vide letter F. No. 10-84/2018-IA-III dated 07.02.2020 for hazardous waste incinerator (10 MT/day), E-waste dismantling & segregation (10 MT/day) and recycling of discarded containers (10 MT/day).
- iii. Consent to Establish was obtained from Uttar Pradesh State Pollution Control Board (UPPCB) vide letter no 93419 / UPPCB / Bulandshahar (UPPCBRO) /CTE/BULANDBSHAHAR/2020 dated 25.04.2020.
- iv. Subsequently, it was decided to dedicate the project premises only for Common Hazardous Waste Incineration Facility of capacity 10 TPD and obtained Consent to Operate from UPPCB vide letter 94542/UPPCB/Bulandshahar(LAB)/CTO/air/BULANDBSHAHAR/2020 dated 01.01.2021 for only the hazardous waste incinerator.
- v. No E-Waste dismantling & segregation &/or refurbishing/reconditioning of discarded containers/drums has been done in the project premises.
- vi. Subsequently, the MoEF&CC, vide its letter no 10-84/2018-IA-III dated 24.01.2022, directed the company to obtain amendment in Environmental Clearance for revision in the project configuration.
- vii. Accordingly, amendment in existing EC has been sought w.r.t the Project configuration i.e. only Common Hazardous Waste Incineration Facility (10 TPD) shall be operated in the project premises. Details are as below:

Component	Details as per EC dated 07.02.2020	Details of Amendment sought	Remarks
Area	1857 sqm.	1857 sqm.	No change
Plot no	Plot No. D- 26	Plot No. D- 26	No change
Common Hazardous Waste Incinerator	10 TPD	10 TPD	No change
E-Waste dismantling & segregation activity	10 TPD	0 TPD	Removal of activity from project configuration

Discarded container recycling/refurbishing activity	10 TPD	0 TPD	Removal of activity from project configuration
---	--------	-------	--

- viii. The remaining project configuration shall remain same as per existing Environmental Clearance and no other change in project details is proposed except for removal of E-Waste dismantling & segregation activity and discarded container recycling/refurbishing activity from project configuration.
- ix. The salient features of the project are as follows:

S. No.	Particulars	Description
A	General Information	
1	Nature of Project	Common Hazardous Waste Incineration Facility of capacity 10 TPD
2	Location	Plot No. D-26, Sikandrabad Industrial Area, District Bulandshahr, Uttar Pradesh.
3	Plot area	1857 sqm.
4	Capital Cost of the project	₹ 2.0 Crore
B	Basic Requirements of the Project	
1	Water demand	Total Water Demand: 7.0 KLD Daily fresh water demand: 4.0KLD Treated water demand (ETP): 3.0 KLD Source: Tanker supply
2	Power requirement	100 KW Source: UPPCL
3	Power backup	DG Set 125 KVA: 1 nos. 15 kVA: 1 nos
4	Employment potential	Operation phase: 15

- x. Authorization under HoW Rules, 2016 was also obtained from UPPCB vide letter 13443 / UPPCB / Bulandshahar (UPPCBRO) / HWM / BULAND SHAHAR / 2020 dated 08.01.2021 valid upto 06.01.2026.

2. The EAC noted that the project/activity is covered under category 'A' of item 7(d) 'Common hazardous waste treatment, storage and disposal facilities (TSDFs)' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at Central level by sectoral EAC.

3. The EAC noted that the project was issued Show Cause Notice by MoEF&CC vide F.No. 10-84/2018-IA-III dated 06.05.2021 (for concealing the facts from MoEF&CC in the process of appraisal with regard to land area required for the three activities and based on which EC was granted), to which the PP submitted his response vide letter dated 20.05.2021. An

appeal was also filed in the Hon'ble NGT against grant of EC to M/s Sheetal Waste Management on the grounds that there are mis-declarations in the application for EC and that the plot area is too small to meet the statutory requirements. The Hon'ble NGT vide its order dated 25.08.2020, declined the application stating that no case is made out for quashing the EC or CTE and instructed UPPCB to conduct a site visit and take remedial action if there is any deficiency, within 2 months. Thereafter, the matter was considered in the Ministry and PP was directed vide letter no 10-84/2018-IA-III dated 24.01.2022 to seek amendment in Environmental Clearance for revision in the project configuration. It is also noted that EC granted vide vide F.No. 10-84/2018-IA-III dated 07.02.2020 has been suspended until the said amendment is duly approved.

4. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended amending the environmental clearance granted vide vide F.No. 10-84/2018-IA-III dated 07.02.2020, to the extent of project parameters as mentioned in table under para 4(vii) and 4(ix) above. All other conditions, as specified in the aforesaid EC shall remain unchanged.

AGENDA ITEM NO. 83.4.3

Proposed Commercial Complex Project with built-up area of 38,070 sqm. at Chowannur Village, Kunnamkulam Municipality, Kunnamkulam Taluk, Thrissur District, Kerala to be developed by M/s HiLITE Builders Pvt. Ltd. –Environmental Clearance

(IA/KL/MIS/257502/2022; F. No. 21-32/2022-IA-III)

1. The Project Proponent (M/s HiLITE Builders Pvt. Ltd.) along with his consultant 'M/s. Environmental Engineers & Consultants Pvt. Ltd.', made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Survey No. 107, Chowannur Village, Kunnamkulam Municipality, Kunnamkulam Taluk, Thrissur District, Kerala.
- ii. The project is new.
- iii. The total plot area is 12,141.73 sqm. FAR (proposed) is 23,676.37 sqm. and total construction (Built-up) area is 38,070 sqm. The project will comprise of 1 building. Total Nil of flats shall be developed. Maximum height of the building is 30 m. The details of buildings are as follows:

Name of Building	Max. no. of floors	Max. height (m)	Built-up area (sqm.)
Commercial Building	Basement+ LG + UG+ 3 Floors	30	38,070

- iv. During construction phase, total water requirement is expected to be 35 KLD which will be met by recycled water from portable STP/stored rain water (tank) for construction purposes and well water/Kerala Water Authority (KWA) supply for meeting the domestic water requirement expected to be 11 KLD. During the construction phase, portable STP will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labor force.
- v. During operational phase, total water demand of the project is expected to be 185 and the same will be met by 68 KLD fresh water from stored rain water tanks/KWA/Well water and 117 KLD recycled water. Wastewater generated (130 KLD) will be treated in STP of total 160 KLD capacity. 117 KLD of treated wastewater will be generated which will be completely recycled and re-used for flushing (99 KLD), for gardening (3 KLD) and for HVAC plant make-up requirement (15 KLD).
- vi. About 850 kg/daysolid waste will be generated in the project. The biodegradable waste (425 kg/day) will be processed in bio-bin facility and the non-biodegradable waste generated (425 kg/day) will be handed over to authorized local vendor. Hazardous waste i.e., the used oil from D.G. sets, discarded oil filters and discarded batteries and stored separately and will be disposed to CPCB/SPCB authorized vendors.
- vii. The total power requirement during operation phase is 2,727 kW (connected load) and will be met from Kerala State Electricity Board (KSEB) & DG Sets (1,000 kVA x 3 nos.) as a standby power back up arrangement.
- viii. Rooftop rainwater of buildings will be collected in RWH tank of 100 KL total capacity for harvesting after filtration.
- ix. Parking facility for 474 cars + 150 two wheelers is proposed to be provided against the requirement of 474 cars + 150 two wheelers respectively (according to local norms).
- x. The total estimated excavation of the earth is 30,000 cu.m. The excavated earth of 2,000 cu.m. will be preserved for landscaping purposes, 2,000 cu.m. will be used for backfilling purposes, 1,000 cu.m. will be used for internal road construction. The remaining excess excavated earth (about 25,000 cu.m.) will be stored outside the project site in the land bank of the project proponent in the vicinity.
- xi. On-grid solar power generation of 288 kWp is proposed to meet 10.56% of connected power load. Proposed energy saving measures would save about 22 % of power.
- xii. Total area for landscaping area proposed is about 930 sqm. (about 8% of total plot area). 200 trees will be cut and 2,152 trees are proposed for plantation, of which, more than 200 trees would be planted within

- the site and the remaining 1,952 trees would be planted in consultation with Social Forestry Department and the local body, in the public places and in parks.
- xiii. The project is not located in Critically Polluted area.
 - xiv. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
 - xv. Chowannur village is not included in the list of Villages in ESA of the Western Ghats as per Appendix 3 of the report of the High Level Working Group (HLWG) on Western Ghats.
 - xvi. Forest Clearance is not required.
 - xvii. No court case is pending against the project.
 - xviii. CRZ Clearance is not required.
 - xix. Expected timeline for completion of the project - About 36 months from the date of start of construction.
 - xx. Investment/Cost of the project is ₹180 Crores.
 - xxi. Employment potential – About 700 persons.
 - xxii. Benefits of the project – Employment opportunities & revenue to the State. The Proposed Commercial Complex Project would provide better commercial facilities with some jobs facilities to the local population with supporting infrastructure facilities.

2. The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

3. *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, decided to defer the proposal and asked the project proponent to provide the following additional information:*

- i. Maximum height of the building is specified as 50 m in Form 1A and Form 2 and as 30 m in the presentation. Clarify and correct the same.
- ii. Clarify the discrepancies in details of excavated earth generated in the project.
- iii. Clarify the requirement of landscaping area/green area required for the project as per KMBR and submit revised layout accordingly.

AGENDA ITEM NO. 83.4.4

Proposed Commercial Complex project with built-up area of 67,690 sqm. at Kumaramputhur Village & Panchayat, Mannarkkad Taluk, Palakkad District, Kerala to be developed by M/s HiLITE Properties Private Ltd. – Environmental Clearance

(IA/KL/MIS/254534/2022; F. No. 21-33/2022-IA-III)

1. The Project Proponent (M/s HiLITE Properties Private Ltd.) along with his consultant 'M/s. Environmental Engineers & Consultants Pvt. Ltd.', made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Survey Nos. 50/2, 3, 5, 49/1B, 7, 9, 3, 52/1, Kumaramputhur Village & Panchayat, Mannarkkad Taluk, Palakkad District, Kerala.
- ii. The project is new.
- iii. The total plot area is 29,717 sqm., FAR area (achieved) is 63,230 sqm. and total construction (Built-up) area is 67,690 sqm. The project will comprise of 3 Buildings. Retail Shopping area, Multiplex (1500 seats), Food court/Restaurant (700 seats)/Auditorium/Assembly hall (1500 Seats) and Multi Level Car Parking. Maximum height of the building is 50 m. The details of building are as follows:

Building Block Name	Max No. of Floors	Built-up area (sqm.)
Tower 1 : Commercial building	B+LG+G+2 floors	49,870
Tower 2 : Auditorium	B + Ground floor	9,250
Tower 3: MLCP (Multi Level Car Parking)	G + 4 floors	8,570
Total		67,690

- iv. During construction phase, total water requirement is expected to be 62 KLD which will be met by recycled water from portable STP / stored rain water (tank) for construction purposes and well water / Kerala Water Authority (KWA) supply for meeting the domestic water requirement expected to be 11 KLD. During the construction phase, portable STP will be provided for disposal of wastewater. Temporary sanitary toilets will be provided during peak labor force.
- v. During operational phase, total water demand of the project is expected to be 310 KLD and the same will be met by 126 KLD fresh water from stored rain water tanks / KWA / well water and 184 KLD recycled water. Wastewater generated (204 KLD) will be treated in STP of total 250 KLD capacity. 184 KLD of treated wastewater will be generated which will be completely recycled and reused for flushing (154 KLD), for gardening (1 KLD) and for cooling towers attached with the HVAC system (29 KLD).
- vi. About 1,310 kg/day solid waste will be generated in the project. The biodegradable waste (655 kg/day) will be processed in bio-bin unit and the non-biodegradable waste generated (655 kg/day) will be handed over to authorized local vendor. An area of about 325 sqm. is earmarked for storage of the non-biodegradable waste. Hazardous waste i.e., the used oil from D.G. sets, discarded oil filters and discarded batteries and stored separately and will be disposed to CPCB/SPCB authorized vendors.

- vii. The total power requirement during operation phase is 3,600 kW (connected load) and will be met from Kerala State Electricity Board (KSEB) & DG Sets (1500 kVA x 3. nos.) as a standby power back up arrangement.
- viii. Rooftop rainwater of buildings will be collected in RWH tanks of 132 KL for Tower 1 and 50 KL for Tower 2 for harvesting after filtration.
- ix. Parking facility for 1050 cars + 520 two wheelers is proposed to be provided against the requirement of 850 cars + 450 two wheelers respectively (according to local norms).
- x. Solar power generation of 365 kWp is proposed which is about 10.14% of connected power load. Proposed energy saving measures would save about 20% of power.
- xi. The total excavated soil is about 32,800 cu.m. The excavated earth of 600 cu.m. will be preserved for landscaping purposes and 1,300 cu.m. will be used for backfilling purposes, 900 cu.m. will be used for internal road construction purposes. The remaining excess excavated earth of about 30,000 cu.m. will be stored in own land located within 20kms and will be used for backfilling non-wetland and NH966 (Kozhikode – Palakkad) High way work is going to start.
- xii. Total area for landscaping proposed is 950 sqm. (about 4% of total plot area). There will be clearance of about 2025 trees (Predominantly Rubber and different varieties of shrubs, herbs, grass & climbers) for the development of proposed site and remaining trees will be transplanted/retained. It is proposed to plant 5,000 trees, which consists of 500 trees within the site & 4,500 trees within the project vicinity (in public places) in consultation with the local self-government & Social Forestry Department.
- xiii. The project is not located in Critically Polluted area.
- xiv. Kumaramputhur village is not included in the list of Villages in ESA of the Western Ghats as per Appendix 3 of the report of the High Level Working Group (HLWG) on Western Ghats.
- xv. Silent Valley National Park is located at 7 km(N). An application for obtaining Wildlife Clearance has been submitted vide Proposal No. FP/KL/Others/6218/2022 dated 02.02.2022.
- xvi. Forest Clearance is not required.
- xvii. No court case is pending against the project.
- xviii. CRZ Clearance is not required.
- xix. Expected timeline for completion of the project - About 42 months.
- xx. Investment/Cost of the project is ₹75 Crores.
- xxi. Employment potential - About 1100 persons.
- xxii. Benefits of the project –The project would provide better commercial retail shopping area with supporting infrastructure facilities and amenities to the people. Direct and indirect employment opportunities; The potential for employment and access to new services may draw people to the area around the project. There will be an increase in economic activity and employment for the local community, local skills development. Employment opportunities generation and revenue to the State.

2. The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

3. *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, decided to defer the proposal and asked the project proponent to provide the following additional information:*

- i. Clarify the discrepancies in building height and no. of floors in each building as provided in Form 1A, Form 2 and presentation.
- ii. Clarify the requirement of landscaping area/green area required for the project as per KMBR and consider increasing the green area for the project accordingly. Submit revised landscaping details and layout specifying the number of existing trees and tree cutting/transplantation/plantation proposed.

AGENDA ITEM NO. 83.4.5

Proposed expansion of existing Hospital project with increase in built-up area from 23,421.68 sqm. to 30,370.28 sqm. at Chembilode Village & Panchayat, Kannur Taluk & District, Kerala by M/s Malabar Institute of Medical Sciences Ltd. - Reconsideration for Environmental Clearance

(IA/KL/MIS/250024/2022; F. No. 21-2/2022-IA-III)

1. The EAC noted that the proposal was deferred in its 81st meeting held on 31st January, 2022 and the project proponent was asked to provide the following additional information:

- i. Submit the details of existing trees as well as tree cutting and transplantation.
- ii. Submit the details of radioactive waste generated from the project and its management including its handling, storage and disposal.

2. The Project Proponent (M/s. Malabar Institute of Medical Sciences Ltd.) along with his consultant 'M/s. Environmental Engineers & Consultants Pvt. Ltd.', made a presentation and provided the following information:

- i. The proposed project is expansion of existing hospital complex project with additional supporting infrastructure facilities. The details of existing trees as well as tree cutting and transplantation areas given below:

Details of trees existing at site	There is no tree existing at site where the proposed new hospital building needs to
-----------------------------------	---

	be constructed. The greenery seen in the latest satellite image is banana plantation, which is in herb category. The satellite image showing the site prior and during banana plantation has been submitted.
No. of trees required to be cut	Nil
Details of transplantation of trees	Nil

- ii. The use of unsealed radioisotopes regularly give rise to radioactive waste, which has to be disposed of in a responsible and safe manner. The waste includes disposable containers (vials, syringes etc.) partially decayed or surplus unsealed sources. The radioactive waste would be stored in a “Decay Room” and the radiation level checked through “Dose Calibrator”. All the radiation safety guidelines of Atomic Energy Regulatory Board (AERB) Bhabha Atomic Research Centre (BARC) with regard to the disposal of radioactive waste would be followed. A radiation safety officer will be employed to ensure the radiation safety guidelines.

3. The EAC noted that the project/activity is covered under category ‘B’ of item 8(a) ‘Building and Construction projects’ of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

4. *The EAC found that the response to the queries are satisfactory. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity while considering for accord of environmental clearance:*

- i. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 147 KLD during operational phase.
- ii. As proposed, wastewater shall be treated in an onsite STP of total 200 KLD capacity. At least 146 KLD of treated water from the STP shall be recycled and re-used for flushing (104 KLD), for horticulture (1 KLD), for boiler (15 KLD), and for make-up water requirement for cooling towers attached with the HVAC System (26 KLD). There shall be no discharge of treated water outside the project premises, as committed.
- iii. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial

- counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
- iv. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be 558 sqm. As proposed, at least 230 trees shall be maintained within the site during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm. of land should be planted and maintained. The existing trees will be counted for this purpose. Plantations to be ensured species (cut) to species (planted). 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.
 - v. 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. As proposed, RWH tank of total 118 KL capacity shall be provided for rain water harvesting after filtration.
 - vi. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste, as per SWM Rules, 2016. As committed, biodegradable waste shall be utilized through the Bio-Gas generation plant/bio-bin unit to be installed within the site. Inert waste shall be disposed off as per norms at authorized site. The recyclable waste shall be sold to authorized vendors/recyclers. Construction & Demolition (C&D) waste shall be segregated and managed as per C&D Waste Management Rules, 2016. Bio-medical wastes shall be disposed as per Bio-Medical Waste (Management & Handling) Rules, 2016. The radiation safety guidelines of Atomic Energy Regulatory Board (AERB) Bhabha Atomic Research Centre (BARC) with regard to the management and disposal of radioactive waste shall be followed.
 - vii. 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. 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.
 - viii. The PP shall provide electric charging points in parking areas for e-vehicles as committed.
 - ix. As committed, solar energy installation of 267.5kWp capacity to meet 10 % of the connected load shall be implemented.

- x. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/clearances under any other Acts/Regulations or Statutes as applicable to the project.

AGENDA ITEM NO. 83.4.6

Proposed apartment cum villas project with total built up area of 68,830 Sqm. at Cheruvakkal Village, Thiruvananthapuram Municipal Corporation, Thiruvananthapuram Taluk & District, Kerala by M/s MOR Realtors – Reconsideration for Environmental Clearance

(IA/KL/MIS/250693/2022; F. No. 21-129/2021-IA-III)

1. The EAC noted that the proposal was deferred in its 80th meeting held during 20-21st January, 2022 and the project proponent was asked to provide the following additional information:

- i. Submit the break-up of built-up area for the proposed project components and clarify the maximum building height.

2. The Project Proponent (M/s MOR Realtors) along with his consultant 'M/s. Environmental Engineers & Consultants Pvt. Ltd.', made a presentation and provided the following information:

- i. The break-up of built-up area for the proposed project component along with maximum building height of each component is given below:

Project Components	Max. No. of Floors	Max. Height (m)	Built-up area (sqm.)
100 Villas	G + 1 floor	7	23,320
Apartments (3 towers)	LG+UG+G1+G2+15 floors	57	43,510
Club house	G+2	11	2,000
Total			68,830

3. The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

4. *The EAC found that the response to the queries are satisfactory. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified*

by the Ministry vide OM dated 4th January, 2019 for the said project/ activity while considering for accord of environmental clearance:

- i. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 192 KLD during operational phase.
- ii. As proposed, wastewater shall be treated in an onsite STP of total 275 KLD capacity. At least 156 KLD of treated water from the STP shall be recycled and re-used for flushing (96 KLD) and for gardening (60 KLD). Excess treated water from STP (51 KLD) shall be utilised as proposed. PP shall submit MoU for the disposal of excess treated water (outside the site) to the Regional Office of MoEF&CC along with six-monthly compliance report.
- iii. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
- iv. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be 20,000 sqm. (about 41% of total plot area). As proposed, at least 866 trees shall be maintained within the site & the project vicinity in consultation with the local authority, during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm. of land should be planted and maintained. The existing trees will be counted for this purpose. Plantations to be ensured species (cut) to species (planted). 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.
- v. No tree can be felled/transplanted unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
- vi. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e., planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
- vii. 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. As proposed, RWH tank of 75KL capacity for each multistoried apartment tower (i.e. 75 X

- 3 = 225 KL) and 10 KL for each villa shall be provided by PP for rain water harvesting after filtration.
- viii. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste, as per SWM Rules, 2016. As committed, biodegradable waste shall be utilized through the Bio-Gas generation plant/bio-bin unit to be installed within the site. Inert waste shall be disposed off as per norms at authorized site. The recyclable waste shall be sold to authorized vendors/recyclers. Construction & Demolition (C&D) waste shall be segregated and managed as per C&D Waste Management Rules, 2016.
- ix. The PP shall provide electric charging points in parking areas for e-vehicles as committed.
- x. As committed, solar energy installation of 260kWp capacity to meet 10.4% of the connected load shall be implemented.
- xi. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/clearances under any other Acts/Regulations or Statutes as applicable to the project.

LIST OF PARTICIPANTS OF EAC (INFRASTRUCTURE-2) IN 83rd MEETING OF EAC (INFRA-2) HELD DURING 28th FEBRUARY & 2nd MARCH, 2022 THROUGH VIDEO CONFERENCING

S. No.	Name	Designation	Attendance		Sign
			28.02.2022	02.03.2022	Through VC
1.	Dr. N. P. Shukla	Chairman	P	A	-
2.	Dr. H. C. Sharatchandra	Member	P	P	-
3.	Shri V. Suresh	Member	P	P	-
4.	Dr. V. S. Naidu	Member	P	P	-
5.	Shri B. C. Nigam	Member	P	P	-
6.	Dr. Manoranjan Hota	Member	P	P	-
7.	Dr. Dipankar Saha	Member	P	P	-
8.	Dr. Jayesh Ruparelia	Member	P	P	-
9.	Dr. (Mrs.) Mayuri H. Pandya	Member	A	A	-
10.	Dr. M. V. Ramana Murthy	Member	A	A	-
11.	Prof. Dr. P.S.N. Rao	Member	A	A	-
12.	Dr. Dharmendra Kumar Gupta	Scientist "F"& Member Secretary	P	P	-

ANNEXURE-1

Standard EC Conditions for Project/Activity 7(a): Airport

I. Statutory compliance:

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).
- iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi. Clearance from Directorate General of Civil Aviation (DGCA) and Airports Authority of India (AAI) for safety and project facilities shall be obtained.
- vii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- viii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.

II. Air quality monitoring and preservation:

- i. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the airport area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions.
- ii. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- iii. 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. 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.
- iv. Soil and other construction materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet
- v. The excavation working area should be sprayed with water after operation so as to maintain the entire surface wet.
- vi. Excavated materials shall be handled and transported in a manner that they do not cause any problems of air pollution.
- vii. The soil/construction materials carried by the vehicle should be covered by impervious sheeting to ensure that the dusty materials do not leak from the vehicle.

III. Water quality monitoring and preservation:

- i. Run off from chemicals and other contaminants from aircraft maintenance and other areas within the airport shall be suitably contained and treated before disposal. A spillage and contaminant containment plan shall be drawn up and implemented to the satisfaction of the State Pollution Control Board.
- ii. Proper drainage systems, emergency containment in the event of a major spill during monsoon season etc. shall be provided.

- iii. The runoff from paved structures like Runways, Taxiways, can be routed through drains to oil separation tanks and sedimentation basins before being discharged into rainwater harvesting structures.
- iv. Storm water drains are to be built for discharging storm water from the air-field to avoid flooding/water logging in project area. Domestic and industrial waste water shall not be allowed to be discharged into storm water drains.
- v. Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Rain water harvesting structures shall conform to CGWA designs. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.
- vi. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- vii. Sewage Treatment Plant shall be provided to treat the wastewater generated from airport. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression
- viii. A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.
- ix. A detailed drainage plan for rain water shall be drawn up and implemented.

IV. Noise monitoring and prevention:

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment's.
- iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.
- iv. During airport operation period, noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- v. Where construction activity is likely to cause noise nuisance to nearby residents, restrict operation hours between 7 am to 6 pm.

V. Energy Conservation measures:

- i. Energy conservation measures like installation of LED/CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.

VI. Waste management:

- i. Soil stockpile shall be managed in such a manner that dust emission and sediment runoff are minimized. Ensure that soil stockpiles are designed with no slope greater than 2:1 (horizontal/vertical).
- ii. The project activity shall conform to the Fly Ash notification issued under the E.P. Act of 1986.
- iii. Solid inert waste found on construction sites consists of building rubble, demolition material, concrete; bricks, timber, plastic, glass, metals, bitumen etc shall be reused/recycled or disposed off as per Solid Waste Management Rules, 2016 and Construction and Demolition Waste Management Rules, 2016.
- iv. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
- v. The project proponents shall implement a management plan duly approved by the State Pollution Control Board and obtain its permissions for the safe handling and disposal of:
 - a. Trash collected in flight and disposed at the airport including segregation, collection and disposed.
 - b. Toilet wastes and sewage collected from aircrafts and disposed at the Airport.
 - c. Wastes arising out of maintenance and workshops
 - d. Wastes arising out of eateries and shops situated inside the airport complex.
 - e. Hazardous and other wastes
- vi. The solid wastes shall be segregated as per the norms of the Solid Waste Management Rules, 2016. Recycling of wastes such as paper, glass (produced from terminals and aircraft caterers), metal (at aircraft maintenance site), plastics (from aircrafts, terminals and offices), wood, waste oil and solvents (from maintenance and engineering operations), kitchen wastes and vegetable oils (from caterers) shall be carried out. Solid wastes shall be disposed in accordance to the Solid Waste Management Rules, 2016 as amended.

- vii. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- viii. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

VII. Green Belt:

- i. Green belt shall be developed in area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the Air Port.
- ii. Top soil shall be separately stored and used in the development of green belt.

VIII. Public hearing and Human health issues:

- i. Construction site should be adequately barricaded before the construction begins.
- ii. Traffic congestion near the entry and exit points from the roads adjoining the airport shall be avoided. Parking should be fully internalized and no public space should be utilized.
- iii. Provision of Electro-mechanical doors for toilets meant for disabled passengers. Children nursing/feeding room to be located conveniently near arrival and departure gates.
- iv. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- v. 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- vi. Occupational health surveillance of the workers shall be done on a regular basis.

IX. Miscellaneous:

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholder's / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- x. The criteria pollutant levels namely; PM₁₀, PM_{2.5}, SO₂, NO_x (ambient levels) shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- xi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

- xii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xiii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xiv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xv. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xvi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xvii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xviii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- xix. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts/NGT and any other Court of Law relating to the subject matter.
- xx. Any appeal against this EC 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-2

Standard EC Conditions for Project/Activity 7(d): Common hazardous waste treatment, storage and disposal facilities (TSDFs)

I. Statutory compliance:

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- v. The Project proponent should ensure that the TSDF fulfils all the provisions of Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016.
- vi. The project proponents shall adhere to all conditions as prescribed in the Protocol for 'Performance Evaluation and Monitoring of the Common Hazardous waste treatment, storage and disposal facilities' published by the CPCB in May, 2010.
- vii. Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.
- viii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- ix. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- x. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities

II. Air quality monitoring and preservation:

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions.
- iv. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- v. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- vi. Appropriate Air Pollution Control (As proposed, air pollution control device viz. gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bag filter/ESP for removal of particulate matter; venturi scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to the incinerator) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vii. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out. Analysis of Dioxins and Furans shall be done through CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram or equivalent NABL Accredited laboratory
- viii. Gas generated in the Land fill should be properly collected, monitored and flared

- ix. 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 02 kms radius of the project is maintained and improved upon after the implementation of the project. 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 02 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.

III. Water quality monitoring and preservation:

- i. The project proponent shall install continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the State Pollution Control Board / CPCB. Trend analysis of ground water quality shall be carried out each season and information shall be submitted to the SPCB and the Regional Office of MoEF&CC.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. No discharge in nearby river(s)/pond(s).
- v. The depth of the land fill site shall be decided based on the ground water table at the site.
- vi. The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.
- vii. All leachates arising from premises should be collected and treated in the ETP followed by RO. RO rejects shall be evaporated in MEE. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.
- viii. The Company shall review the unit operations provided for the treatment of effluents, specially the sequencing of MEE after tertiary treatment, the source of permeate when no R.O. is recommended and the treatment of MEE condensate. The scheme for treatment of effluents shall be as permitted by the Pollution Control Board/Committee under the provisions of consent to establish.
- ix. Scrubber water, leachate water or wheel wash effluent shall be treated in the effluent treatment plant followed by RO to achieve zero liquid discharge.
- x. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- xi. Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused within the project.
- xii. A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.
- xiii. Rain water runoff from hazardous waste storage area shall be collected and treated in the effluent treatment plant.

IV. Noise monitoring and prevention:

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
- iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures:

- i. Energy conservation measures like installation of LED/CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.

VI. Waste management:

- i. The TSDF should only handle the waste generated from the member units.
- ii. Periodical soil monitoring to check the contamination in and around the site shall be carried out.
- iii. No non-hazardous wastes, as defined under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, shall be handled in the premises.

- iv. The Project proponent shall not store the Hazardous Wastes more than the quantity that has been permitted by the CPCB/SPCB.
- v. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
- vi. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- vii. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.

VII. Green Belt:

- i. Green belt shall be developed in an area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the project site.
- ii. Top soil shall be separately stored and used in the development of green belt.

VIII. Public hearing and Human health issues:

- i. Traffic congestion near the entry and exit points from the roads adjoining the project site shall be avoided. Parking should be fully internalized and no public space should be utilized.
- ii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- iii. 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis.

IX. Miscellaneous:

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms /conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- x. The criteria pollutant levels namely; PM_{2.5}, PM₁₀, SO₂, NO_x (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.

- xi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- xii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xiii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xiv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xv. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xvi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xvii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xviii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xix. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts/NGT and any other Court of Law relating to the subject matter.
- xx. Any appeal against this EC 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-3

Standard EC Conditions for Project/Activity 7(da): Bio-Medical Waste Treatment Facilities

I. Statutory compliance:

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- v. Transportation and handling of Bio-medical Wastes shall be as per the Bio-Medical Waste Management Rules, 2016 including the section 129 to 137 of Central Motor Vehicle Rules 1989.
- vi. Project shall fulfill all the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 including collection and transportation design etc. and also guidelines for Common Hazardous Waste Incineration - 2005, issued by CPCB Guidelines of CPCB/MPPCB for Bio-medical Waste Common Hazardous Wastes incinerators shall be followed.
- vii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- viii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- ix. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities

II. Air quality monitoring and preservation:

- i. The project proponent shall install emission monitoring system including Dioxin and furans to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Periodical air quality monitoring in and around the site including VOC, HC shall be carried out.
- iii. Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, so as to achieve Total Organic Carbon (TOC) content in the slag and bottom ashes less than 3%, or their loss on ignition is less than 5% of the dry weight of the material.
- iv. Venturi scrubber (alkaline) should be provided with the incinerator with stack of adequate height (Minimum 30 meters) to control particulate emission within 50mg/Nm³.
- v. Appropriate Air Pollution Control (APC) system shall be provided for fugitive dust from all vulnerable sources, so as to comply prescribed standards. All necessary air pollution control devices (quenching, Venturi scrubber, mist eliminator) should be provided for compliance of emission standards.
- vi. Masking agents should be used for odour control.

III. Water quality monitoring and preservation:

- i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Waste water generated from the facility shall be treated in the ETP and treated waste water shall be reused in the APCD connected to the incinerator. The water quality of treated effluent shall meet the norms prescribed by State Pollution Control Board. Zero discharge should be maintained.
- iii. Process effluent/any waste water should not be allowed to mix with storm water.
- iv. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- v. Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused within the project.

- vi. A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point should be obtained.
 - vii. The leachate from the facility shall be collected and treated to meet the prescribed standards before disposal.
 - viii. Magnetic flow meters shall be provided at the inlet and outlet of the ETP & all ground water abstraction points and records for the same shall be maintained regularly.
 - ix. Rain water runoff from hazardous waste storage area shall be collected and treated in the effluent treatment plant.
- IV. Noise monitoring and prevention:**
- i. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
- V. Energy Conservation measures:**
- i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
 - ii. Provide LED lights in their offices and residential areas
- VI. Waste management:**
- i. Incinerated ash shall be disposed at approved TSDF and MoU made in this regard shall be submitted to the Ministry prior to the commencement.
 - ii. The solid wastes shall be segregated as per the norms of the Solid Waste Management Rules, 2016.
 - iii. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
 - iv. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016
 - v. No landfill site is allowed within the CBWTF site
 - vi. The Project proponent shall not store the Hazardous Wastes more than the quantity that has been permitted by the CPCB/SPCB.
- VII. Green Belt:**
- i. Green belt shall be developed in area as provided in project details, with native tree Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- VIII. Public hearing and Human health issues:**
- i. Feeding of materials/Bio-medical waste should be mechanized and automatic no manual feeding is permitted.
 - ii. Proper parking facility should be provided for employees & transport used for collection & disposal of waste materials.
 - iii. Necessary provision shall be made for fire-fighting facilities within the complex.
 - iv. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
 - v. Emergency plan shall be drawn in consultation with SPCB/CPCB and implemented in order to minimize the hazards to human health or environment from fires, explosion or any unplanned sudden or gradual release of hazardous waste or hazardous waste constituents to air, soil or surface water.
 - vi. 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
 - vii. Occupational health surveillance of the workers shall be done on a regular basis.
- IX. Miscellaneous:**
- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed
 - ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
 - iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
 - iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

- v. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/ conditions and / or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- x. The criteria pollutant levels namely; PM_{2.5}, PM₁₀, SO₂, NO_x (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.
- xi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- xii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xiii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xiv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xv. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xvi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xvii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xviii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.
- xix. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts/NGT and any other Court of Law relating to the subject matter.
- xx. Any appeal against this EC 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-4

Standard EC Conditions for Project/Activity 7(g): Aerial ropeways

I. Statutory compliance:

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/Committee.
- v. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- vi. 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.

II. Air quality monitoring and preservation:

- i. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM₁₀ and PM_{2.5} in reference to PM emission) covering upwind and downwind directions.
- ii. Appropriate Air Pollution Control (APC) system (both during the construction and operation) shall be provided for all the dust generating points *inter alia* including loading, unloading, transfer points, fugitive dust from all vulnerable sources, so as to comply prescribed standards.
- iii. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- iv. Adequate parking shall be constructed at upper terminal and lower terminal. PP shall ensure smooth traffic management.

III. Water quality monitoring and preservation:

- i. Storm water from the project area shall be passed through settling chamber.
- ii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- iii. Total fresh water use shall not exceed the proposed requirement as provided in the project details.
- iv. Prior permission from competent authority shall be obtained for use of fresh water.
- v. No wastewater shall be discharged in open. Appropriate Water Pollution Control system shall be provided for treatment of waste water.
- vi. A certificate from the competent authority, in case of discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.

IV. Noise monitoring and prevention:

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures:

- i. Energy conservation measures like installation of LED/CFLs/TFLs for lighting should be integral part of the project design and should be in place before project commissioning.
- ii. Solar energy shall be used in the project i.e., at upper terminal and lower terminal to reduce the carbon footprint.

VII. Waste management

- i. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.

- ii. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016.
 - iii. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
- VII. Public hearing and Human health/safety issues:**
- i. Comply with the safety procedures, norms and guidelines (as applicable) as outlined in IS 5228, IS 5229 and IS 5230, code of practice for construction of aerial ropeways, Bureau of Indian Standards.
 - ii. Maintaining hoists and lifts, lifting machines, chains, ropes, and other lifting tackles in good condition.
 - iii. Ensuring that walking surfaces or boards at height are of sound construction and are provided with safety rails or belts.
 - iv. The project should conform to the norms prescribed by the Director General Mine safety. Necessary clearances in this regard shall be obtained.
 - v. Adequate infrastructure, including power, shall be provided for emergency situations and disaster management.
 - vi. Adequate first aid facility shall be provided during construction and operation phase of the project.
 - vii. Regular safety inspection shall be carried out of the ropeway project and a copy of safety inspection report should be submitted to the Regional Office.
 - viii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- VIII Miscellaneous:**
- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
 - ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
 - iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
 - iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
 - v. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms /conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
 - vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
 - vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
 - viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
 - ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
 - x. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
 - xi. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
 - xii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

- xiii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xiv. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xv. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xvi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xvii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xviii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xix. Any appeal against this EC 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-5

Standard EC Conditions for Project/Activity 7(h): Common Effluent Treatment plants (CETPs)

I. Statutory compliance:

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- vii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

II. Air quality monitoring and preservation:

- i. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Diesel generating sets shall be installed, in the downwind directions.
- ii. Appropriate Air Pollution Control (APC) system shall be provided for fugitive dust from all vulnerable sources, so as to comply prescribed standards.

III. Water quality monitoring and preservation:

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- iii. There shall be flow meters at inlet and outlet of CETP to monitor the flow. Suitable meters shall be provided to measure the quantity of effluent received, quantity of effluent recycled/reused and discharged.
- iv. The units and the CETP will maintain daily log book of the quantity and quality of discharge from the units, quantity of inflow into the CETP, details of the treatment at each stage of the CETP including the raw materials used, quantity of the treated water proposed to be recycled, reused within the Industrial park/units, quantity of the treated effluent discharged. All the above information shall be provided on- line of the web site exclusively prepared for the purpose by the CETP owner. The website shall be accessible by the public. The financial and energy details of the CETP will also be provided along with details of the workers of the CETP.
- v. The CETP operator will maintain an annual register of member units which will contain the details of products with installed capacities and quality and quantity of effluents accepted for discharge. This will form a part of the initial and renewal applications for consent to operate to be made before the State Pollution Control Board.
- vi. No changes in installed capacity, quality or quantity of effluents as agreed upon in the initial MOU between the operator and the member units, addition of any new member units shall be carried without prior approval of the ministry
- vii. The Unit shall inform the State Pollution Control Board at least a week prior to undertaking maintenance activities in the recycle system and store/dispose treated effluents under their advice in the matter.
- viii. The unit shall also immediately inform the Pollution Control Board of any breakdown in the recycling system, store the effluents in the interim period and dispose effluents only as advised by the Pollution Control Board.
- ix. The MoU between CETP and member units shall indicate the maximum quantity of effluent to be sent to the CETP along with the quality.
- x. The unit shall maintain a robust system of conveyance for primary treated effluents from the

member units and constantly monitor the influent quality to the CETP. The Management of the CETP and the individual member shall be jointly and severally responsible for conveyance and pre-treatment of effluents. Only those units will be authorized to send their effluents to the CETP which have a valid consent of the Pollution Control Board and which meet the primary treated standards as prescribed. The CETP operator shall with the consent of the State Pollution Control Board retain the powers to delink the defaulter unit from entering the conveyance system.

- xi. The effluent from member units shall be transported through pipeline. In case the effluent is transported thorough road, it shall be transported through CETP tankers only duly maintaining proper manifest system. The vehicles shall be fitted with proper GPS system.
 - xii. Before accepting any effluent from member units, the same shall be as permitted by the SPCB in the consent order. No effluent from any unit shall be accepted without consent from SPCB under the Water Act, 1974 as amended.
 - xiii. Treated water shall be disposed on land for irrigation. An irrigation management plan shall be drawn up in consultation with and to the satisfaction of the State Pollution Control Board.
 - xiv. The Project proponents will build operate and maintain the collection and conveyance system to transport effluents from the industrial units in consultation with and to the satisfaction of the State Pollution Control Board and ensure that the industrial units meet the primary effluent standards prescribed by the State Pollution Control Board.
 - xv. The State Pollution Control Board will also evaluate the treatment efficiency of the Effluent Treatment Plant (ETP) and its capability of meeting the prescribed standards. The final scheme of treatment would be such as is approved by the Pollution Control Board in the Consent to Establish.
 - xvi. The project proponents will create an institutional arrangement for the involvement of individual members in the management of the CETP.
- IV. Noise monitoring and prevention:**
- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
 - ii. Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment's.
 - iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.
- V. Waste management:**
- i. ETP sludge generated from CETP facility shall be handled and disposed to nearby authorized TSDF site as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
 - ii. Non-Hazardous solid wastes and sludge arising out of the operation of the CETP shall be adequately disposed as per the Consent to be availed from the State Pollution Control Board. Non-Hazardous solid wastes and sludge shall not be mixed with Hazardous wastes.
 - iii. The CETP shall have adequate power back up facility, to meet the energy requirement in case of power failure from the grid.
 - iv. The site for aerobic composting shall be selected and developed in consultation with and to the satisfaction of the State Pollution Control Board. Odour and insect nuisance shall be adequately controlled.
 - v. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
 - vi. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
- VI. Energy Conservation measures:**
- i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
 - ii. Provide LED lights in their offices and residential areas
- VII. Green Belt:**
- i. Green belt shall be developed in area as provided in project details, with native tree Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- VIII. Public hearing and Human health issues:**
- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
 - ii. Adequate infrastructure, including power, shall be provided for emergency situations and disaster management.

- iii. 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis.

IX. Miscellaneous:

- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest /wildlife norms /conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms /conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- x. The criteria pollutant levels 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.
- xi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of operation by the project.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act,

1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

- xvi. Any appeal against this EC 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-6

Standard EC Conditions for Project/Activity 7(i): Common Municipal Solid Waste Management Facility (CMSWMF)

I. Statutory compliance:

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- vii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.

II. Air quality monitoring and preservation:

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (for projects involving incineration).
- ii. As proposed, air pollution control device viz. gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bag filter/ESP for removal of particulate matter; venturi scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to the incinerator. Online pollutant monitoring shall be provided as per CPCB guidelines for monitoring particulate matter, SO₂, NO_x and CO from the incinerator stack. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out.
- iii. Analysis of Dioxins and Furans shall be done through CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram or equivalent NABL Accredited laboratory.
- iv. Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.
- v. Gas generated in the Land fill should be properly collected, monitored and flared.
- vi. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

III. Water quality monitoring and preservation:

- i. The project proponent shall install continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the State Pollution Control Board / CPCB. Trend analysis of ground water quality shall be carried out each season and information shall be submitted to the SPCB and the Regional Office of MoEF&CC.
- iii. The depth of the land fill site shall be decided based on the ground water table at the site.
- iv. Rain water runoff from the landfill area and other hazardous waste management area shall be

collected and treated in the effluent treatment plant.

- v. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- vi. The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.
- vii. All leachates arising from premises should be collected and treated in the ETP followed by RO. RO rejects shall be evaporated in MEE. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.
- viii. Scrubber water, leachate water or wheel wash effluent shall be treated in the effluent treatment plant followed by RO to achieve zero liquid discharge.
- ix. Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused within the project.
- x. A certificate from the competent authority for discharging treated effluent/untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point should be obtained.

IV. Waste management:

- i. No non-hazardous wastes, as defined under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, shall be handled in the premises.
- ii. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
- iii. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
- iv. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.

V. Transportation:

- i. Project should ensure that the site is properly cordoned off from general movement and no unauthorized person or goods permitted to enter the premises. Necessary security provision should be made as a condition in the Authorization under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 to prevent unwanted access.
- ii. Traffic congestion near the entry and exit points from the roads adjoining the project site shall be avoided. Parking should be fully internalized and no public space should be utilized.
- iii. 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 02 kms radius of the project is maintained and improved upon after the implementation of the project. 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 02 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.

VI. Green belt:

- i. Green belt shall be developed in an area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the project site.
- ii. Top soil shall be separately stored and used in the development of green belt.

VII. Public hearing and Human health/safety issues:

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iii. Occupational health surveillance of the workers shall be done on a regular basis.

IX. Miscellaneous:

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently. (for projects involving incineration)
- ii. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed (For projects involving only Landfill without incineration)

- iii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iv. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- v. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/ conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- x. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- xi. The criteria pollutant levels namely; PM_{2.5}, PM₁₀, SO₂, NO_x (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 (in case of incineration involved).
- xii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- xiii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xiv. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xvi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xvii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xviii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xix. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xx. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xxi. Any appeal against this EC 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-7

Standard EC Conditions for Project/Activity 8(a/b): Building and Construction projects/Townships and Area Development projects

I. Statutory compliance:

- i. 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.
- ii. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
- iii. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- iv. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- v. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- vi. The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
- vii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- viii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
- ix. The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.
- x. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.

II. Air quality monitoring and preservation:

- i. 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.
- ii. A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
- iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5}) covering upwind and downwind directions during the construction period.
- iv. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- v. 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, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
- vi. Sand, murrum, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
- vii. Wet jet shall be provided for grinding and stone cutting.
- viii. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
- ix. 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 Management Rules 2016.
- x. The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
- xi. 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.

xii. For indoor air quality the ventilation provisions as per National Building Code of India.

III. Water quality monitoring and preservation:

- i. 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.
- ii. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
- iii. Total fresh water use shall not exceed the proposed requirement as provided in the project details.
- iv. 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 along with six monthly Monitoring reports.
- v. 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.
- vi. At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
- vii. 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.
- viii. 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.
- ix. 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.
- x. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- xi. 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/storage tanks shall be provided for ground water recharging as per the CGWB norms.
- xii. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.
- xiii. All recharge should be limited to shallow aquifer.
- xiv. No ground water shall be used during construction phase of the project.
- xv. 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.
- xvi. 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 along with six monthly Monitoring reports.
- xvii. Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.
- xviii. No sewage or untreated effluent water would be discharged through storm water drains.
- xix. Onsite sewage treatment of capacity of treating 100% waste water to be installed. 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 Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.
- xx. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.

- xxi. 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.

IV. Noise monitoring and prevention:

- i. Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone 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.
- ii. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures:

- i. 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.
- ii. Outdoor and common area lighting shall be LED.
- iii. 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.
- iv. 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.
- v. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.
- vi. 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.

VI. Waste Management:

- i. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.
- ii. 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.
- iii. 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.
- iv. Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
- v. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
- vi. 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.
- vii. 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.
- viii. 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.
- ix. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.

- x. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

VII. Green Cover:

- i. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
- ii. A minimum of 1 tree for every 80 sqm 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.
- iii. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
- iv. 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.

VIII. Transport

- i. A comprehensive mobility plan, as per MoUD 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.
 - a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
 - b. Traffic calming measures.
 - c. Proper design of entry and exit points.
 - d. Parking norms as per local regulation.
- ii. 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.
- iii. 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. 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.

IX. Human health issues:

- i. 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.
- ii. For indoor air quality the ventilation provisions as per National Building Code of India.
- iii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- iv. 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- v. Occupational health surveillance of the workers shall be done on a regular basis.
- vi. A First Aid Room shall be provided in the project both during construction and operations of the project.

X. Miscellaneous:

- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report
- viii. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- ix. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- x. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xi. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the Expert Appraisal Committee.
- xii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).
- xiii. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xiv. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xvi. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xvii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xviii. Any appeal against this EC 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.
