

MINUTES OF 78th MEETING OF EXPERT APPRAISAL COMMITTEE (INFRASTRUCTURE-2) HELD DURING 14th - 15th DECEMBER, 2021.

VENUE: Through Video Conferencing

DATE: 14th-15th December, 2021

PROCEEDINGS

78.1 Opening Remarks of the Chairman: The Chairman and Members extended warm welcome with each other and other participants of the meeting. It was noted that the Chairman of the EAC (Infra 2), Dr. N.P. Shukla, has been appointed as Full-time Independent Technical Member in the Commission for Air Quality Management in National Capital Region and Adjoining Areas (CAQM). Since NOC from MoEF&CC for continuing as Chairman of EAC (Infra-2) in this regard is awaited, Dr. N.P. Shukla designated Dr. H.C. Sharatchandra as the interim Chairman for the 78th EAC meeting. Thereafter, the meeting was opened to start proceeding as per the agenda adopted for this meeting.

78.2 Confirmation of Minutes of 77th Meeting of Expert Appraisal Committee (Infrastructure-2) held on 30th November, 2021.

The Expert Appraisal Committee (Infrastructure-2), hereinafter called the EAC, was informed that no representation has been received regarding projects considered in 77th meeting. Minutes of 77th meeting of EAC were confirmed. 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.

78.3 Consideration of Proposals (Day I): The EAC considered proposals as per the agenda adopted for Day-I of 78th meeting. The details of deliberations held and decisions taken in the meeting are as under:

AGENDA ITEM NO. 78.3.1

Setting up of Common hazardous waste treatment, storage and disposal facilities (TSDFs) at Plot Nos: 1004 to 1022, 1027 & 1028 of Kesda Village, Simga Tehsil, Baloda Bazar District, Chhattisgarh by M/s Ramky Enviro Engineers Ltd. - Environmental Clearance

(IA/CG/MIS/171901/2020; F. No. 21-109/2021-IA-III)

1. The Project Proponent (M/s. Ramky Enviro Engineers Ltd.) along with his consultant 'M/s. Ramky Enviro Services 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 Nos: 1004 to 1022, 1027 & 1028 of Kesda Village, Simga Tehsil, Baloda Bazar District, Chhattisgarh.
- ii. The project is new.
- iii. The project was issued ToR vide letter no. 10-54/2020-IA.III dated 03.11.2020. The baseline monitoring studies have been carried out during October to December, 2020.
- iv. The total land area for the proposed project is around 50 acres (20.42 ha). A minimum area of 15 m wide will be left for greenbelt development all along the boundary. The project is proposed to treat hazardous wastes and also comprises of AFRF, paper recycling, plastic recycling, E-waste recycling, used oil/spent oil recycling, drum recycling/decontamination recycling plant, solvent recovery, Aluminum dross reprocessing, Spent Pot Liner (SPL) (Refractory portion) processing & disposal, SPL (Carbon portion) reprocessing, renewable energy facilities. The project details are given as follows:

S.No.	Type of Wastes/Unit	Capacity Scalable Up to
1	Secured landfill (Direct to Landfill)	4,50,000 MTA
2	Landfill After Treatment	
3	Hazardous Waste Incineration(Common for Hazardous waste, domestic hazardous waste & Other incinerable waste)	Incinerator scalable up to 1.5 Tons/hr in modular form
4	E Waste Recycling	100 TPD
5	Alternative Fuel and Raw Material Facility (AFRF)	100 TPD
6	Plastic Recycling (hazardous in nature/contaminated elements)	20 TPD
7	Paper Recycling (hazardous in nature /contaminated elements)	50 TPD
8	Solvent Recovery (hazardous in nature/contaminated elements)	18 KLD
9	Aluminum Dross	100 TPD
10	Used/Spent Oil Recycling	15 KLD
11	Renewable Energy	2 MW
12	SPL (Carbon Portion)-Hazardous in nature and contaminated elements	100 TPD
13	SPL (Refractory Portion)-Hazardous in Nature/Contaminated elements	100 TPD
14	Drum/Decontamination Recycling Plant	200 Drum/day

- v. The land area requirement for the project is given as follows:

S. No.	Proposed Facility	Land Area in Acre (approx.)
1	Landfill	28.18
2	Greenbelt	10.77
3	Facilities	2.43
4	Paved roads	2.14
5	Open spaces/ future expansion	6.83
6	Parking	0.06
Total Area (approx.)		50.41

- vi. Water requirement is 100 KLD i.e. 50 KLD of treated water and 50 KLD of fresh water sourced from bore well to be dug with prior permission of CGWA.
- vii. Around 57.2 KLD of wastewater will be generated in the project. The leachate generated from landfill will be collected into leachate collection ponds. The leachate collected will partly treated and will be sent in to spray drier of incinerator and a part is sprayed back onto landfill for dust suppression, stabilization of hazardous waste, etc. The wastewater from TSDF operations, floor washings, workshop etc., will be collected, disinfected and then treated for oil and suspended solids by skimming and settling in sedimentation tank and the clarified water would be recycle for incinerator spray drier, washing, spraying on landfill and for dust suppression, etc., The waste water generated from boiler and cooling tower would be used in ash quenching and for greenbelt development purpose. Around 3.6 KLD of sewage generated will be treated in septic tank. There will not be any wastewater discharge to any nearby water body and the proposed project adopts zero wastewater discharge concept. The details of wastewater generation and management are given as follows:

Process/Facility	Wastewater Generation (KLD)	Remarks
Secured Land Fill	1.4	Sent for Leachate treatment & reused
Incinerator + plant - wet & venturi scrubber	30.2	Sent to wastewater treatment scheme for treatment & reuse
Boiler spent solvent & used oil recovery	18.2	
Plastic, Paper, & E-waste	2.4	
Truck wheel wash	1.4	
Sub Total	53.6	
Domestic	3.6	Sent to septic tank or soak pit
Greenbelt	-	
Grand Total	57.2	

- viii. An estimation of around 24 kg/day municipal solid waste is expected to be generated from the facility and shall be sent to nearest municipal facility for disposal. Hazardous & domestic hazardous waste generated within the premises shall be disposed of in incinerator or landfilled as required within the proposed facility. The ash coming from the incinerator and power plant will be used as a daily cover for landfill along with soil and mud.
- ix. The drainage pattern in the study area can be described as sub-dendritic to dendritic. Seonath River is located at 9.3 km west; it is tributary of Mahanadi. Ghughua tank is located at 1.7 km west from the site. A man-made canal namely Bhatpara branch canal is located at a distance of 0.6 km west.
- x. The power required for operations is 320 kVA, which will be taken from Chhattisgarh State Power Distribution Company Limited. 320 kVA DG set (standby) will be used as backup power during emergency requirement.
- xi. In the proposed project it is intended to set up 2 MW solar power project in the closed landfill after evaluating the recent developments in solar energy on closed landfill on following criteria.
 - a) Solar power system considerations with respect to landfill applications,
 - b) Landfill technical and engineering considerations, and Regulatory considerations.
- xii. No rainwater harvesting system or other artificial structures for ground water recharge are proposed within the facility, due to the nature of facility being hazardous waste management, to eliminate the probability of groundwater contamination. However, it is proposed to make proper utilization of rainwater collected from within the facility. A rainwater collection pond has been designed to hold rainwater. The rainwater thus collected, after treatment as necessary, shall be used for various uses (dust suppression, floor washings, toiler flushing, greenbelt, etc.).
- xiii. The gases coming out of the incinerator stack are passed through scrubber, multi cyclone and bag filter for the removal of particulates. For proper dispersion of SO₂ and NO_x emissions into atmosphere, incinerator stack height meeting MoEF&CC/CPCB guidelines will be provided. To prevent the formation of dioxins, the flue gas temperature is rapidly lowered from 500°C to less than 200°C by adopting rapid quench/catalyst/adsorption by activated carbon.
- xiv. Adequate greenbelt will be developed for the proposed project in an area of 10.7 acres (43,601 sqm). It includes greenbelt along the boundary, roads and open spaces. 10 m wide green buffer shall be developed along the boundary of the project and 1 m wide buffer along the road (two sides).
- 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. No court case is pending against the project.

- xix. The project is expected to be completed within 12 (twelve) months.
- xx. Public Hearing was held on 07.08.2021 at around 11 A.M. at Ground situated in front of Venkatarmana Poultry Farm of Village Kesda under Tehsil Simga, District Balodabazar.
- xxi. Investment/Cost of the project is estimated to be around ₹36 Crores. Budget of EMP is ₹3.2 Crores with a Recurring cost of ₹32 Lakhs /annum. The overall project cost works out to be around ₹75.10 Crores, which includes land and other CSIDCL regulatory costs.
- xxii. Employment potential – About 50 persons shall be deployed during the construction phase. Once the facility is operational, about 40 persons including skilled and unskilled workers shall be deployed.
- xxiii. Benefits of the project: Wastes generated from existing industries will be addressed in a better and environmentally safe way. It provides a one stop solution for the management of various types of wastes such as hazardous waste and domestic hazardous waste etc. Minimizes pollution load on environment with an additional benefit of green and clean surroundings. Possibility for recovery of materials thereby conserving the natural resources. Management of wastes is relatively easier and economically viable at a common facility. Most viable option in the absence or availability of expertise. Reduced environmental liability due to captive storage of hazardous waste in the premises of industries. Prevention of natural resource contamination. Employment opportunity is envisioned for the nearby inhabitants thereby improving their lifestyle & economic conditions. New infrastructure and development of amenities in and around the project site is expected.

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 (Infra-2) noted several deficiencies in the proposal and in EIA Report as well as in the Public Hearing proceedings and made the following observations:*

- i. The public hearing proceedings mention disruption and that the meeting was ended after protest was launched by the public. Only 4 people have signed the attendance sheet whereas the comments of more people have been recorded. The PP explained that there was a law and order issue and only few public representatives were allowed to come forward and speak. The EAC noted that the spirit of the public hearing seems to have been compromised. Accordingly, an explanation needs to be sought from the SPCB on the adequacy of the public hearing conducted and conformity to requirements under EIA Notification, 2006.
- ii. It is not specified whether the land has been leased or owned by the project proponent. The cost of the project considered for budgetary

- provisions is only ₹36 Crores, whereas the total cost of the project inclusive of land and other CSIDCL regulatory costs has been given as ₹ 75.10 Crores. Clarification is required in this regard. Detailed break-up of EMP capital budget and recurring budget needs to be provided.
- iii. There is no FAE mentioned for Soil Conservation involved in the preparation of EIA Report.
 - iv. The water requirement and wastewater calculations needs to be re-evaluated. The waterbalance diagram is incomplete and incorrect with the inflow quantities not matching the outflow quantities or the total water demand as stated. Also, the treatment methods adopted for different types of wastewater is not specified in the water balance diagram. The quantities of water requirement and wastewater generation for activities such as 2 KLD for landfill operation (1.4 KLD wastewater generation) and 4 KLD for plastic recycling (2.4 KLD wastewater generation) need to be justified. Also, manpower required is 50; sanitary water required @ 45 LPCD is 2,250 litres/day, whereas in water balance 4 KLD is considered which is equivalent to 80 LPCD. Therefore, detailed water requirement calculations along with revised water balance diagram needs to be provided.
 - v. In solid waste management, ash coming from power plant is mentioned. Source of the ash generation in the project needs to be clarified.
 - vi. The capacity of rainwater collection system has not been provided.
 - vii. The details of parking and traffic management for need to be provided.
 - viii. The width of greenbelt is mentioned as 10m and 15m and needs to be clarified. The number of trees proposed for plantation has not been specified. Does the green area allocated meet the requirement as per CPCB guidelines?
 - ix. The renewable energy of 2MW solar power generation is proposed in the closed landfill after evaluating the recent developments in solar energy on closed landfill and other criteria. Why is it then mentioned as a project feature when the implementation is neither planned out nor confirmed?
 - x. EIA Report Unique Identification Code is not revision controlled. Needs to be differentiated for draft and final report.
 - xi. It is noted that most of the proposed activities (other than incinerator and landfill) are not covered under item 7(d) of EIA Notification. However, since integrated facility is proposed, detailed breakup of each proposed component with expected waste quantity (availability) and proposed capacity shall be provided. It shall also include the details of the source for each type of waste and rejects/products generated from each activity along with end use.
 - xii. The detailed land use breakup shall also be provided specifying the area allotted for each activity and its adequacy (particularly space requirements) with respect to CPCB guidelines.
 - xiii. The provisions for avoiding the intermixing of hazardous wastes and non-hazardous waste streams needs to be clarified in detail. Detailed layout plan shall be provided indicating the same.
 - xiv. Clarification and detailed break-up of fuel requirement is required.

- xv. Fire potential from storage yard of waste paper, plastic waste and solvents are not addressed. Industrial accidents are listed but their critical relevance to TSDF is not captured.
- xvi. The land filling activity requires further clarification. Gas management system is proposed in secured landfill. How is gas production expected? It is also specified that salts are to be bagged and landfilled. How are water soluble ingredients to be sent to secured landfill?
- xvii. TCLP test requirement or its quantity is not stated in the EIA Report.
- xviii. Quantification of HW requiring chemical fixation/immobilization, solidification and encapsulation needs to be provided.
- xix. The Terms of Reference included the provision for biomedical waste facility which has then been dropped from the proposal. Affidavit needs to be submitted in this regard.
- xx. Based on operating experience of the project proponent in their other projects, is there operating data for extent of capacity utilization made for E-Waste recycling, Alternate Fuel and Raw-material Facility, Plastic recycling, Paper recycling, Solvent Recovery and Renewable Energy? Also, leachate characteristics and expected incinerator stack emission details including dioxin and furan levels shall be provided based on operating experience of the project proponent.

Accordingly, the EAC decided to defer the proposal and asked the project proponent to provide the additional information and resubmit the EIA Report in compliance to the aforesaid observations.

AGENDA ITEM NO. 78.3.2

Environment Clearance for Proposed Expansion of the Apartment cum Villa Project with increase in built-up area from 19,897.98 sqm. to 24,008.21 sqm. at Karakulam Village & Panchayat, Nedumangad Taluk, Thiruvananthapuram District, Kerala to be developed by M/s Cordon Constructors & Realtors Pvt. Ltd. -Environmental Clearance

(IA/KL/MIS/243239/2021; F. No. 21-115/2021-IA-III)

1. The Project Proponent (M/s. Cordon Constructors & Realtors 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 Nos. 661/8, 661/30, 661/26, 661/27-29, 661/30-1, 661/27-28 at Karakulam Village & Panchayat, Nedumangad Taluk, Thiruvananthapuram District, Kerala with coordinates from 08°32'47.85"N to 08°32'52.05"N Latitude and 76°58'53.90"E to 76°58'54.94"E Longitude.

- ii. The project is an expansion. However, the proposal is for 'Fresh EC'.
- iii. Earlier, the project was issued building permit by the local body (Karakulam Grama Panchayat) vide order no. B2-101/2017-18 dated 03.12.2018 for a built-up area of 19,897.98 sqm., based on which preliminary construction work is in progress. Now, it is proposed to expand the project with additional built-up area of 4,110.23 sqm. The cumulative built-up area after expansion will be 24,008.21 sqm which is greater than 20,000 sqm. Accordingly, application is submitted for Environmental Clearance.
- iv. The total plot area is 6,307 sqm., FAR area is 15,131.03 sqm. and total construction (Built-up) area is 24,008.21 sqm. The project will comprise of 2 nos. of residential apartment block (Total 122 nos. of flats shall be developed) + 2 Villas. Maximum height of the building is 39.50 m. The details of building are as follows:

Building Block Nos. & Name	Max. No. of Floors	Max. height (m)	Total built-up area (sqm.)
Block-1	3B + Ground + 10 floors	33.30	9098.93
Block-2	3B + Ground + 12 floors	39.50	14,510.62
Villa 1	G + 1 floor	6.45	199.33
Villa 2	G + 1 floor	6.45	199.33
TOTAL			24,008.21

- v. During construction phase, total water requirement is expected to be 22 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 labour force.
- vi. During operational phase, total water demand of the project is expected to be 88 KLD and the same will be met by 57 KLD fresh water from stored rainwater tanks/KWA/well water and 31 KLD recycled water. Wastewater generated (68 KLD) will be treated in STP of 82 KLD capacity. 61 KLD of treated wastewater will be generated of which 31 KLD will be recycled and re-used within site for flushing (28 KLD) and Horticulture (3 KLD), etc. About 30 KLD treated water from STP will be used for farming & horticulture purposes of M/s Pankaja Kasthuri Herbals Ind. Pvt. Ltd.
- vii. About 250 Kg/day solid waste will be generated in the project. The Bio-degradable waste (150 kg/day) will be processed in bio-bin unit and the non-biodegradable waste generated (100 kg/day) will be handed over to authorized local vendor. An area equivalent of about 60 sqm. for about 15 days storage of non-biodegradable waste would be provided. The 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.

- viii. There is an old building (120 sqm. of built-up area) within the site and which will be demolished. The salvageable materials from the demolition debris would be recovered and the remaining demolition debris and the construction debris would be used for site preparatory works.
- ix. The total power requirement during operation phase is 1,250 kW and will be met from Kerala State Electricity Board (KSEB) & DG Set (400 kVA x 1 no.) as standby. Total power requirement during construction phase is 100 kW and will be met from KSEB & DG Sets (standby).
- x. Rooftop rainwater of buildings will be collected in RWH tanks 100 KL capacity for multi storied apartment tower and 10 KL for each villa for harvesting after filtration.
- xi. Parking facility for 146 Cars and 164 two wheelers is proposed to be provided against the requirement of 144 Cars and 153 two wheelers (according to local norms).
- xii. Proposed energy saving measures would save about 20% of power.
- xiii. Rooftop solar PV installation of 110kWp capacity shall be provided to meet 11% of the connected load.
- xiv. The total excavated soil will be about 1,000 cu.m. which will be preserved for landscaping purposes, backfilling purposes and internal road construction.
- 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. No court case is pending against the project.
- xix. CRZ Clearance is not required.
- xx. Total area for landscaping proposed is 1,246.64 sqm. (about 20% of total plot area). 12 trees will be cut and about 200 trees are proposed to be planted around the periphery as green belt.
- xxi. Expected timeline for completion of the project - About 48 months from the date of start of construction.
- xxii. Investment/Cost of the project is ₹50.84 Crores.
- xxiii. Employment potential –About 150 persons during construction phase and about 60 persons during operation phase.
- xxiv. Benefits of the project – Employment opportunities & revenue to the State. The residential project would provide better residential facilities with supporting infrastructure facilities and amenities to the residents.

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 observed inconsistencies and gaps in the information submitted in Form-1 and the presentation such as power requirement details, water requirement details and water balance diagram. Accordingly, the EAC (Infra-*

2) *decided to defer the proposal and asked the project proponent to provide the following additional information:*

- i. Clarify the details of power requirement.
- ii. Resubmit water requirement calculation and water balance diagram.
- iii. Resubmit Form-1 and Form IA with correct information.

AGENDA ITEM No. 78.3.3

Expansion of Civil Enclave at Gwalior Airport at Maharajpur, Gwalior, Madhya Pradesh by M/s Airports Authority of India (AAI) – Terms of Reference

(IA/MP/MIS/241619/2021; F. No. 21-114/2021-IA-III)

1. The Project Proponent (M/s. Airports Authority of India (AAI)) along with his consultant 'M/s. EQMS India 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 Maharajpur, Gwalior, Madhya Pradesh with coordinates 26°16'52.35"N Latitude and 78°12'57.98"E Longitude.
- ii. The proposal is for 'Expansion'. However, the application is for 'Fresh EC'.
- iii. The existing Gwalior Airport did not attract applicability to obtain Environmental Clearance since it was established before 1994. Gwalior Airport (Rajmata Vijayaraje Scindhia Terminal) is a Civil Enclave Airport at Maharajpur Air Force Station. Now, under UDAN 4.1(Ude Desh ka Aam Nagarik) scheme under Regional Air Connectivity Scheme of National Civil Aviation Policy 2016, increasing tourist footfall and complaisance of PM Modi's Flagship Smart Cities Mission, Airports Authority of India (AAI) has proposed for expansion of civil enclave at Gwalior airport.
- iv. The proposed project will involve the following infrastructural facilities:
 - a. The terminal building will be state of the art centrally air-conditioned, one and half level terminal building with mezzanine, with all modern facilities and amenities catering to 1400 PHP (Departure-700; Arrival-700).
 - b. Development of 9 no. of additional aprons to capture Airbus 320 aircrafts.
 - c. Additional Taxiway (Dimension: 650m x 23m) will be developed from proposed terminal building to existing runway.

- d. Security Hold Area with 4 no. of aerobridges and bus lounge area with adequate seating arrangements, isolated smoking area, child-care rooms, and washrooms etc., will be developed.
- e. Parking Area will be developed for 700 no. of cars.
- f. Water Treatment and Solid Waste treatment facilities will be developed in the utility section of terminal building.
- g. Approach Road (1800m x 20m) will be widened with Airport Road for better connectivity and accessibility.
- v. The salient features of the project are given as follows:

S.No.	Particulars	Unit	Total after Proposed Terminal Building & Ancillary Activities
1	HANDLING CAPACITY		
	Person Handling Capacity	MPPA	1.11
2	PROJECT AREA DETAILS		
	Plot Area	acres	172.60
	Area to be demolished	sqm.	1218.98
	Proposed Built-up Area	sqm.	25000
	Maximum Height of Building	m	30
3	COMPONENTS OF AIRPORT		
	ATC Tower	No.	With IAF
	Number of Buildings	No.	1
	Number of Aprons	No.	13 (Existing -4 no.; Proposed -9 no.)
	Aerobridges	No.	4
4	SERVICE DETAILS		
	Total Water Requirement	KLD	845
	Freshwater Requirement	KLD	357
	Wastewater Generation	KLD	514
	STP Capacity	KLD	600
	Treated Water Reuse	KLD	488
	Biodegradable Waste	kg/day	1774 (including 16 kg/day of STP Sludge)
	Recyclable Waste	kg/day	1758
	Total Waste	kg/day	3532
	Power Requirement	kVA	4439
	Power Backup (DG Sets)	kVA	5x1250
	Parking	ECS	700

- vi. The existing terminal building will be non-operational after development of proposed terminal building. Major infrastructural facilities and utilities of Indian Air Force (IAF) such as Runway, ATC

- Tower, Navigation system, Fire Fighting Services, etc., will be utilised for operation of the airport.
- vii. The total handling capacity of the airport after expansion will be 1.11 million passengers per year (MPPA). The total plot area of airport will be 172.60 acres(excluding IAF Base & Runway). The existing plot area of airport is 29.405 acres.Under proposed expansion, additional 143.20 acres of land has been transferred from Indian Council of Agricultural Research (ICAR) to Airports Authority of India (AAI) for construction of the proposed terminal building and auxiliary facilities. The land use of additional area has already been demarcated for “Transportation Use” as per Gwalior Master Plan, 2021. Hence, there will be no change in land use for proposed land area.
 - viii. There will be demolition of existing development of area 1218.98 sqm. that currently covers powerhouse, substation, residential quarters, dog kennel, overhead tank and storerooms.
 - ix. The total water requirement of airport will be 845 KLD. Out of which, freshwater requirement of 357 KLD will be sourced from groundwater through borewells. Total wastewater generation will be 514 KLD that will be treated in proposed Sewage Treatment Plant of capacity 600 KLD. Approx. 488 KLD treated water will be generated from STP treatment that will be reused in the airport for flushing, HVAC cooling, gardening purposes. It will be a “Zero-liquid Discharge Project”.
 - x. Total solid waste generation from the airport will be 3532 kg/day. Out of total, 1758 kg/day of biodegradable waste will be treated in Organic Waste Convertor (OWC) for reuse as manure. 16 kg/day of STP Sludge will be used directly for manure in green area. 1758 kg/day of recyclable waste will be given to authorized recyclers. Solid Waste Management Rules, 2016 will be followed.
 - xi. Total power requirement of the airport will be 4439 kVA. For backup purposes, 5 no. of DG sets of capacity 1250 kVA (each) will be installed.
 - xii. 200 kW solar panels will be installed for reducing power consumption of up to 5% of electric demand load. The proposed terminal building will adopt latest GRIHA measures to achieve 4-star rating GRIHA V-2015.
 - xiii. Approx. 20245 sqm.of green area will be developed under proposed airport development. There are approximately 583 no. of trees located within the proposed site that will be cleared after taking permission from concerned authority.
 - xiv. The project is not located in Critically Polluted area.
 - xv. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
 - xvi. Forest Clearance is not required.
 - xvii. No court case is pending against the project.
 - xviii. Investment/Cost of the project is ₹446.12 Crores.
 - xix. Employment Potential –About 200 persons during construction phase and about 533 persons (staff) during operation phase.
 - xx. Benefits of the project – The proposed project will help in development and revenue generation. It expects boost of industrialization, multi-

model-connectivity, and infrastructure development in the hinterland. The commercial development such as retail outlets, food-courts, multiplexes, and market zone shall lift the socio-economic status of the area. The proposed project will broaden the scope of opportunities, tourism as well as economic development in Gwalior to give a boost in development of the city. Airport is directly or indirectly key to the development and revenue generation. The aviation industry itself is a source of considerable economic activity, creating jobs that directly serve passengers at airlines, airports and air navigation services providers. Terminal Building will be designed to achieve 4-star GRIHA-V rating.

2. The EAC noted that the project/activity is covered under category 'A' of item 7(a) 'Airports' 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 and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended for grant of Terms of Reference as specified by the Ministry as Standard ToR in April, 2015 for the said project/activity and the following ToR in addition to Standard ToR for preparation of EIA-EMP report:*

- i. Importance and benefits of the project.
- ii. Layout maps of proposed project indicating runway, terminal building, parking, greenbelt area, utilities etc.
- iii. The impacts of demolition and the activities related thereto shall be examined and a management plan shall be prepared to conform to the C&D Waste Management Rules.
- iv. The details of excavations, its impacts and the impact of transport of excavated material. A detailed management plan shall be suggested.
- v. An assessment of the cumulative impact of all development and increased inhabitation being carried out or proposed to be carried out by the project or other agencies in the core area, shall be made for traffic densities and parking capabilities in a 05 kms radius from the site. A detailed traffic management and a traffic decongestion plan drawn up through an organization of repute and specializing in Transport Planning shall be submitted with the EIA. The Plan to be implemented to the satisfaction of the State Urban Development and Transport Departments shall also include the consent of all the concerned implementing agencies.
- vi. A note on appropriate process and materials to be used to encourage reduction in carbon footprint. Optimize use of energy systems in buildings that should maintain a specified indoor environment conducive to the functional requirements of the building by following mandatory compliance measures (for all applicable buildings) as recommended in the Energy Conservation Building Code (ECBC) 2017 of the Bureau of Energy Efficiency, Government of India. The energy

- system includes air conditioning systems, indoor lighting systems, water heaters, air heaters and air circulation devices.
- vii. Details shall be provided regarding the solar generation proposed and the extent of substitution, along with compliance to the ECBC rules.
 - viii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).
 - ix. Details of emissions, effluents, solid waste (including de-plane waste) and hazardous waste generation and their management. Air quality modelling and noise modelling shall be carried out for the emissions from the various types of aircrafts.
 - x. An onsite disaster management plan shall be prepared to account for risks and accidents. This onsite plan shall be dovetailed with the disaster management plan for the district.
 - xi. Cost of project and time of completion.
 - xii. A tabular chart with index for point wise compliance of above TORs.
 - xiii. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included.

AGENDA ITEM NO. 78.3.4

Establishment of Incineration facility for treatment and disposal of hazardous and other wastes at Survey No.571/A, Municipally Village & Mandal, Sangareddy District, Telangana by M/s. VBR Green Enviro Pvt. Ltd.- Terms of Reference

(IA/TG/MIS/241588/2021; F. No. 21-108/2021-IA-III)

1. The Project Proponent (M/s VBR Green Enviro Pvt. Ltd.) along with his consultant 'M/s. Samrakshan', 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. 571/A, Municipally Village & Mandal, Sangareddy District, Telangana with coordinates 17°41'59.45"N Latitude and 77°51'58.52"E Longitude.
 - ii. The project is new.
 - iii. The proposal is for the establishment of an Integrated Treatment, Storage, and Disposal Facility (TSDF) with an incinerator. Treatment systems proposed are Incineration; Shredding; Effluent Treatment Plant for barrel cleaning wastewater, scrubber, lab and washings; Composting by organic converter and vermicomposting; and Bricks manufacturing using incinerator ash.
 - iv. The maximum capacity/quantity of wastes proposed to be handled by the TSDF are given as follows:

S. No.	Type of Waste	Maximum Load that can be handled (TPD)
1	Incinerable waste	10 (500 kg/hr)
2	Plastic waste (hazardous – 25 TPD & non-hazardous – 75 TPD)	100
3	Metal waste	10
4	Paper & carton	4
5	Glass bottles	1
6	Packed date expired food items, agricultural waste like seeds/grain waste	2.5
7	Other organic waste	1.5

- v. Sources of wastes are industries majorly in and around Hyderabad located within 100 km from the site. Wastes from other neighbouring States is also proposed to be collected following the procedure laid down in the Hazardous and Other Wastes (Management, Handling and Transboundary Movement) Rules 2016.
- vi. The total land area is 9,206.3 sqm. The site area is agricultural land converted for non-agricultural purpose.
- vii. Nearest village is Munipally located at a distance of 1.2 km towards South East.
- viii. Total fresh water requirement is about 7 KLD which will be sourced from bore wells (1 no. existing + 1 no. proposed) located within the site /Mission Bhagiratha /private tankers. During dry season when the yield is low water will be fetched from/private tankers.
- ix. Domestic sewage of about 2 KLD will be generated which will be treated in septic tank & soak pit. Industrial effluent of about 13 KLD will be treated in ETP of 20 KLD capacity and will be recycled and reused within the facility.
- x. There are 221 existing trees within the project site and 245 more trees are proposed. The greenbelt area is 3038.079 sqm. i.e., 33% of total area. No cutting of existing trees is proposed.
- xi. Power requirement for the proposed project is 125 HP. One DG set of 500 kVA capacity is proposed to be installed to serve as backup in case of power failure.
- xii. Baseline monitoring was carried out from March to May 2021 in anticipation of the ToR.
- xiii. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xiv. Forest Clearance is not required.
- xv. No court case is pending against the project.
- xvi. Investment/Cost of the project is ₹9.5 Crores.
- xvii. Employment potential –About 40 persons during operation phase (Direct: 15 persons; Indirect: 25 persons).
- xviii. Benefits of the project- The project will help in scientific secured disposal of the incinerable hazardous waste, date expired food products supplementing/supporting operating facilities from the industries located in the States of Telangana, Andhra Pradesh and

Odisha. Improvement of social health and sanitation level and generation of employment.

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 (Infra-2), based on the information and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended for grant of Terms of Reference as specified by the Ministry as Standard ToR in April, 2015 for the said project/activity and the following ToR in addition to Standard ToR for preparation of EIA-EMP report:*

- i. Importance and benefits of the project.
- ii. Details of various waste management units with capacities for the proposed project. Details of utilities indicating size and capacity to be provided.
- iii. Specify the land area and space allotted for each activity proposed within the integrated waste management facility. The area requirements for each activity shall be calculated as per the CPCB guidelines for the specified activity.
- iv. List of waste to be handled and their source along with mode of transportation.
- v. Characteristics and source of each type of waste to be handled.
- vi. Details of storage and disposal of pre-processing and post-processing rejects/inerts and products.
- vii. List of proposed end receivers for the rejects/inerts/products should be provided. MoUs to be submitted in this regard.
- viii. The EIA would address to the conformity of site to the stipulations as made in the Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and will have a complete chapter indicating conformity to the said rules. NOC shall be obtained from State Pollution Control Board regarding site suitability for establishment of TSDF.
- ix. Project proponents would also submit a write up on how their project proposal conform to the stipulations made in the "Protocol for Performance evolution and monitoring of the Common Hazardous Waste Treatment Storage and Disposal facilities including common Hazardous Waste incinerators", published by the CPCB on May 24, 2010.
- x. Other chemicals and materials required with quantities and storage capacities.
- xi. Details of temporary storage facility for storage of hazardous waste at project site.
- xii. Details of pre-treatment facility of hazardous waste at TSDF.
- xiii. Details of air emissions, effluents, hazardous/solid waste generation and their management.

- xiv. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).
- xv. Process description along with major equipment and machineries, process flow sheet (quantitative) from waste material to disposal to be provided.
- xvi. Hazard identification and details of proposed safety systems.
- xvii. Details of Drainage of the project up to 5 km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided.
- xviii. Ground water quality monitoring in and around the project site.
- xix. The Air Quality Index shall be calculated for base level air quality.
- xx. Status of the land purchases in terms of land acquisition Act. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xxi. Details of effluent treatment and recycling process.
- xxii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project.
- xxiii. A detailed Plan for green belt development.
- xxiv. A certificate 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
- xxv. The project proponents shall satisfactorily address all the complaints/suggestions that have been received against the project till the date of submission of proposals for Appraisal.
- xxvi. Cost of project and time of completion.
- xxvii. A tabular chart with index for point wise compliance of above TORs.
- xxviii. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included.

AGENDA ITEM NO. 78.3.5

Development of Integrated Common Hazardous Waste Treatment, Storage, Disposal and Recycling Facilities at Undurmikidakkulam, Thiruchli Taluk, Virudhunagar District, Tamil Nadu by M/s Tamil Nadu WasteManagement Limited (a division of M/s Ramky Enviro Engineers Limited) - Extension of Validity of EC

(IA/TN/MIS/241559/2021; F. No. 21-120/2021-IA-III)

1.The Project Proponent (M/s Tamil Nadu Waste Management Limited (a division of M/s Ramky Enviro Engineers Limited)) along with his consultant

‘M/s. Ramky Enviro Services 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 Undurmikidakkulam, Thiruchli Taluk, Virudhunagar District, Tamil Nadu.
- ii. The project was granted Environmental Clearance vide letter no. 10-77/2012-IA.III dated 06.02.2014 for the proposed “Integrated Common Hazardous Waste Treatment, Storage, Disposal and Recycling Facilities at Undurmikidakkulam, Thiruchli Taluk, Virudhunagar District, Tamil Nadu” with the following components:

Phase	Component
Phase – I	<ul style="list-style-type: none"> • Secured Landfill – 1,50,000 TPA • Treatment/ Stabilization – 90,000 TPA • Bio Medical Waste – 30,000 Beds • E-Waste – 30,000 TPA
Phase – II	<ul style="list-style-type: none"> • Spent Solvent Recycling – 10,000 KL • Incineration – 20,000 TPA • Used Oil Recycling – 10,000 KL • Alternate Fuel & Raw Material Facility – 10,000 TPA • Used Lead Acid Batteries – 24,000 TPA • Waste Plastic Recycling – 10,000 TPA • Waste Paper Recycling – 10,000 TPA
Phase – III	<ul style="list-style-type: none"> • Renewable Energy – 2 MW • Waste to Energy – 2 MW

- iii. Consent to Establish (CTE) was granted by Tamil Nadu Pollution Control Board (TNPCB) initially on 08.12.2014, for the following treatment units:

S. No.	Description	Quantity	Unit
1	Directly Landfillable wastes as per Hazardous Waste Management and Handling Rules, 2008	1,50,000	TPA
2	Landfillable wastes after stabilization	90,000	TPA
3	Incinerable wastes	20,000	TPA
4	Alternate Fuel and Raw material Facility	10,000	TPA

- iv. ‘Secured Landfill’ and ‘Treatment/Stabilization’ facilities have been established so far, along with associated infrastructure, and they are operational since October 2016. Consent to Operate (CTO) has been obtained from TNPCB on 08.10.2016 for the following treatment units:

S. No.	Description	Quantity	Unit
1	Directly Landfillable Waste	1,50,000	TPA

2	Landfillable wastes after stabilization	90,000	TPA
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- v. The erection works of incinerator, civil works for setting up bio-medical waste treatment facility, recycling facilities and Alternate Fuel and Raw material Facility (AFRF) were deferred due to adverse market conditions and resultant strain on the budget earmarked for the project. Thereafter due to COVID-19 lockdown, the project was shelved for some time.
- vi. Considering the favourable market conditions now, it is intended to execute the remaining works. The expected date of completion of construction (including inspection, trial run, etc.) of the project is by September 2023. In view of the above, the application for extension of validity of environmental clearance has been submitted.

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 (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. Details of completed and pending works at site specifying the percentage of completion.
- ii. Submit detailed timeframe for the completion of pending works.
- iii. Submit a copy of the latest six-monthly compliance report submitted by the PP to Integrated Regional Office of MoEF&CC.

AGENDA ITEM NO. 78.3.6

Proposed Residential Project with built-up area of 45,420.44 sqm. at Edappally South Village, Cochin Corporation, Kanayannoor Taluk, Ernakulam District, Kerala to be jointly developed by M/s Sunny Apartments Pvt. Ltd. & M/s United Developers Pvt. Ltd. - Environmental Clearance

(IA/KL/MIS/243083/2021; F. No. 21-116/2021-IA-III)

1. The Project Proponent (M/s. Sunny Apartments Pvt. Ltd. & M/s United Developers 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 nos. 151/7A-4, 160/10A-6, 160/10B-4, 160/11-2, 160/12-2-3, 160/12-3, 160/9A-5, 160/7A2, 160/7C-3, 151/7A-3, 160/10A-4, 160/10B-2, 160/9A-4, 160/6B, 160/11-3, 160/12-2, 160/13-2-2, 151/14A-16, 160/13-5, 160/13-2-3, 151/14A-16-2, 160/13-4, 160/13-4, Edappally South Village, Cochin Corporation, Kanayannoor Taluk, Ernakulam District, Kerala with coordinates from 10°0'38.66"N To 10°0'43.06"N Latitude and 76°18'11.58"E to 76°18'16.08"E Longitude.
- ii. The project is new.
- iii. The total plot area is 8,243.62 sqm., FSI area is 30,836.07 sqm. and total construction (Built-up) area is 45,420.44 sqm. The project will comprise of 1 no. of residential apartment block. Total 96 nos. of flats shall be developed. Maximum height of the building is 152 m. The details of building are as follows:

Name of Building	Max. no. of floors		Max. Height	Built-up area
1 no. Residential Building Block	Basement	Parking + Services	152.0	45,420.44 sqm.
	Ground floor	Parking + Services		
	1st floor	Parking		
	2nd floor	Landscape + Pool		
	3rd floor to 42 floors (typical)	Apartments		

- iv. During construction phase, total water requirement is expected to be 42 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 labour force.
- v. During operational phase, total water demand of the project is expected to be 72 KLD and the same will be met by 45 KLD fresh water from Stored Rain Water Tanks/KWA/well water and 27 KLD recycled water. Wastewater generated (56 KLD) will be treated in STP of total 68 KLD capacity. 51 KLD of treated wastewater will be recycled and re-used (25 KLD for flushing, 2 KLD for gardening etc.). About 24KLD treated water from STP will be used for plantation purposes by M/s Sahyadri Gardens.
- vi. About 207 kg/day solid waste will be generated in the project. The biodegradable waste (104 kg/day) will be processed in bio-bin unit and the non-biodegradable waste generated (103 kg/day) will be handed over to authorized local vendor. An area equivalent of about 50 sqm. for about 15 days storage of non-biodegradable waste would be provided. The 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.
- vii. There are small structure/building (about 100 sqm.) existing at site which will be demolished. 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.
 - viii. The total power requirement during operation phase is 2,250 kW (connected load) and will be met from Kerala State Electricity Board (KSEB) & DG Sets (500 kVA x 1 no.) as a standby power back up arrangement. Total power requirement during construction phase is 100 kW and will be met from KSEB & DG Sets (standby).
 - ix. Rooftop rainwater of buildings will be collected in RWH tank of 120 KL for harvesting after filtration.
 - x. Parking facility for 347 Cars + 256 Two Wheelers is proposed to be provided against the requirement of 168 Cars + 210 Two Wheelers respectively (according to local norms). Provision for charging for electrically operated vehicles (20%) proposed in each parking floor.
 - xi. Proposed energy saving measures would save about 20% of power.
 - xii. Solar PV installation of 236 kWp capacity shall be provided to meet 10.5% of the connected load.
 - xiii. The project is not located in Critically Polluted area.
 - xiv. Forest Clearance is not required.
 - xv. CRZ Clearance is not required.
 - xvi. No court case is pending against the project.
 - xvii. Mangalavanam Bird Sanctuary (with an extent of 2.7 ha.) at about 3 km (SW) from the project site. NBWL Clearance is required. An application for obtaining Wildlife Clearance has been submitted at MoEF & CC vide Proposal no. FP/KL/Others/6131/2021 dated 05.12.2021. However, the project site is located outside the eco-sensitive zone of the Mangalavanam Bird Sanctuary as specified in draft notification issued by MoEF & CC dated 07.09.2020.
 - xviii. The total excavated soil is 7,650 cu.m. The excavated earth of 2,090 cu.m. will be preserved for landscaping purposes, 2060 cu.m. will be using for backfilling purposes and 3,500 cu.m. will be using for internal road construction purposes.
 - xix. The project requires building height clearance from southern naval command/airport authority and fire & rescue department, which are in process.
 - xx. Total area for natural landscaping proposed is 700 sqm. (about 10% of total plot area). 35 trees will be cut and about 460 trees will be planted within the site. Landscaping is proposed in the podium with an area of 3,600 sq.m. (44% of plot area), at 2nd floor level.
 - xxi. Expected timeline for completion of the project - About 36 months from the date of start of construction.
 - xxii. Investment/Cost of the project is ₹200 Crores.
 - xxiii. Employment potential - About 150 persons during construction phase and 50 persons during operation phase.

xxiv. Benefits of the project – Employment opportunities & Revenue to the State. The proposed residential project would provide better residential facilities with supporting infrastructure facilities and amenities to the residents.

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 observed inconsistencies and gaps in the information submitted in Form-1 and the presentation such as landscaping details, existing structures at site, water balance diagram, sewage generation and STP capacity. Accordingly, the EAC (Infra-2) decided to defer the proposal and asked the project proponent to provide the following additional information:*

- i. Clarify the details of landscaping area.
- ii. Resubmit water requirement calculation and water balance diagram.
- iii. Details of alternate arrangements for reuse of excess treated water if not collected by M/s Sahyadri Gardens.
- iv. Details of existing structures at site.
- v. Resubmit Form-1 and Form IA with correct information.

AGENDA ITEM NO. 78.3.7

Common hazardous waste incineration facility (CHWIF) of 20 TPD capacity and preparation of alternate fuel and raw material (AFR) for co-processing (20 TPD capacity) at Plot No. 20 (Corner) of Sira Industrial Area, 1st Phase, Tumkur Dist., Karnataka by M/s Indian Eco Solutions- Terms of Reference

(IA/KA/MIS/239361/2021; F. No. 21-102/2021-IA-III)

The EAC noted that the consultant M/s Sea Green Enviro) presenting the proposal did not have accreditation by Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET). Accordingly, the EAC (Infra-2) decided to defer the proposal and asked the project proponent to present the proposal in the forthcoming meeting of EAC with consultant having the accreditation by QCI/NABET for the specified sector.

AGENDA ITEM NO. 78.3.8

Proposed Residential Project with built-up area of 86,077.33 sqm. at Nadama Village, Thripunithura Municipality, Kanayannur Taluk, Ernakulam District, Kerala to be developed by M/s ZANSS PROJECTS - Environmental Clearance

(IA/KL/MIS/242085/2021; F. No. 21-113/2021-IA-III)

1. The Project Proponent (M/s. ZANSS PROJECTS) 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 no. 1/34 & 1/38, Nadama Village, Thripunithura Municipality, Kanayannur Taluk, Ernakulam District, Kerala with coordinates from 9°57'44.62"N to 9°57'49.86"N Latitude and 76°19'22.66"E to 76°19'30.87"E Longitude.
- ii. The project is new.
- iii. The total plot area is 19,370.23 sqm., FSI area is 58,247.5 sqm. and total construction (Built-up) area is 86,077.33 sqm. The project will comprise of 5 nos. of residential apartment blocks. Total 907 nos. of flats shall be developed. Maximum height of the building is 74.40 m. The details of building are as follows:

Name of Building	Max. no. of floors		Max. Height	Built-up area
5 Residential Building Blocks (connected with common floors i.e. Ground + 1 st floor + 2 nd floor + 3 rd floor)	Ground Floor + 25 floors		74.40	86,077.33 sqm.
	Ground floor	Parking + Services		
	1st floor	Parking + Services + Apartments		
	2nd floor	Parking+ Apartments		
	3rd floor	Parking floor		
4th floor to 25 th floor (typical)	Apartments			

- iv. During construction phase, total water requirement is expected to be 80 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 labour force.

- v. During operational phase, total water demand of the project is expected to be 655 KLD and the same will be met by 416 KLD fresh water from stored rain water tanks/KWA/well water and 239 KLD Recycled Water. Wastewater generated (508 KLD) will be treated in STP of total 610 KLD capacity. 457 KLD of treated wastewater will be generated of which 239 KLD will be recycled and re-used (219 KLD for flushing, 20 KLD for gardening etc.) within site. About 218 KLD excess treated water from STP will be used for farming & horticulture purposes of Thripunithura Municipality.
- vi. About 1.89ton/daysolid waste will be generated in the project. The biodegradable waste (0.945 ton/day) will be processed in bio-gas generation unit / bio-bin unit and the non-biodegradable waste generated will be handed over to authorized local vendor. An area equivalent of about 500 sq.m. for about 15 days storage of non-biodegradable waste would be provided. The 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.
 - i. The total power requirement during operation phase is 8,812.24 KW and will be met from Kerala State Electricity Board (KSEB) & DG Sets (400 kVA x 2 nos.) as standby. Total power requirement during construction phase is 100 kW and will be met from KSEB& DG Sets (standby).
 - ii. Rooftop rainwater of buildings will be collected in RWH tank of 180 KL capacity and 600 KL capacity pond for harvesting after filtration.
 - iii. Parking facility for 349 Cars + 380 Two Wheelers is proposed to be provided against the requirement of 349 Cars + 380 Two Wheelers respectively (according to local norms). Provision for charging for electrically operated vehicles (20%) proposed in each parking floor.
 - iv. Proposed energy saving measures would save about 20% of power.
 - v. Solar PV installation of 900 kWp capacity shall be provided to meet 10% of the connected load.
 - vi. Mangalavanam Bird Sanctuary (with an extent of 2.7 ha.) at about 6 km (NW). NBWL Clearance is required. An application for obtaining Wildlife Clearance was submitted at MoEF&CC vide proposal no. FP/KL/Others/6127/2021 dated 02.12.2021. However, the project site is located outside the eco-sensitive zone of the Mangalavanam Bird Sanctuary as specified in draft notification issued by MoEF&CC dated 07.09.2020.
 - vii. The project is not located in Critically Polluted area.
 - viii. Forest clearance is not required.
 - ix. CRZ Clearance is not required.
 - x. No court case is pending against the project.
 - xi. The total excavation of the earth is about 1,500 cu.m. The excavated earth of about 1,000 cu.m. will be preserved for landscaping purposes and remaining of about 500 cu.m. will be used for backfilling/internal road construction purposes.

- xii. The project requires building height clearance from southern naval command/airport authority and fire & rescue department, which are in process.
- xiii. Total area for landscaping proposed is 5,617.56 sqm. (about 29% of total plot area). 20 trees will be cut and 450 trees will be planted within the site.
- xiv. Expected timeline for completion of the project - About 48 months from the date of start of construction.
- xv. Investment/Cost of the project is ₹178 Crores.
- xvi. Employment potential - About 600 persons.
- xvii. Benefits of the project – Employment opportunities & revenue to the State. The proposed residential project would provide better residential facilities with supporting infrastructure facilities and amenities to the residents.

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. Prior Clearance from standing committee of NBWL should be obtained before commencing the project.
- ii. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 416 KLD during operational phase.
- iii. As proposed, wastewater shall be treated in an onsite STP of total 610 KLD capacity. At least 239 KLD of treated water from the STP shall be recycled and re-used for flushing (219 KLD) and for gardening (20 KLD). Excess treated water from STP will be used for farming & horticulture purposes of Thripunithura Municipality 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.
- iv. 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.
- v. Area for greenery shall be provided as per the details provided in the

project document i.e., area under plantation/greenery will be 5,617.56 sqm. As proposed, at least 450 trees shall be maintained 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.

- vi. 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).
- vii. 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.
- viii. 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 180 KL capacity and 600 KL capacity pond shall be provided by PP for rain water harvesting after filtration.
- ix. 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.
- x. The PP shall provide electric charging points in parking areas for e-vehicles as committed.
- xi. As committed, roof top solar energy installation of 900 kWp capacity shall be provided to meet atleast 10% of the connected load 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. 78.3.9

Expansion of Hotel Building with increase in built up area from 55,550.169 sqm. to 82,212.816 sqm. at Plot No. 3, Sector 10, Dwarka, Delhi by M/s Tirupati Buildings and Offices Pvt. Ltd. – Reconsideration for Environmental Clearance

(IA/DL/MIS/223780/2021; F. No. 21-54/2021-IA-III)

1. The EAC noted that the proposal was deferred in its 76th meeting held on 16th November, 2021, and the PP was asked to provide the following additional details:

- i. Submit affidavit clarifying the discrepancy in the number of floors w.r.t to existing EC.
- ii. Submit copy of DDA approval issued to the project specifying number of floors and built-up area.

2. The Project Proponent (M/s Tirupati Buildings and Offices Pvt. Ltd.) along with his consultant 'M/s Perfact Enviro Solutions Pvt. Ltd.', made a presentation and provided the following information:

- i. Affidavit clarifying the discrepancy in number of floors with respect to earlier EC has been submitted. The project has exceeded the number of floors from G+10 to G+12, but built-up area limits have not been exceeded from earlier Environment Clearance granted vide File No. 21-98/2008-IA.III dated 08.07.2008 and have also not exceeded the height as permissible from Airport Authority of India AAI/NOC/2009/297/1138 dated 30.10.2009. It is also submitted that any deviation in any aspect in the building will not be made without prior intimation to the MOEF&CC.
- ii. The submissions made in the affidavit are given as follows:
 - a. We have not exceeded total built-up area from the permissible area in earlier Environment Clearance vide File No. 21-98/2008-IA.III dated 08.07.2008.
 - b. We have not exceeded the height as permissible from Airport Authority of India AAI/NOC/2009/297/1138 dated 30.10.2009.
 - c. We have exceeded the number of floors from G+10 to G+12 but built-up area limits have not been exceeded from earlier Environment Clearance granted, due to unawareness.
 - d. We will not make any deviation in any aspect in the building without prior intimation to the MOEF&CC.
- iii. Copy of DDA approved drawings issued to project specifying the number of floors & built up area have been submitted. The building details as per the same are given as follows:

S.No.	Particulars	Unit	Area details as per DDPlans
1	Proposed Ground coverage	Sqm	3994.652
Commercial area (proposed)			

2	Proposed Commercial Area at Ground floor	Sqm	3768.623
3	Proposed Commercial Area at First floor	Sqm	1115.80
Total Commercial area		Sqm	4898.054
4	Proposed Atrium area	Sqm	1358.58
FAR Calculations (Proposed)			
5	Proposed Ground Floor Area	Sqm	3994.652
6	Proposed First Floor Area	Sqm	3772.869
7	Proposed Second Floor Area	Sqm	3921.982
8	Proposed Third Floor Area	Sqm	112.814
9	Proposed Fourth Floor Area	Sqm	1996.028
10	Proposed Fifth Floor Area	Sqm	1996.028
11	Proposed Sixth Floor Area	Sqm	1996.028
12	Proposed Seventh Floor Area	Sqm	1996.028
13	Proposed Eighth Floor Area	Sqm	1996.028
14	Proposed Ninth Floor Area	Sqm	1996.028
15	Proposed Tenth Floor Area	Sqm	1996.028
16	Proposed Eleventh Floor Area	Sqm	1996.028
17	Proposed Twelfth Floor Area	Sqm	1996.028
18	25% Atrium Area	Sqm	339.645
19	Covered Terrace Area	Sqm	151.548
20	Total Projection in Atrium area (31.658 x 11)	Sqm	348.238
21	Total projection in third floor area	Sqm	112.814
22	Covered area on Terrace floor	Sqm	151.548
23	Total FAR	Sqm	30606
24	Proposed Third/Service Floor Area	Sqm	1996.028
25	First Basement area	Sqm	8758.353
26	Second Basement area	Sqm	8758.353
27	Third Basement area	Sqm	8758.353
28	Total Basement area	Sqm	28271.087

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 Delhi at the time of initial consideration of the proposal, it required appraisal at Central level by sectoral EAC.

4. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all issues, found that the project appears to be a case of violation of the previous EC granted vide letter no. 21-98/2008-IA.III dated 08.07.2008. In view of the foregoing, the EAC recommended that Ministry may take necessary action accordingly. The Committee also took serious note of hiding/concealment of the facts by the project proponent and consultant for

trying to mislead the committee. Therefore, committee issued a warning to the consultant (M/s Perfect Enviro Solutions Pvt. Ltd.) not to repeat the same in the future.

Consideration of Proposals on Day-II (15th December, 2021): The EAC considered proposals as per the agenda adopted for Day-II of 78th meeting. The details of deliberations held and decisions taken in the meeting are as under:

AGENDA ITEM NO. 78.4.1

Capacity enhancement of Secured Landfill Facility (SLF) from 10 to 20 lacs MT at Common Hazardous Waste Treatment, Storage and Disposal Facilities (TSDF) at Survey No. 1244/1, 1437/1, 1430/1 & 1510/1, Village Majra, P.O. Dabhota, Tehsil Nalagarh, Solan District, Himachal Pradesh by M/s Shivalik Solid WasteManagement Ltd. - Environmental Clearance

(IA/HP/MIS/239636/2018; F. No. 21-112/2021-IA-III)

1. The Project Proponent (M/s. Shivalik Solid Waste Management Ltd.) along with his consultant 'M/s. Perfect Enviro 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 Khasra No. 1244/1, 1437/1, 1430/1, 1510/1, Village Majra, P.O. Dabhota, Tehsil Nalagarh, Distt. Solan, Himachal Pradesh.
- ii. The project is an 'Expansion'.
- iii. The project was granted Terms of Reference vide letter no. 10-73/2018-IA-III dated 30.11.2018 for capacity enhancement of existing Secured Landfill Facility (SLF) from 10 to 20 lacs MT.
- iv. The consent to establish (CTE) for the unit was applied in 2005 under Air Act 1981 and Water Act 1974 and in accordance to Hazardous Wastes (Management and Handling) Amendment Rules, 2003 under rule 8-Para 5 (before the enforcement of EIA Notification 2006 dated 14th September, 2006). Before setting up the facility, Himachal Pradesh State Pollution Control Board (HPSPCB) conducted Public Hearing on 29.03.06 at the project site as per requirements of HW Rules and the State Government thereafter notified the site for development of Common Hazardous Waste Treatment Storage and Disposal Facility vide notification no. Ind.A(F)15-4/2003-II dated 07.03.2007. The TSDF site has been operational since June 2008 after obtaining Consent to Operate (CTO) from HP Pollution Control Board. Compliance to the conditions of CTO has been obtained from HPPCB and submitted on the Parivesh Portal.

v. The salient features of the project are given as follows:

S. No.	Particulars	Unit	Details
1	Plot area	Sqm.	35 Acre (144,032 sqm.)
2	Green Area	Sqm.	50,032 (35% of plot area)
3	Processing Capacity of Landfill Waste	MT/year	Existing- 50,000 Proposed- 50,000 Total= 10,00,00
4	Total no. of cells	No	13 SLF Cells
5	Manpower	Nos.	80
6	Source of Electricity Supply	-	Himachal Pradesh State Electricity Board.
7	Total Power Requirement	KW	373
8	DG Sets (Backup)	kVA	1 x 100
9	Fuel Requirement	L/hour	8-10 (Diesel) for DG set and 20-25 (Bio-Diesel) for Boiler
10	Source of Water	-	01 Tubewell (Permission for 15 KLD obtained)
12	Fresh Water Requirement	KLD	12
13	Wastewater Generation	KLD	10
14	Capacity of ETP/MEE	KLD	20
15	Total Vehicles at site	Numbers	58
16	Life of Landfill estimated	Years	25

vi. Existing Secured Landfill cells (13nos. in total) have been designed as per the recommendations of design of Indian Institute of Technology, Delhi (IIT-D) and till date two cells are capped and two are in operation. Now, enhancement in the capacity of SLF is proposed through change in the height of heap of the SLF and change in slope from 1:5 to 1:4 which results in increase of capacity from 10 Lac MT to 20 Lac MT. This change is proposed under the guidance from IIT-D. Details of proposed expansion are given as follows:

Details	Existing	Proposed
Capacity of Landfill	10 lac MT	20 Lac MT
Total Height	10m (Below the ground)+ 20m (Above the ground) = 30 m	9m (Below the ground)+ 25m (Above the ground) = 34 m
Slope	1:5	1:4
Area	72000 sqm.	77000 sqm.

vii. It is also proposed to expand the annual processing capacity of the unit as below:

S. No.	Category of Hazardous Waste	Type of Hazardous waste	Unit	Quantity of Hazardous waste (Tons/Annun)			Mode of Disposal
				Existing	Proposed	Total after Expansion	

1	Schedule-1 & schedule-2 of HOWR 2016	Land fillable waste	MTPA	50,000	50,000	100,000	Landfill at TSDF
2	5.1	Collection/ transportation of used oil	KL/ Year	600	600	1,200	To be sent for recycling to authorized recyclers
3	A4160	Collection/ transportation of used batteries	MTPA	600	600	1,200	To be sent for recycling to authorized recyclers
4	33.1	Collection/ transportation of discarded containers	Nos/ year	48,000	0	48,000	Utilization as per Rule 9 of HOWR, 2016
5	-	Pre-processing of Hazardous wastes for co-processing in cement kiln	MTPA	4,000	4,000	8,000	To be sent for co-processing in Cement Kilns in Himachal Pradesh

- viii. Project is located on land measuring 35 Acres (1,44,032 sqm) given on lease by HPSPCB. As per the land lease, proposed project site is registered for industrial use. The land use distribution for the unit as proposed is given as follows:

Particulars	Total area (sqm.)	% Area
Green Area	50,032	34.7
Landfill Area	77,000	53.5
Total Infrastructure Area	17,000	11.8
Total Area	144,032	100.00

- ix. Total water requirement for the project will be 26.2 KLD in Non Rainy season & 22 KLD in Rainy Season. The ultimate source of water will be tube well (1 no.). Approval of 15 KLD has been taken from the ground water authority. However fresh water demand for the project is 12 KLD during non-rainy and 9 KLD during rainy season. The remaining water demand is met by treated water from MEE Condensate of 9 KLD and 5.2 KLD from collected rainwater reuse from onsite 1100 KL pond. Total quantity of wastewater generation will be 10 KLD from the processes and waste water of 8 KLD will be generated from domestic purposes is being disposed of to septic tank via soak pits and 10 KLD is being treated in MEE of capacity 20 KLD. The wastewater of 10 KLD will be treated in MEE of 20 KLD and treated water 9 KLD will be utilized in vehicle, scrubber & boiler makeup.
- x. Approx. 12 kg/day of municipal solid waste will be generated from the project. Biodegradable waste generated (7 kg/day) will be treated in the biogas plant and non-biodegradable waste (5 kg/day) will be given to approved recyclers.

- xi. The total power requirement will be 373 kW which will be met by Himachal Pradesh State Electricity Board. DG set (1X 100 KVA) will be provided for power backup. Adequate stack height of 7.6 m from roof level shall be maintained.
- xii. 11 Solar Street lights of 7 watts have been installed within project premises. After expansion, Solar Photovoltaic (PV) of about 130 KW shall be installed over the capped area of cells based on viability of the area.
- xiii. 2 No.s of rain water collection tanks are installed. One tank of 1100 KL capacity having catchment of nearby hilly terrain and second tank of 6 KL capacity collecting rooftop rainwater of laboratory block. The collected rainwater shall be reused within the facility for gardening on non-rainy days and cooling tower/lab water makeup. During the rainy season, a flexible geo-membrane cover shall be placed over the uncapped area of the landfill to minimize infiltration of rainfall into the landfill and the rainwater shall be diverted to join the surface water drains.
- xiv. Public Hearing was conducted at the project site on 09.01.2020 at 11.30 AM. Major issues raised during the public hearing and response in the form of implementable action plan have been submitted.
- xv. Total capital cost towards EMP will be ₹2200 lakhs and recurring cost will be ₹19.2 lakhs per year.
- xvi. Baseline study was conducted in the winter season from December 2018- February 2019 at 9 locations & revalidated baseline study was carried out for from 10th Oct- 10th Nov, 2021 at 9 no. of locations.
- xvii. The project is not located in a Critically Polluted area.
- xviii. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xix. Forest Clearance is not required.
- xx. There is a PIL filed on this project dated 08.09.2021 in the High Court of Himachal Pradesh on ground water contamination. Present status is The CWPIIL 45/2021-36578 dated 14.10.2021, The Court On Its Own Motion v/s State of HP & Others.
- xxi. Green belt is developed along most of the periphery of the project area as well as along roads. Total of 50,032 sqm (35% of plot area) shall be developed as green area. No tree cutting is involved in the project. About 10,006 no. of trees are proposed at site out of which 8000 no. of trees have already been planted.
- xxii. Investment/Cost of the total project is ₹22 crores.
- xxiii. Employment potential- About 33 persons during construction phase and 80 persons during operation phase.
- xxiv. Benefits of the project- There are 3,078 numbers of hazardous waste generating industries in industrial area of Himachal Pradesh. This industrial growth has led to continuous increase in generation of Hazardous Waste. Hazardous waste and its related environmental problems have been recognized by HPSPCB. There is only one common secured landfill facility i.e. M/s Shivalik Solid Waste Management Ltd. Distt. Solan in Himachal Pradesh. Capacity Enhancement of Secured Landfill Facility (SLF) from 10 Lacs to 20 lac

MT and processing capacity of landfill waste will also be increased from 50,000 TPA to 100,000 TPA at existing Facility. Thus the project will cater to the treatment of the increasing Hazardous waste in the entire state of Himachal Pradesh. The project will create direct and indirect employment for local people for which skilled and unskilled manpower will be needed. It promotes the proper disposal of hazardous waste in the state of Himachal Pradesh.

2. The EAC noted that the project/activity is covered under category 'B' 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. However, General Condition is applicable and the project falls under Category "A" since the interstate boundary of Himachal Pradesh and Punjab falls within 2.47 km (Aerial Distance) and 4.5 km (Road distance) from the proposed site. Therefore, it requires appraisal at Central level by sectoral EAC.

3. The EAC also noted that the PP has obtained certified compliance report from Himachal Pradesh State Pollution Control Board vide letter dated 19.06.2021.

4. The EAC observed that the PP has not mentioned the pending litigation in the online application submitted vide Form-2 on Parivesh Portal. The committee also found several gaps and inconsistencies in the information provided in the EIA Report and the presentation.

5. *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 revised Form-2 and Form-1 in Parivesh Portal specifying the pending litigation along with all relevant orders and documents.
- ii. Clarify and resubmit the calculations for water requirement, recycling and reuse along with water balance diagram.
- iii. Provide details of parking provision and proposed solar energy installation.
- iv. Clarify and resubmit the details of solid waste and hazardous waste generation and management.
- v. Resubmit the EIA Report with correct information.

AGENDA ITEM NO. 78.4.2

Proposed Apartment cum Villa project with built-up area of 27,213 sqm at Kumaramangalam Village & Panchayat, Thodupuzha Taluk, Idukki District, Kerala to be developed by M/s Q Developers – Environmental Clearance

(IA/KL/MIS/242345/2021; F. No. 21-118/2021-IA-III)

1. The Project Proponent (M/s. Q Developers) 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. 1206/7, 1206/5/15, 1208/4-5, 572/1, 1208/7/1, 1208/7/3, 1208/7/2, 572/1, 270/1, Kumaramangalam Village & Panchayat, Thodupuzha Taluk, Idukki District, Kerala, with coordinates from 09°55'15.41"N to 09°55'16.72"N Latitude and 76°41'50.95"E to 76°41'53.78"E Longitude.
- ii. The project is new.
- iii. The total plot area is 24,117 sqm. and total construction (Built-up) area is 27,213 sqm. The project will comprise of 1 no. of residential apartment block (Total 52 nos. of flats shall be developed) + 54 Villa units. Maximum height of the building is 39 m. The details of building are as follows:

Name of Building	Max. no. of floors	Max. Height	Built-up area
Apartment Building Block	Basement + Ground Floor + 13 floors	39 m.	15,990 sqm.
Villa	Ground + 1 Floor	8.5 m.	11,223 sqm.
TOTAL			27,213 sqm.

- iv. During construction phase, total water requirement is expected to be 25 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 labour force.
- v. During operational phase, total water demand of the project is expected to be 113 KLD and the same will be met by 72 KLD fresh water from Stored Rain Water Tanks/KWA/well water and 41 KLD Recycled Water. Wastewater generated (87 KLD) will be treated in STP of total 110 KLD capacity. 78 KLD of treated wastewater will be generated of which 41 KLD will be recycled and re-used (36 KLD for flushing, 5 KLD for Horticulture etc.) within site. About 37 KLD excess treated water from STP will be used for farming & horticulture purposes of Kumaramangalam Grama Panchayat.
- vi. About 320 kg/day solid waste will be generated in the project. The Bio-degradable waste (160 kg/day) will be processed in Bio-bin unit and the non-biodegradable waste generated (160 kg/day) will

be handed over to authorized local vendor. An area equivalent of about 80 sqm. for about 15 days storage of non-biodegradable waste would be provided. The 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.

- vii. There is an old building (80 sqm. of built-up area) within the site and which is in dilapidated condition and the same would be demolished. 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.
- viii. The total power requirement during operation phase is 2,000 kW and will be met from Kerala State Electricity Board (KSEB) & DG Sets (250 kVA x 1 no. + 200 kVA x 1 nos) as a standby power back up arrangement. Total power requirement during construction phase is 100 kW and will be met from Kerala State Electricity Board & DG Sets (standby).
- ix. Rooftop rainwater of buildings will be collected in RWH tank of 100 KL capacity for multi storied apartment tower and 10 KL for each villa for harvesting after filtration.
- x. Parking facility for 78 Cars + 52 Two Wheelers for apartment and 2 Cars/Villa is proposed to be provided against the requirement of 58 Cars + 52 Two Wheelers & 1 Car/Villa respectively (according to local norms). Provision for charging for electrically operated vehicles (20%) is proposed.
- xi. Solar PV installation of 202kWp capacity shall be provided to meet 10.1% of the connected load. For each Villa Solar Power Plant of 1kWp would be installed.
- xii. The total excavated soil is about 3,591 cu.m. The excavated earth of about 800 cu.m. will be preserved for landscaping purposes, about 628 cu. m. for backfilling purposes and about 2,163 cu.m. for internal road construction.
- 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. Forest Clearance is not required.
- xvi. CRZ Clearance is not required.
- xvii. No court case is pending against the project.
- xviii. Total area for landscaping proposed is 6,000 sqm. (about 25% of total plot area). 5 trees will be cut and about 352 trees will be planted within the site.
- xix. Expected timeline for completion of the project - About 48 months from the date of start of construction.
- xx. Investment/Cost of the project is ₹ 81.54 Crores.
- xxi. Employment potential- About 150 persons during construction phase and about 125 persons during operation phase.
- xxii. Benefits of the project- Employment opportunities & revenue to the State. The residential project would provide better residential

facilities with supporting infrastructure facilities and amenities to the residents.

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 72 KLD during operational phase.
- ii. As proposed, wastewater shall be treated in an onsite STP of total 110 KLD capacity. At least 41 KLD of treated water from the STP shall be recycled and re-used for flushing (36 KLD) and for horticulture (5 KLD). Excess treated water from STP will be used for farming & horticulture purposes of Kumaramangalam Grama Panchayat 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 6,000sqm. As proposed, at least 352 trees shall be maintained 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 100 KL capacity for multi storied apartment tower and 10 KL for each villashall 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 202 kWp capacity shall be provided to meet atleast 10.1% 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. 78.4.3

Proposed Residential Building with built-up area of 20665.23 sqm. at Chathamangalam Panchayath, Poolokode Village, Kozhikode Taluk & District, Kerala by M/s Cancer and Allied Ailments Research (CARE) Foundation - Environmental Clearance

(IA/KL/MIS/242431/2021; F. No. 21-117/2021-IA-III)

1.The Project Proponent (M/s. Cancer and Allied Ailments Research (CARE) Foundation) along with his consultant 'M/s. ULTRA TECH', 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 Nos.274/4, 272/2, 272/3, 272/4A1, 272/4A2, 273/4, 272/4A2 4B, 267/1, 266/2, 266/4, 265/1B2, 268/2, 277/1B1, 279/3, Block No: 05,Ward No: 13, at Chathamangalam Panchayath, Poolokode Village, Kozhikode Taluk & District, Kerala with coordinates 11.29523°N Latitude and 75.94995°E Longitude.
- ii. The project is new.
- iii. The proposed building is a residential facility for the patients and their families of the existing Cancer Hospital Project (Environmental Clearance No.75/2015, dated 25-9-2015) of M/s Cancer and Allied Ailments Research (CARE) Foundation, adjacent to the proposed project site.
- iv. The total plot area is 6232 sqm., FSI area is 13723.90 sqm and total construction (Built-up) area is 20665.23 sqm. The project will comprise of one Building of three towers (Tower A, Tower B, Tower C) having a common podium. Tower A: -2 parking+G+10 floors; Tower B: -4 parking+G+14floors; Tower C: G+5 floors. Total 106 flats shall be developed. Maximum height of the residential building is 54m. The details of project are as follows:

Item	Description
Plot area	6232 sqm.
Built-up area	20665.23sqm.
FSI	2.20
Permissible FSI	3
Coverage	30.92%
Total green area	1475.81sqm.
No. of dwelling units	106 units <ul style="list-style-type: none"> • 3 BHK- 30Units • 2 BHK -56 Units • 1 BHK - 20 Units
Total occupancy estimated	510

- v. During construction phase, total water requirement is expected to be 9.75 KLD (for construction activities and for drinking and flushing for construction workers)which will be met by existing well of Cancer hospital. During the construction phase, compact portable STP will be provided for disposal of wastewater. Temporary sanitary toilets will be provided during the construction period.
- vi. During operational phase, total water requirement of the project is expected to be 87 KLD during non-monsoon season and 76 KLD during monsoon season and the same will be met by 47 KLD freshwater from proposed open well and harvested rainwater and 40 KLD (non-monsoon season) & 34 KLD (monsoon season) recycled Water. Wastewater generated (63 KLD) will be treated in an existing STP (Activated sludge process technology followed by tertiary treatment processes including ultrafiltration) of total 500 KLD

capacity. 40 KLD of treated wastewater will be recycled and reused (23 KLD for flushing, 11 KLD for gardening and 6 KLD for car and floor washing). About 16.7 KLD (non-monsoon season) and 27.7 KLD (monsoon season) will be disposed into the green area of the Cancer hospital for landscaping purposes.

- vii. About 0.204 TPD solid wastes will be generated in the project. The biodegradable waste (0.082TPD) will be processed in bio-bins and the non-biodegradable waste generated (0.122TPD) will be handed over to authorized local vendor.
- viii. The total power requirement during construction phase is 60 kW and will be met from temporary three phase connection from Kerala State Electricity Board (KSEB) and total power requirement during operation phase is 7200 kWh/day and will be met from KSEB and Solar Panels. Two DG sets of 100 kVA & one DG set of 82.5 kVA is proposed as a source of backup power.
- ix. Rooftop rainwater of buildings will be collected in a RWH tank of total 45 KLD capacity for harvesting after filtration.
- x. Parking facility for 107 four wheelers and 366.62 sqm. area for two wheelers is proposed to be provided against the requirement of 107 and 345.26 sqm. area respectively (according to local norms).
- xi. Solar panels of capacity 18 kWp are proposed for lighting of common areas and solar water heaters. Proposed energy saving measures would save about 26,280 kWh/annum of power.
- xii. The project is not located in Critically Polluted area.
- xiii. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xiv. Forest Clearance is not required.
- xv. CRZ Clearance is not required.
- xvi. No court case is pending against the project.
- xvii. The Capital Cost allocated for EMP is ₹0.4870 Crores (48.70 Lakhs) and Recurring Cost allocated for EMP is ₹0.1042 Crore (10.42 Lakh).
- xviii. Total green area of 1475.81 sqm. is proposed in the project. A total of 74 trees along with weeds and colonizers are present at the project site. Out of which, 51 trees are proposed to be cleared along the weeds and colonizers for the construction of the proposed building. 23 trees will be retained at the project site. A total of 518 trees are proposed to be planted as compensation for tree cutting (10 times).
- xix. Expected timeline for completion of the project– 18 months.
- xx. Investment/Cost of the project is ₹52 Crores.
- xxi. Employment potential: 150 workers during construction phase and 10 workers (service personnel) during operation phase.
- xxii. Benefits of the project - Solution for inadequate residential facilities in the vicinity of cancer hospital for patients from far away. 24 hrs medical support for patients of cancer hospital. Creates employment opportunities.

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, was of the opinion that even though the proposed project is a residential project, the proposal appears to be far too interlinked with the adjacent hospital project in order to consider it as a separate project. Accordingly, the EAC decided to defer the project and asked the project proponent to provide the following additional information:*

- i. Revised project layout demarcating separate access to the proposed residential project from the main road.
- ii. Details of shared amenities with the adjacent hospital project. MoU to be submitted for the same specifying the existing capacities of the units and their adequacy to cater to the project.
- iii. Revised details of energy conservation measures including solar energy.
- iv. Details of provision for charging for electrically operated vehicles.

AGENDA ITEM NO. 78.4.4

Development of Water Aerodrome at Swaraj Island, Andaman & Nicobar by M/s Andaman and Nicobar Administration – Reconsideration for Environmental Clearance

(IA/AN/MIS/124243/2019; F. No. 10-53/2019-IA-III)

1. The EAC noted that the proposal was deferred in its 64th meeting held during 12th-13th April, 2021, and the PP was asked to revise the EIA report and provide the following additional details:

- i. Since the EIA consists of mostly secondary data on biodiversity without conducting actual site specific biodiversity studies w.r.t aquatic and natural environment in effect of tourism, PP needs to resubmit the revised EIA covering Biodiversity Conservation/ Management Plan including water and air quality data. The study on biodiversity should be conducted by any national lab.
- ii. Submission of comprehensive risk analysis for sea-plane crashing/ catching fire at the sea-aerodrome with estimated HSD consumption.
- iii. Status of CRZ clearance at state and central level.
- iv. Reassessment of impact of noise level during landing & take-off on fauna in the area.
- v. Proper Water conservation measures with wastewater treatment and reuse/reuse. Source of water for construction to be defined properly rather than saying taker supply.
- vi. As per the EIA report, proposed project site for construction of terminal building (1568.9 sqm.) and associate infrastructure (453.3

sqm.) falls partly in Mangroves (CRZ-IA). Also, the speedboat pathway is dominated by mangrove vegetation on both sides. However, the management plan does not address the impact on the mangroves due to project activities. Detailed plan for mangrove protection due to proposed activities to be prepared for protection.

2. The Project Proponent (M/s Andaman and Nicobar Administration) along with his consultant 'M/s Enviro Resources', made a presentation and provided the following information:

- i. The Zoological Survey of India (ZSI), Andaman and Nicobar Regional Centre, MoEF&CC, Port Blair, Andaman and Nicobar Islands have conducted additional field studies in Swaraj Island during 25th to 28th September, 2021. The study area covers the coastal, marine environment and terrestrial ecosystem along the proposed project site.
- ii. Following significant observations were made during the field surveys at the proposed area for the construction of water aerodrome at Swaraj Dweep:
 - a. The proposed area for the construction of water aerodrome is situated in the deemed forest/coastal areas.
 - b. Rani Jhansi Marine National Park is approximately 4 km (aerial distance) away from the proposed site for construction.
 - c. There are coral reefs at the proposed project site and its adjoining areas.
 - d. There are mangroves at proposed area.
 - e. There is no turtle-nesting site at vicinity of the project site.
 - f. No migratory birds could be noticed in the project area during the surveys.
 - g. No endangered species could be found in the proposed project site during the surveys.
 - h. There were no nesting/breeding grounds for endemic of migratory birds in and around the proposed project area.
 - i. No critical habitats could be found in the proposed area during the survey.
- iii. ZSI has recommended the proposed project for the construction of water aerodrome at Swaraj Dweep for environmental/forest clearance in view of the following reasons:
 - a. The proposed project site is the only suitable place for the construction of water aerodrome.
 - b. The significant nesting/breeding grounds and roosting ground for the endemic or migratory birds are not reported from the proposed project site.
 - c. The proposed site does not fall under the migratory route of the birds.
 - d. No endangered and endemic faunal communities such as Andaman Wild Pig and Swiftlet were distributed in the vicinity of proposed project area.
 - e. The assessment of the present study revealed out the environmental impact through the proposed project will be negligible.

- f. The suggested environmental management plans may be strictly followed.
- g. It is suggested that during the operational phase of the project, data on the status of faunal and floral communities may be collected which will be helpful to assess the impact of the project on ecology of the area.
- iv. The comprehensive risk analysis for sea-plane crashing/catching fire at the sea-aerodrome with estimated HSD consumption has been prepared and submitted.
- v. Andaman & Nicobar Coastal Zone Management Authority (A&NCZMA) has recommended the project for CRZ clearance vide letter no. PCCF/EPA/279/355 which has been submitted to MoEF&CC.
- vi. The revised impact assessment of noise levels during landing & take-off on fauna in the area was conducted and is found to have negligible/no impact.
- vii. The construction water requirement of 4.5 KLD will be sourced from Public Works Department (PWD), Andaman & Nicobar Administration. During operation phase, 14.46KLD will be the total water requirement in first cycle in dry season. Second cycle onwards, fresh water requirement will be 6.76 KLD and 7.7 KLD will be met by treated water. Thus there will be reduction of fresh water consumption by 53.25%. During wet season, water will not be required for green belt, thus fresh water requirement will be 3.9 KLD. About 8.5 KLD waste water will be treated in STP of 10 KLD capacity. 7.7 KLD treated water will be generated which will be completely recycled and reused within the site for flushing and gardening.
- viii. ZSI has studied the likelihood environmental impacts of the proposed project area at Swaraj Dweep, South Andaman and have been predicted for the operational phases based on the assessment of present survey/study, and have suggested management plans to mitigate the direct and indirect adverse environmental impacts predicted and identified as a result of the proposed project.

3. The EAC noted that the project/activity is covered under category 'A' of item 7(a) 'Airports' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at Central level by sectoral EAC.

4. The EAC observed that the name of the project proponent was inadvertently mentioned as M/s Airport Authority of India in the agenda for the 78th meeting and may be corrected to M/s Andaman and Nicobar Administration, as submitted by the PP in his application.

5. *The EAC found that the response to the queries raised are not satisfactory and made the following observations:*

- i. The observations and recommendations specified in the Biodiversity Study Report are found to be very generic in nature.
- ii. ZSI may not be considered as competent authority to assess the flora, specifically mangroves in the area. Separate study needs to be carried

out by an independent agency viz, CSIR-NIO or any Government accredited agency on the flora in the area.

- iii. Detailed plan for mangrove protection has not been prepared.
- iv. Water requirement calculations and water balance diagram does not clarify the quantity of fresh water/treated water for different uses.

Accordingly, the EAC (Infra-2) decided to defer the proposal and asked the project proponent to resubmit the response to the queries, in compliance to the aforesaid observations.

AGENDA ITEM NO. 78.4.5

Expansion of building construction project with increase in built-up area from 29,572.88 sqm. to 34,790.96 sqm. consisting of Retail, Food Court and Family Entertainment Centre at Valayanad Village, Kozhikode Municipal Corporation, Kozhikode Taluk & District, Kerala to be developed by M/s Lulu Convention Center Calicut (Pvt.) Ltd. - Environmental Clearance

(IA/KL/MIS/237876/2021; F. No. 21-110/2021-IA-III)

1.The Project Proponent (M/s. Lulu Convention Center Calicut (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 Nos. 271, 272, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291/1A, 291/1B, 321/2, 364, 367/2, 368, 369/2, 370, 372/1, 488/1A1A, 488/2, Valayanad Village, Kozhikode Municipal Corporation, Kozhikode Taluk & District, Kerala, with coordinates from 11°14'24.38"N to 11°14'27.65"N Latitude and 75°48'04.69"E to 75°48'15.03"E Longitude.
- ii. The proposal is for 'Expansion' and amendment/change in nature of the project activity.
- iii. Earlier, EC was obtained from SEIAA, Kerala vide E.C. Order no. 99/2017 (File No. 1116/EC/SEIAA/KL/2017) on 22-12-2017.The Certified Compliance Report (CCR) has been issued by IRO, MoEF&CC, Bangalore, dated 24.11.2021. The preliminary work is in progress at site based on the Environmental Clearance obtained, however, the construction work is yet to begin at site.
- iv. After expansion, the total plot area will be 39,334.42 sqm. and total construction (Built-up) area will be 34,790.96 sqm. The project will comprise of 1 no. building block. Maximum height of the building will be 24.05 m. The details of the proposed expansion and amendment are given as follows:

Particular	Details as per EC	Details as per present proposal	Remarks
Nature of the project	Hotel (105 Rooms), Restaurant (214 seats) Convention centre (2,000 seats)	Shopping Retail area, Family Entertainment centre, Food court (148 seats)	Change of facilities
Survey Nos.	271, 272, 282, 283, 285,286, 287,288, 290, 291/1A, 291/1B, 321/2,364, 367/2, 368,369/2, 370,372/1,488/1A1A, 488/2	271, 272, 282, 283, 284, 285, 286,287, 288, 289, 290, 291/1A,291/1B, 321/2, 364, 367/2, 368, 369/2,370,372/1, 488/1A1A,488/2	Addition of Survey Nos.284,289
Plot area	3.856 ha.	3.9334 ha.	Increase of 0.0774 ha.
Built-up area (insqm.)	29,572.88	34,790.96	Increase of 5,218.08
Max. no. of floors	Ground + 10 floors	Basement + Ground + Mezzanine floor+ 1 st floor + 2 nd floor	Reduction in no. of floors
Max. Height	51.80 m.	24.05 m.	Reduction of building height 27.75 m.
No. of Towers proposed	1 tower	1 tower	No change
Daily Water Requirement	127 KL (fresh 97 KL)	250 KL (fresh 93 KL)	Increase in water req. 123 KL
Daily sewage generation	102 KL	174 KL	Increase in sewage 72 KL
STP capacity	123 KL	210 KL	Increase in STP capacity of 87 KL
Daily solid waste generation	397 kg	1,142 kg	Increase solid waste 745 kg
Total Power Requirement	2.0 MVA (2,50,000 kWh/month)	3.6 MVA (6,00,000 kWh/month)	Increase of power req. of 1.6 MVA
D.G. set capacity	500 kVA x 1 no. + 1000 kVA x 2 nos.	1010 kVA x 4 nos. (3 working + 1 standby)	Increase in D.G. capacity
Parking	482 Cars + 429 Two wheeler	496 Cars + 200 Two Wheelers	As per norms

		+ 1 Truck	
Project cost	₹125.275 Crores	₹150 Crores	Increase in cost of ₹24.725 Crores
Max. population (floating)	2,751 persons	10,600 persons	Increase in population 7,849 persons

- v. 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 15 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.
- vi. During operational phase, total water demand of the project is expected to be 250 KLD and the same will be met by 93 KLD fresh water from stored rain water tank /KWA/well water and 157 KLD recycled water. Wastewater generated (174 KLD) will be treated in STP of total 210 KLD capacity. 157 KLD of treated wastewater will be generated which will be completely recycled and re-used for flushing (142 KLD), gardening (5 KLD)etc.) and for make-up water requirement for cooling towers attached with the HVAC system(about10 KLD).
- vii. About 1,142 kg/day solid waste will be generated in the project. The biodegradable waste (571 kg/day) will be processed in bio-gas generation unit/bio-bin system and the non-biodegradable waste generated will be handed over to authorized local vendor. An area equivalent of about 300 sqm. for about 15 days storage of non-biodegradable waste would be provided. The 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.
- viii. There is an old building (50 sqm.of built-up area) within the site and which are in dilapidated condition and the same would be demolished. 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 power requirement during operation phase is 3.6 MVA and connected load will be 5,000 KW which will be met from Kerala State Electricity Board (KSEB) & DG Sets (1010 kVA x 4nos - 3 nos. working & 1 no. standby) as a standby power back up arrangement. Total power requirement during construction phase is 100 kW and will be met from Kerala State Electricity Board & DG Sets (standby).
- x. Rooftop rainwater of buildings will be collected in RWH tank of total 400 KL (200 KL x 2 nos.) capacity for harvesting after filtration.
- xi. Parking facility for 496 cars + 200 two wheelers + 1 truck is proposed to be provided against the requirement of 401 cars + 200 two wheelers (according to local norms).

- xxv. Solar PV installation of 630 kWp capacity shall be provided to meet 12.6% of the connected load.
- xii. Total quantity of excavated soil will be of 27,530 cu.m. 660cu.m. of topsoil which is fertile will be kept at site for landscaping work, 628 cu.m. of excavated soil will be used for backfilling work and 26,242 cu.m. for internal road construction purposes.
- 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. Forest Clearance is not required.
- xvi. CRZ Clearance is not required.
- xvii. No court case is pending against the project.
- xviii. Total area for landscaping proposed is 3,434.45 sqm. (about 10% of total plot area). 29 trees will be cut and about 800 trees will be planted within the site.
- 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 ₹150 Crores.
- xxi. Employment potential - About 1,000 persons.
- xxii. Benefits of the project – The project would provide better commercial retail shopping area and entertainment facilities 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 also noted that the project has obtained Certified Compliance Report from MoEF&CC Integrated Regional Office, Bangalore vide letter no. EP/12.1/2017-18/21/SEIAA/KER/041 dated 24.11.2021. As per the said report, the status of compliance of the project is rated as "Satisfactory".

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 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 93 KLD during operational phase.

- ii. As proposed, wastewater shall be treated in an onsite STP of 210 KLD capacity. At-least 157 KLD of treated water from the STP shall be recycled and re-used for flushing (142 KLD) and for gardening (5 KLD) and for make-up water requirement for cooling towers attached with the HVAC system (10 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 at-least 3,434.45 sqm. As proposed, at least 800 trees shall be maintained 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 total 400 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 bio-gas generation unit /bio-bin system 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 PV installation of 630 kWp capacity shall be provided to meet atleast 12.6% of the connected load.
 - 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. 78.4.6

Proposed Building 'Samasthalayam' with built-up area of 32388.49 sqm. at Thenhippalam Village, Tirurangadi Taluk, Malappuram District, Kerala by M/s Samastha Kerala Islam Matha Vidyabhyasa (SKIMV) Board - Environmental Clearance

(IA/KL/MIS/241853/2021; F. No. 21-119/2021-IA-III)

1.The Project Proponent (M/s. Samastha Kerala Islam Matha Vidyabhyasa (SKIMV) Board) along with his consultant 'M/s. ULTRA TECH', 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 Block No. 4, Ward No. 10, Re Survey No. 88/3, 88/4, 94/5 at Thenhippalam Grama Panchayath, Thenhippalam Village, Tirurangadi Taluk, Malappuram District, Kerala with coordinates 11°6'42.85" N Latitude and 75°53'27.76" E Longitude.
- ii. The project is new.

- iii. The plot of land having an area of 16418.38 sqm. in possession of SKIMV Board has 5 existing buildings (office cum commercial building and related amenities) of SKIMV Board with a total built up area of 3694 sqm. and the remaining area is occupied by 76 trees. A plot area of 2747.38 sqm. (including frontage of the plot facing the NH and the existing office cum commercial building) out of total plot area of 16418.38 sqm. has been acquired by NHAI for widening the existing NH 66 (Panvel- Kochi-Kanyakumari). Hence, SKIMV Board proposes to construct new buildings with office space, dormitory and commercial purposes in the remaining plot of area 13671.0 sqm. by considering the proposed width of NH, in two phases.
- iv. The total plot area of the proposed project is 13671.0 sqm. (337.80 Cents), FSI area is 23465.77 sqm. and total construction (Built-up) area is 32388.49 sqm. The project will comprise of five buildings in two phases. Maximum height of the building is 31 m. The details of building are as follows:

Item	Description																
Plot area	13671.0 sqm. (337.80 Cents)																
Built-up area	32388.49 sqm. Phase I: 25290.49 sqm. Phase II: 7098.00 sqm.																
No. of buildings	5 buildings Phase I <ul style="list-style-type: none"> • Main building (Office Space & Dormitory) • Mosque • Commercial complex • Ladies prayer area Phase II <ul style="list-style-type: none"> • Annex building (future expansion) 																
Maximum no. of floors	B+G+5 (Main building)																
Maximum height of the building	31.0 m (Main building)																
No. of shops	60 (Commercial Complex)																
Occupancy load	1482																
Total FSI area	23465.77 sqm.																
FSI	1.72																
Permissible FSI	3																
Coverage	40.90%																
Green belt area	2764.04 sqm. <ul style="list-style-type: none"> • On ground – 2643.60 sqm. • On podium – 120.44 sqm. 																
Detailed area statement of the buildings	<table border="1"> <thead> <tr> <th>Building</th> <th>No. of floors</th> <th>Height (m)</th> <th>Area (sqm.)</th> </tr> </thead> <tbody> <tr> <td colspan="4">Phase I</td> </tr> <tr> <td>Main building</td> <td>B+G+5</td> <td>31</td> <td>21163.37</td> </tr> <tr> <td>Mosque</td> <td>G+1</td> <td>8</td> <td>1091.96</td> </tr> </tbody> </table>	Building	No. of floors	Height (m)	Area (sqm.)	Phase I				Main building	B+G+5	31	21163.37	Mosque	G+1	8	1091.96
	Building	No. of floors	Height (m)	Area (sqm.)													
	Phase I																
	Main building	B+G+5	31	21163.37													
Mosque	G+1	8	1091.96														

	Commercial complex	G+2	9.45	2981.40
	Ladies prayer area	G	3.6	53.76
	Total			25290.49
	Phase II			
	Annex Building	G+5	16.2	7098.00
	Total built-up area			32388.49

- v. During construction phase, total water requirement is expected to be 15.6 KLD (including water for drinking and flushing for construction workers and for construction activities) which will be met by drinking water cans and existing bore well at the site (for flushing and construction activities). During the construction phase, portable STP will be provided for disposal of wastewater. Temporary sanitary toilets will be provided during the construction period.
- vi. During operational phase, total water requirement of the project is expected to be 87 KLD during non-monsoon season and 70.5 KLD during monsoon season and the same will be met by 37.5 KLD freshwater from KWA supply/existing bore well/proposed open wells /harvested rainwater and 49.5 KLD (non-monsoon season) & 33 KLD (monsoon season) recycled water. Wastewater generated (58 KLD) will be treated in a STP of total 70 KLD capacity. 52.2 KLD of treated wastewater will be generated which will be recycled and reused (28 KLD for flushing, 16.5 KLD for gardening and 5 KLD for HVAC). About 2.7 KLD (non-monsoon) and 19.2 KLD (monsoon) excess treated water will be discharged into the proposed public drain.
- vii. About 0.337 TPD solid wastes will be generated in the project. The biodegradable waste (0.135 TPD) will be managed through 3 bio-bins each of 50 kg capacity each and the non-biodegradable waste generated (0.202 TPD) will be handed over to authorized local vendor.
- viii. The existing office cum commercial building will be cleared by NHAI and the remaining 4 existing buildings (974 sqm.) will be cleared for the proposed construction. Demolition works will be done as per Construction and Demolition waste management rules 2016. All the recoverable building materials will be recovered and reused and the remaining will be used in the project site for filling and levelling the site.
- ix. The soil type in the project site is lateritic. Excavation for the construction of basement for main building and laying of foundation for all buildings involves laterite cutting of 9,33,320.94 cu.m. Of this quantity, 3293.44 cu.m. is required for filling and 2100 cu.m. is required for building construction. Remaining quantity after filling and building construction (9,27,927.5 cu.m.) will be sold out.
- x. The total power requirement during construction phase is 75 kW and will be met from temporary 3 phase connection from Kerala State Electricity Board (KSEB). Total power requirement during operation

phase is 6000 kWh/day and will be met from KSEB and solar panels. One DG set of 500 kVA is proposed as a source of backup power.

- xi. Solar panels of capacity 130 kW are proposed to be placed in the terrace floor of the main building for water heating and lighting up the driveways and walkways. It is proposed to save 27 kW i.e. 10.83 % of electricity by the use of solar energy.
- xii. Rooftop rainwater of buildings will be collected in a RWH tank of total 300 KL capacity for harvesting after filtration.
- xiii. Parking facility for 391 nos of four wheelers and 1450 sqm. area for two wheelers is proposed to be provided against the requirement of 384 nos and 1440 sqm. area respectively (according to local norms). Out of 391, about 20% of the proposed cars are expected to be electric cars.
- xiv. The project is not located in Critically Polluted area.
- xv. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xvi. Forest Clearance is not required.
- xvii. CRZ Clearance is not required.
- xviii. No court case is pending against the project.
- xix. The total green area of 2764.04 sqm.(Ground- 2643.60 sqm. and Podium- 120.44 sqm.) is allocated for green belt for the proposed project. Out of the total 76 trees, 3 trees will be cleared by NHAI for NH widening and 52 trees will be cleared for the proposed construction. Remaining 21 trees will be retained within the site. A total of 178 trees will be maintained within the site during operation phase.
- xx. Expected timeline for completion of the project– 24 months (2 years) each for both Phase I and Phase II. The construction activities of Phase II will start after 3 years of Phase I.
- xxi. Investment/Cost of the project is: ₹50 Crore (Phase I – ₹40.0 Crore, Phase II- ₹10.0 Crore)
- xxii. Employment potential: 200 persons during construction phase. 198 persons during operation phase [Office (100 Staff) and Commercial Complex (98 staff)]
- xxiii. Benefits of the project - Creates employment opportunities during construction and operation phase. Improves the livelihood by the establishment of new shops in the commercial complex. Availability of goods and service for the local population

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. The project proponent shall obtain prior NOC from NHAI before commencing the project.
- ii. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 37.5 KLD during operational phase.
- iii. As proposed, wastewater shall be treated in an onsite STP of 70 KLD capacity. At-least 49.5 KLD of treated water from the STP shall be recycled and re-used for flushing (28 KLD) and for gardening (16.5 KLD) and for HVAC system (5 KLD). PP shall explore options to utilise the excess treated water of 2.7 KLD (non-monsoon) and 19.2 KLD (monsoon).
- iv. 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.
- v. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be at-least 2764.04 sqm. As proposed, at least 178 trees shall be maintained 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.
- vi. 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).
- vii. 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.
- viii. 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 300 KL capacity shall be provided by PP

- for rain water harvesting after filtration.
- ix. 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 bio-gas generation unit /bio-bin system 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.
 - x. 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.
 - xi. The PP shall provide electric charging points in parking areas for e-vehicles as committed.
 - xii. As committed, solar PV installation of 130 kW capacity shall be provided to meet atleast 10.83% of the connected load.
 - xiii. 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. 78.4.7

Environmental Clearance for Hospital Complex Project with total built-up area of 56,866 sqm. (Existing 26,985sqm. + Proposed 29,881 sqm.) at Puthiyangadi Village, Kozhikode Corporation, Kozhikode Taluk & District, Kerala by M/s Perfect Health Care Services - Environmental Clearance

(IA/KL/MIS/240263/2021; F. No. 21-111/2021-IA-III)

1. The Project Proponent (M/s. Perfect Health Care Services) 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. 53/1, 54/1, 54/2, 54/3A, 54/3B1, 54/3B2, 54/3C 1A, 54/12, 58/2B, Puthiyangadi Village, Kozhikode Corporation, Kozhikode Taluk & District, Kerala with coordinates from 11° 18'4.13"N To 11° 18'8.54"N Latitude and 75°46'20.93"E to 75°46'34.94"E Longitude.
- ii. The proposal is for 'Fresh EC'.
- iii. Earlier, EC was obtained from SEIAA, Kerala vide E.C. Order no. 9/SEIAA/KL/394/2012 dated 16.07.2012 for 500 bedded hospital with built-up area of 56,866 sqm. However, the construction carried out at site was only for a built-up area of 26,985 sqm. with 220 beds. The occupancy of the building was carried out for the aforesaid built-up area vide occupancy certificate dated 02.05.2017 from Kozhikode Municipal Corporation and the hospital is functioning.
- iv. It is now proposed to expand the existing project with additional built-up area of 29,881 sqm. and thereby the cumulative built-up area (existing + proposed) will be 56,866 sqm. and with additional beds of 280 and thereby the cumulative beds (existing + proposed) will be 500 beds. Although the parameters of the new application are the same as that of the parameters of EC granted vide E.C. Order no. 9/SEIAA/KL/394/2012 dated 16.07.2012, however, since the aforesaid EC has expired on 15.07.2019, application has been submitted for fresh EC.
- v. Certified Compliance Report (CCR) has been issued by Integrated Regional Office (IRO), MoEF&CC, Bangalore dated 09.12.2021.
- vi. The total plot area is 31,424 sqm. and total construction (Built-up) area is 56,866 sqm. The project will comprise of 1 no. hospital & 1 no. MLCP building block. Maximum height of the building is 38.96 m. The details of building are as follows:

S.No.	Building block name	Max. no. of floors	Max. height	Built-up area (sqm.)	Status of construction
1.	Existing Hospital Block (Phase- A)	Ground + 5 floors	24.35	26,985	Constructed
	Proposed Hospital Block (Phase-B, extension of existing block)	Ground + 8 floors	38.96	14,229	Proposed
	Proposed Hospital Block (Phase-C, extension of existing block)	Ground + 8 floors	38.96	11,152	Proposed
2.	Proposed MLCP Block	Ground + 5 floors	22.00	4,500	Proposed
	Total built-up area			56,866	

- vii. The details of the floor wise facilities in the proposed project are given as follows:

No. of floors	Existing Hospital Building (Phase-A) (Ground + 5 floors)	Proposed Extension of existing Hospital building (Phase-B) (Ground + 8 floors)	Proposed Extension of existing Hospital building (Phase-C) (Ground + 8 floors)	Proposed Multi Level Car Parking (MLCP) Block (Ground + 5 floors)
Ground floor	Reception, Pharmacy, Cafeteria, Admin Unit & Scanning Unit	Reception & Cafeteria	Emergency Department	40 Cars
1 st floor	OPDs, Blood bank, Dialysis & Physiotherapy	OPD	OPD	48 Cars
2 nd floor	OTs	OTs/ICUs	OTs/ICUs	48 Cars
3 rd floor	I.P. Beds	I.P. Beds	I.P. Beds	48 Cars
4 th floor	I.P. Beds	I.P. Beds	I.P. Beds	48 Cars
5 th floor	I.P. Beds	I.P. Beds	I.P. Beds	48 Cars
6 th floor	Nil	I.P. Beds	I.P. Beds	Nil
7 th floor	Nil	I.P. Beds	I.P. Beds	Nil
8 th floor	Nil	Admin (Non-clinical)	Admin (Non-clinical)	Nil

- viii. During construction phase, total water requirement is expected to be 36 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 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 317 KLD and the same will be met by 155 KLD fresh water from stored rainwater tank/KWA/well water and 162 KLD recycled water. Wastewater generated (180 KLD) will be treated in STP of total 225 KLD capacity. 162 KLD of treated wastewater will be generated which will be completely recycled and re-used for flushing (105 KLD), gardening (32 KLD), boiler (20 KLD) and for Make-up water requirement for cooling towers attached with the HVAC system (5KLD).
- x. About 750 kg/day solid waste will be generated in the project. The biodegradable waste (375 kg/day) will be processed in bio-gas generation unit (existing)/bio-bin system and the non-biodegradable waste generated (375 kg/day) will be handed over to authorized local vendor. An area equivalent of about 150 sqm. for about 15 days storage of non-

biodegradable waste would be provided. The 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.

- xi. Bio-medical waste (about 250 Kg/day) like infectious beddings, cotton, swabs, used syringes, discarded medicines, etc. would be generated. The bio-medical waste would be segregated at source by providing appropriate colour coded bins/containers as per the colour coding provided in the Bio-Medical Waste (Management & Handling) Rules, 2016 and stored in the earmarked wastes storage areas near to the hospital block (about 25 sqm.). The segregated Bio-medical waste shall be outsourced through Kerala State Pollution Control Board (KSPCB) authorized agency [M/s Indian Medical Association Goes Eco Friendly, (IMAGE)] as per MoU made between PP & IMAGE.
- xii. The total power requirement during operation phase is 9,000 kW (connected load) and will be met from Kerala State Electricity Board (KSEB) & DG Sets (1010 kVA x 4 nos.) asstandby. Total power requirement during construction phase is 100 kW and will be met from KSEB & DG Sets (standby).
- xiii. Rooftop rainwater of buildings will be collected in RWH tank of total 700 KL (350 KL x 2 nos.) capacity for harvesting after filtration.
- xiv. Parking facility for 390 cars + 400 two wheelers is proposed to be provided against the requirement of 370 cars + 400 two wheelers (according to local norms).
- xv. Solar PV installation of 937.50 kWp capacity shall be provided to meet 10.42% of the connected load.
- 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. Forest Clearance is not required.
- xix. CRZ Clearance is not required.
- xx. No court case is pending against the project.
- xxi. Total area for landscaping proposed is 10,743 sqm. (about 34% of total plot area). There is no tree cutting required for the proposed construction. 400 trees are proposed to be planted within the site.
- xxii. Expected timeline for completion of the project - About 36 months from the date of start of construction.
- xxiii. Investment/Cost of the project is ₹780 Crores.
- xxiv. Employment potential - About 150 persons during construction phase and about 750 persons during operation phase.
- xxv. Benefits of the project – The project would provide better health infrastructure facilities & 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 also noted that the project has obtained Certified Compliance Report from MoEF&CC Integrated Regional Office, Bangalore vide letter no. EP/12.1/2012-13/36/SEIAA/KER/1180 dated 09.12.2021. As per the said report, the status of compliance of the project is rated as "Satisfactory".

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 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 155 KLD during operational phase.
- ii. As proposed, wastewater shall be treated in an onsite STP of 225 KLD capacity. At-least 162 KLD of treated water from the STP shall be recycled and re-used for flushing (105 KLD), gardening (32 KLD), boiler (20 KLD) and for make-up water requirement for cooling towers attached with the HVAC system (5 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 at-least 10,743 sqm. As proposed, at least 400 trees shall be maintained 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 700 KL capacity shall be provided by PP 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 bio-gas generation unit /bio-bin system 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.
- 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 PV installation of 937.50 kWp capacity shall be provided to meet atleast 10.42 % of the connected load.
- 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. 78.5

In continuation to the discussions held earlier on 16.09.2021, 28.10.2021 and 16.11.2021, with due permission of the Chairman, the EAC (Infra 2) discussed the report of the site visit conducted by the duly constituted EAC sub-committee during 25-26th November, 2021 to the project location of the Modern Poultry & Egg Market at Ghazipur, Delhi. After detailed discussion held on all issues, the committee expressed concurrence with the findings in the site visit report and recommended it for submission to the Ministry.

LIST OF PARTICIPANTS OF EAC (INFRASTRUCTURE-2) IN 78th MEETING OF EAC (INFRA-2) HELD DURING 14th -15th DECEMBER, 2021 THROUGH VIDEO CONFERENCING

S. No.	Name	Designation	Attendance		Sign
			14.12.2021	15.12.2021	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	P	P	-
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 MoEF&CC/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 lightning 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 MoEFCC/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.
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- 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).
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- 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.
