Validity expires on 06.10.2026

सत्यमेव जयते

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

Present: Dr.H.Nagesh Prabhu IFS (Retd), Chairman; Dr.V.Venu IAS, Member Secretary and Dr.Jayachandran.K, Member

Sub: SEIAA- Environmental Clearance for the proposed building construction project as part of development of IT/ITES campus (Phase-1) at Technocity Campus in Re-Survey Nos. 4/1, 4/2, 4/3 and Re-Survey No. 1 (in Block No. 8 of Andoorkonam Village) and Re-Survey No. 387-part, 388, 389, 390, 401, 402 and Re-Survey Nos. 398 (Part), 399-(part), 400 (Part) (in Block No. 9 of Pallipuram Village), Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala to be developed by M/s Tata Consultancy Services Ltd. - Granted- Orders issued

State Environment Impact Assessment Authority, Kerala

No. SIA/KL/MIS/209935/2021, 1896/EC1/2021/SEIAA dated : 07.10.2021

Read: 1. Application received on 21.04.2021 through PARIVESH from Shri.Santosh P.M., General Manager - Administration,M/s Tata Consultancy Services Ltd., Peepul Park, Technopark Campus, Kariavattom P.O., Thiruvananthapuram, Kerala-695581.

2. Minutes of the 122nd SEAC meeting held on 15th, 16th, 17th&18th June 2021
3. Minutes of the 123rd SEAC meeting held on 27th – 30th July 2021
4. Minutes of the 124th SEAC meeting held on 24th -27th August, 2021
5. Minutes of the 112th SEIAA meeting held on 14th, 15th& 16th September 2021
6. G.O(Rt.) No.29/2019/Envt dt.12.04.2019.

ENVIRONMENTAL CLEARANCE NO. 53 /2021

Shri.Santosh P.M., General Manager - Administration, M/s Tata Consultancy Services Ltd., Peepul Park, Technopark Campus, Kariavattom P.O., Thiruvananthapuram, Kerala-695581, submitted an application for Environmental Clearance via PARIVESH on 21.04.2021 for the proposed building construction project as part of development of IT/ITES campus (Phase-1) at Technocity Campus in Re-Survey Nos. 4/1, 4/2, 4/3 and Re-Survey No. 1 (in Block No. 8 of Andoorkonam Village) and Re-Survey No. 387-part, 388, 389, 390, 401,

402 and Re-Survey Nos. 398 (Part), 399-(part), 400 (Part) (in Block No. 9 of Pallipuram Village), Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala to be developed by M/s Tata Consultancy Services Ltd. The details of the project are as follows:

SL.No.	Particulars	Details
1	Name of the Project	Building construction project as part of development of IT/ITES campus (Phase-1) by M/s Tata Consultancy Services Ltd
2	Proposed Activity	Construction Project
3	Name of the Sector & Schedule No. (in the EIA Notification, 2006)	Category 'B' Schedule 8(a)
4	Name & Address of the Project Proponent	Shri.Santosh P.M., General Manager -Administration, M/s Tata Consultancy Services Ltd., Peepul Park, Technopark Campus, Kariavattom P.O., Thiruvananthapuram - 695581
5	Project Location	
	a) Survey Nos:	Re-Survey Nos. 4/1, 4/2, 4/3 and Re-Survey No. 1 (in Block No. 8 of Andoorkonam Village) and Re-Survey No. 387-part, 388, 389, 390, 401, 402 and Re-Survey Nos. 398 (Part), 399-(part), 400 (Part) (in Block No. 9 of Pallipuram Village)
	b) Revenue Village	Andoorkonam & Pallipuram Village
	c) Taluk	Thiruvananthapuram
	d) District	Thiruvananthapuram
6	Total Plot Area	39.2545 ha
7	Total Built-up Area	99,998.29 sq. m
8	Project Cost	Rs. 440 Crores
9	Total Water Requirement	366 KL/day (fresh water 187 KL + 179 KL recycle water)
10	Domestic Sewage Generation	199 KL/day
11	Total Power Requirement	4,000 kWh

12	Parking proposed	877 Cars + 3255.86 sq.m. area for two wheelers
13	Proposed CER & Budget	Action for spending at least 1.5% of project cost, amounting to Rs 5.595 crore, in the community augmentation plan, as part of Corporate Environment Responsibility (CER), and the proposed activities, shall be as follows. • Ananthanchira Drinking Water Project : Rs 1,00,00,000/ • Well recharge : Rs 1,60,00,000/ • Renewable Energy : Rs 55,00,000/ • Enhance the facilities of Govt. L P / U P Schools: Rs 57,00,000/ • Enhance the facilities of Family Health Centre: Rs 87,50,000/ • Support to the Travancore Heritage Backwater Tourism Circuit Project : Rs 1,00,00,000 Total: Rs. 5,59,50,000/
14	Date of Field Inspection	13.08.2021
15	Validity	5 years from the date of issuance of EC

2. The proposal was placed in the 124th SEAC meeting held on 24th – 27th August, 2021. The Committee discussed the Field Inspection Report and decided to recommend the issuance of EC with project life of **five years** subject to the following specific conditions:

a. Prepare and implement a Comprehensive Master Plan for the whole land, available with TCS, including the present proposal, after considering future Development needs, providing sufficient open areas, greening strips/ Pachathuruthu, Miyawaki micro forest, sewer lines, storm water drainage systems, road network etc.

b. Provide sufficient water treatment facility for roof top / surface runoff /Rain Water harvested, from the compound, for ensuring recycle/ reuse, within the compound.

c. Establish a roof top Rain Water Harvesting (RWH) System, with a storage and treatment unit of 250 KL capacity for reducing intake of domestic water from KWA.

d. Implement a scientific Storm Water Drainage Plan based on topography, underneath clay deposits, percolation rate, future development plans, and storage capacity of pond of 10 ML, in a 1.55 acres of land, as proposed in the EMP.

e. Ensure reusing of rain water to the maximum extent possible, by avoiding soak pits proposed, considering the clayey strata, of sub soil of the project area.

f. Establish a Sewage Treatment Plant (STP) of 240 KL/day capacity, with treatment of primary, secondary with MBBR and tertiary with ultra-filtration units, followed by disinfection for, ensuring reuse of treated water for flushing, horticulture and AC cooling make up water.

g. Provide proper facilities for management of excavated soil / cutting of earth made at the site, of about 95,250 cu.m. Action shall be taken for utilising excavated soil of 48,200 cu.m, for backfilling purposes, earth of 10,700 cu.m, to be preserved for landscaping purposes and balance excavated earth of 36,350 cu.m as proposed to be temporarily stored and stacked in the campus.

h. Provide treatment facility for biodegradable waste of capacity, 413 kg/day using the Organic Waste Converter (OWC), with capacity of about 500 kg/ day and link it with EMP for compliance monitoring.

i. Ensure a tree plantation programme, as part of compensatory afforestation programme of the project, for plantation 1400 trees, as per MoEF & CC norms and additional number of planting of trees, as specified in the KMBR .

j. Establish a properly designed plan for planting of local species of trees in the green belt area / open space, compensatory afforestation area, possibility for providing a Pachathuruthu, Miyawaki micro forest / afforestation within the area, including avenue plantations.

k. Action shall be taken for implementing, at least, one component fully of the Ananthanchira Water Supply Scheme, by the TCS, utilising the above proposed amount, in consultation with Local Body and KWA.

l. Establish onsite solar power generation by using roof top solar panels, for generating. Energy at least 10 %, instead of 7 % proposed, of total electrical demand, and link it with EMP.

m. Action shall be taken for utilisation of excavated balance quantity of soil / clay of 36,350 cu.m. Out of the total excavated earth / soil / clay of 95,250 cu.m, soil of 10,700 cu.m, shall be utilised for landscaping purposes and soil of 48,200 cu.m shall be utilised for backfilling purposes. Action shall also be taken for utilising the balance quantity of soil/ clay of 36,350 cu.m.appropriately in consultation with the

Government, as the soil of the area is a precious industrial resource, and avoid the proposal of stacking it in the compound, as it may deteriorate the quality of storm water collected from the area during the operation phase.

n. Action for spending at least 1.5% of project cost, amounting to Rs 5.595 crore, in the community augmentation plan, as part of Corporate Environment Responsibility (CER), and the proposed activities, shall be as follows.

- Ananthanchira Drinking Water Project : Rs 1,00,00,000/
- Well recharge : Rs 1,60,00,000/
- Renewable Energy : Rs 55,00,000/
- Enhance the facilities of Govt. L P / U P Schools: Rs 57,00,000/
- Enhance the facilities of Family Health Centre: Rs 87,50,000/
- Support to the Travancore Heritage Backwater Tourism Circuit Project : Rs 1,00,00,000

Total: Rs. 5,59,50,000/

o. Implement the CER plan and perform direct implementation of the components that are to be completed from the side of TCS, in each activity, instead of giving funds from the CER budget. Sufficient physical details of each of the proposed activities shall be linked with EMP in quantifiable terms, for ensuring compliance monitoring.

3. The proposal was placed in the 112th SEIAA meeting held on 14th, 15th& 16th September 2021. **Authority accepted the recommendation of SEAC and decided to issue EC for 5 years subject to the following specific conditions in addition to the general conditions.**

a. *Prepare and implement a Comprehensive Master Plan for the whole land, available with TCS, including the present proposal, after considering future development needs, providing sufficient open areas, greening strips/ Pachathuruthu, Miyawaki micro forest, sewer lines, storm water drainage systems, road network etc.*

b. *Provide sufficient water treatment facility for roof top / surface runoff /rain water harvested, from the compound, for ensuring recycle/ reuse, within the compound.*

c. *Establish a roof tor Rain Water Harvesting (RWH) System, with a storage and treatment unit of 250 KL capacity for reducing intake of domestic eater from KWA.*

d. *Implement a scientific Storm Water Drainage Plan based on topography, underneath clay deposits, percolation rate, future development plans, and storage capacity of pond of 10 ML, in a 1.55 acres of land, as proposed in the EMP.*

e. *Ensure reusing of rain water to the maximum extent possible, by avoiding soak pits proposed, considering the clayey strata, of sub soil of the project area.*

f. *Establish a Sewage Treatment Plant (STP) of 240 KL/day capacity, with treatment of primary, secondary with MBBR and tertiary with ultra-filtration units, followed by disinfection for, ensuring reuse of treated water for flushing, horticulture and AC cooling make up water.*

g. *Provide proper facilities for management of excavated soil / cutting of earth made at the site, of about 95,250 cu.m. Action shall be taken for utilising excavated soil of 48,200 cu.m, for backfilling purposes, earth of 10,700 cu.m, to be preserved for landscaping purposes and balance excavated earth of 36,350 cu.m as proposed to be temporarily stored and stacked in the campus.*

h. *Provide treatment facility for biodegradable waste of capacity, 413 kg/day using the Organic Waste Converter (OWC), with capacity of about 500 kg/ day and link it with EMP for compliance monitoring.*

i. *Ensure a tree plantation programme, as part of compensatory afforestation programme of the project, for plantation 1400 trees, as per MoEF& CC norms and additional number of planting of trees, as specified in the KMBR .*

j. *Establish a properly designed plan for planting of local species of trees in the green belt area / open space, compensatory afforestation area, possibility for providing a Pachathuruthu, Miyawaki micro forest / afforestation within the area, including avenue plantations.*

k. *Action shall be taken for implementing, at least, one component fully of the Ananthanchira Water Supply Scheme, by the TCS, utilising the above proposed amount, in consultation with Local Body and KWA.*

l. *Establish onsite solar power generation by using roof top solar panels, for generating. Energy at least 10 %, instead of 7 % proposed, of total electrical demand, and link it with EMP.*

m. *Action shall be taken for utilisation of excavated balance quantity of soil / clay of 36,350 cu.m. Out of the total excavated earth / soil / clay of 95,250 cu.m, soil of 10,700 cu.m, shall be utilised for landscaping purposes and soil of 48,200 cu.m shall be utilised for backfilling purposes. Action shall also be taken for utilising the balance quantity of soil/ clay of 36,350 cu.m. appropriately in consultation with the Government, as the soil of the area is a precious industrial resource, and avoid the proposal of stacking it in the compound, as it may deteriorate the quality of storm water collected from the area during the operation phase.*

n. *Action for spending at least 1.5% of project cost, amounting to Rs 5.595 crore, in the community augmentation plan, as part of Corporate Environment Responsibility (CER), and the proposed activities, shall be as follows.*

- *Ananthanchira Drinking Water Project : Rs 1,00,00,000/*
- *Well recharge : Rs 1,60,00,000/*
- *Renewable Energy : Rs 55,00,000/*
- *Enhance the facilities of Govt. L P / U P Schools: Rs 57,00,000/*
- *Enhance the facilities of Family Health Centre: Rs 87,50,000/*
- *Support to the Travancore Heritage Backwater Tourism Circuit Project : Rs 1,00,00,000*

Total: Rs. 5,59,50,000/

o. *Implement the CER plan and perform direct implementation of the components that are to be completed from the side of TCS, in each activity, instead of giving funds from the CER budget.. Sufficient physical details of each of the proposed activities shall be linked with EMP in quantifiable terms, for ensuring compliance monitoring.*

p. *As per OM no F.No.22-65/2017-IA.III dated 30th September 2020, under Corporate Environmental Responsibility (CER) the project Proponent shall prepare an Environment Management Plan (EMP) as directed by SEAC during appraisal , covering the issues(as listed above) to address the environmental problems in the project region, indicating both physical and financial targets year wise. The EMP shall be implemented in consultation with District Collector. The indicated cost for CER shall be 1.5 of the project cost as indicated above depending upon the nature of activities proposed. The follow up action on implementation of CER shall be included in the half yearly compliance report which will be subjected to field inspection at regular intervals. A copy of the approved EMP shall be made available to the concerned Corporation/Panchayat for information and implementation support.*

q. *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 (Circular No.J-11013/41/2006-IA.II(I) of GoI, MoEF dt.22.09.2008).*

4. In this circumstance, Environmental Clearance is granted to Shri.Santhosh P.M., General Manager - Administration, M/s Tata Consultancy Services Ltd., Peepul Park, Technopark Campus, Kariavattom P.O., Thiruvananthapuram, Kerala-695581, for the proposed building construction project as part of development of IT/ITES campus (Phase-1) at Technocity Campus in Re-Survey Nos. 4/1, 4/2, 4/3 and Re-Survey No. 1 (in Block No. 8 of Andoorkonam Village) and Re-Survey No. 387-part, 388, 389, 390, 401, 402 and Re-Survey Nos. 398 (Part), 399-(part), 400 (Part) (in Block No. 9 of Pallipuram Village), Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala to be developed by M/s Tata Consultancy Services Ltd, subject to the condition in Para 3 of this order and the usual general conditions for projects other than mining appended hereto. Also the following green conditions should be strictly adhered to.

Green Conditions.

1. *Adequate rain water harvesting facilities shall be arranged for.*

2. *Technology and capacity of the STP to be indicated with discharge point (if any) of the treated effluent.*
3. *Effluent water not conforming to specifications shall not be let out to water bodies.*
4. *Maximum reuse of grey water for toilet flushing and gardening and construction work shall be ensured.*
5. *Dual plumbing for flushing shall be done.*
6. *Provisions for disposal of e-wastes, solid wastes, non-biodegradables and separate parking facility for the buildings shall be provided.*
7. *Generation of solar energy to be mandatory for own use and/or to be provided to the grid.*
8. *There shall be no compromise on safety conditions and facilities to be provided by the project proponent*, which shall be ensured for occupation, regularisation or consent to operate.

5. The Environmental Clearance will also be subject to full and effective implementation of all the undertakings given in the Application Form, all the environmental impact mitigation and management measures undertaken by the project proponent in the documents submitted to SEIAA, and the mitigation measures and waste management proposal as assured in the Form -1 and Form-1A, Environment Management Plan as submitted. The assurances and clarifications given by the proponent in the application and related documents will be deemed to be part of these proceedings as conditions as undertaken by the proponent, as if incorporated herein.

6. Validity of the Environmental Clearance will be for **Five years** from the date of issuance of E.C, subject to inspection by SEIAA on annual basis and compliance of the conditions, subject to earlier review of E.C in case of violation or non-compliance of any of the conditions stipulated herein or genuine complaints from residents within the scrutiny area of the project.

7. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its agencies and also by the Regional Office of the Ministry of Environment and Forests, Govt. of India, Bangalore. Necessary assistance for entry and inspection by the concerned officials and staff should be provided by the project proponents.

8. Instances of violation if any shall be reported to the District Collector, Thiruvananthapuram to take legal action under the Environment (Protection) Act 1986.

9. The Half Yearly Compliance Report (HYCRs) with its contents of a covering letter, compliance report and environmental monitoring data has to be in PDF format merged into a single document. The email should clearly mention the name of the project, EC No and date, period of submission and to be sent to the Regional Office of MoEFF& CC by email only at email ID rosz.bng-mefcc@gov.in & seacseiaakerala@gmail.com . Hardcopy of HYCRs shall not be acceptable.

10. The given address for correspondence with the authorized signatory of the project is Shri.Santhosh P.M., General Manager - Administration, M/s Tata Consultancy Services Ltd., Peepul Park, Technopark Campus, Kariavattom P.O., Thiruvananthapuram, Kerala-695581

Anil P.Antony
Administrator, SEIAA
For Member Secretary, SEIAA

To,

Shri.Santhosh P.M.,
General Manager - Administration,
M/s Tata Consultancy Services Ltd.,
Peepul Park, Technopark Campus,
Kariavattom P.O.,
Thiruvananthapuram-695581

Copy to:

1. MoEF Regional Office, Southern Zone, KendriyaSadan, 4th Floor, E&F Wing, II Block, Koramangala, Bangalore-560034.(through e-mail: rosz.bng-mefcc@gov.in)
2. The Principal Secretary to Government, Environment Department

3. The Director, Directorate of Environment & Climate Change, 4th Floor KSRTC Bus Terminal, Thampanoor, Thiruvananthapuram, Kerala 695001

4. The District Collector, Thiruvananthapuram
5. The District Town Planner, Thiruvananthapuram
6. The Tahsildhar, Thiruvananthapuram Taluk, Thiruvanathapuram District
7. The Member Secretary, Kerala State Pollution Control Board
8. The Secretary, Pallipuram Panchayath, Old NH, Kaniyapuram, Thiruvananthapuram, Kerala-695316
9. The Secretary, Andoorkonam Panchayath, Andoorkonam, Thiruvananthapuram, Kerala-695584
10. Chairman, SEIAA, Kerala
11. Website
12. Stock file
13. O/c

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (SEIAA), KERALA

GENERAL CONDITIONS FOR PROJECTS OTHER THAN MINING

1. The proponent should provide notarized affidavit indicating the number and date of Environmental Clearance proceedings that all the conditions stipulated in the EC shall be scrupulously followed.
2. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available on the website of SEIAA www.seiaakerala.in. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.
3. The proponent shall send a copy of the clearance letter to the concerned Grama Panchayath/District Panchayath/Municipality/Corporation/Urban Local Body and also to the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The Environmental Clearance shall also be uploaded on the website of the company.
4. The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font of size of not less than 40.
5. Consent to Establish and Consent to Operate from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating activity. All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives. Copies of statutory clearance obtained shall be enclosed along with first half yearly compliance report.
6. If blasting is involved in the preparation of site, the required clearances from the competent authorities should be obtained.
7. The stipulations/conditions issued by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and

Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, Solid Waste Management Rules,2016 Plastic Waste Management and Handling Rules, 2016, Construction and Demolition Waste Management Rules 2016, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

8. The conditions specified in the EIA notifications 2006 and subsequent amendments, the specific directions given by SEIAA/SEAC should be followed under corporate Environment Responsibility. The activities carried out under CER should be listed with details in Half yearly compliance report along with Status of Implementation and certificates from the beneficiaries and photographs.
9. Safety measures should be implemented as per the Fire and Safety Regulations/SDMA guidelines.
10. The environmental safeguards contained in the EIA Report should be implemented in letter and spirit and status of implementation of each one should be included in the half yearly compliance Report.
11. Environment Monitoring Committee as agreed under the affidavit filed by the proponent should be formed and made functional. Environmental Monitoring Committee with defined functions and responsibility should foresee post operational environmental problems (Eg. development of slums near the site, increase in traffic congestion, power failure, increase in noise level, natural calamities, and increase in suspended particulate matter etc.) and action taken to solve these immediately with mitigation measures
12. Suitable avenue trees should be planted on either side of approach road and internal roads and open parking areas, if any. The proponent should plant trees at least 5 times of the loss of trees that has occurred while clearing the land for the project. The native flowering and fruiting species only shall be used for planting and planning should be done considering the nature of public use.
13. The project shall incorporate devices for solar energy generation and utilization to the maximum possible extent with the possibility of contributing the same to the power grid and consumption in future.
14. The proponent shall submit half yearly compliance reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) and upload the same on their website and shall update the same periodically. The

compliance repot shall be simultaneously sent to the Regional Office of Ministry of Environment, Forests and Climate Change, Govt. of India at Bengaluru and also to SEIAA.

15. The project proponent is responsible for implementing all the provisions of labour laws applicable from time to time. Provision should be made for providing cooking facilities and supply of kerosene or cooking gas to the labourers.
16. The proponent shall co-operate with and provide facilities and documents/data to the Agencies including the Officials from the Regional of Ministry of Environment, Forests and Climate Change, Bengaluru during their inspection as part of monitoring the implementation of environmental safeguards.
17. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Authority.
18. In case of transfer of EC, the matter shall be intimated and approval from the Authority shall be obtained as per the existing norms.
19. Environmental Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.
20. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the Environment Clearance under the provisions of the Environment (Protection) Act 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
21. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal 1, if preferred, within a period of 30 days as prescribed under section 11 of the National Green Tribunal Act, 1997.

General Conditions specific to Construction Phase

1. All statutory permissions including "Consent for Establishment" to STP/ETP, Solid waste management plant, Power Generator etc shall be obtained from Kerala State Pollution Control Board under Air Act and Water Act and Environment (Protection) Act. A copy shall be submitted to the Ministry/SEIAA before start of any construction work at the site.
2. The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code including protection measures from lightning etc. Building constructed in the

runout area of landslide / rock fall area, shall be provided with suitable structures/ measures to prevent earth materials to hit the structure.

3. All required sanitary and hygienic measures should be in place before starting construction activities which are to be maintained throughout the construction phase.
4. A First Aid Room shall be provided at the project site both during construction and operation phases of the project.
5. Provide safe and healthy basic facilities for construction workers as per the Building & Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996
6. Adequate drinking water and sanitary facilities should be provided for construction workers at the site, Provision should be made for mobile toilets. Safe disposal of wastewater and solid wastes generated including piling debris during the construction phase should be ensured.
7. Unless provided otherwise, all the topsoil excavated during construction phase should be stored and re-used for backfilling/ horticulture/landscaping purposes within the project site.
8. Top soil excavated should not be used for reclaiming wetlands.
9. The muck shall be disposed of only at approved sites with the approval of competent authority. The disposal should not create any adverse effect on the neighbouring communities and should be disposed taking necessary precautions for general safety and health of the public. Proof regarding the same shall be enclosed with the respective six monthly compliance reports.
10. Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such materials must be secured so that they will not leach into the ground water.
11. Any hazardous waste generated during construction phase, should be disposed off to authorised/approved Waste Collectors as per applicable rules and norms with necessary approval of the Kerala State Pollution Control Board.
12. Soil and ground water samples shall be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
13. Storm water control and its re-use measures as per CGWB and BIS standards shall be followed for various applications.
14. 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 the applicable air and noise

emission standards and should be operated only during non-peak hours. During the transportation of building materials/products, the vehicles shall be covered with suitable materials to prevent dust pollution.

15. Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be taken to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/KSPCB.
16. The diesel generator sets used during construction phase should be of low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards. The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken. DG sets shall be installed and made functional as per guidelines of KSPCB.
17. Ready mixed concrete must be used in building construction. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
18. Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
19. Separate dual plumbing line should be provided; one line for Toilet Flushing / Gardening / Vehicle wash and another separate line for other domestic uses, for ensuring reuse / recycle of treated waste water to the maximum extent possible.
20. Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.
21. Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
22. Water efficient plumbing features should be adopted
23. Use of glass may be reduced by 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating on windows.
24. Design of the building should be in compliance to Energy Building Code as applicable

25. Roof should meet perspective requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill the requirement.
26. Opaque wall should meet perspective requirement as per energy Conservation Building Code which is proposed to be mandatory for all air conditioned spaces while it is optional for non-airconditioned spaces by use of appropriate thermal insulation material to fulfill requirement
27. Climate responsive design as per Green Building Guidelines in practice should be adopted
28. Building design should cater to the differently-abled citizens
29. Vegetation should be adopted appropriately on the ground as well as over built structure such as roofs, basements, podiums etc.
30. Exposed roof area and covered parking should be covered with material having high solar reflective index
31. Regular supervision of the above and other measures should be in place all throughout the construction phase, so as to avoid disturbance to the surroundings.
32. Fly ash should be used as building material in construction as per the provisions of Fly Ash Notification of September, 1999 and Amended as on 27th August 2003. (Applicable to Power Stations).
33. Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining the statutory clearances.

General Conditions specific to operation phase

1. The buildings should have adequate distance between them to allow movement of fresh air and passage of natural light and ventilation.
2. Sewage Treatment Plant (STP) should be installed and made functional as per KSPCB guidelines. On/site Treatment of Sewage and Sullage should be done with scientific method ,ensuring efficiency of treatment, ease in operation , sustainability and it should contain the units of primary, secondary, tertiary and quaternary type of treatment scheme. The installation of the STP should be certified by an independent expert and a report in this regard should be submitted to the Ministry/SEIAA before the project is commissioned for operation. Treated effluent emanating from STP shall be recycled / reused to the maximum extent possible. Treatment of 100% grey water shall be done through a decentralized treatment. Reuse of water shall be practiced for flushing process and garden purposes. Discharge of

unused treated effluent shall conform to the norms and standards of the Kerala State Pollution Control Board. Necessary measures should be taken to mitigate the odour problem from STP.

3. Solid waste management plant shall be installed and made functional as per the guidelines of KSPCB. The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material. Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.
4. Provide adequate Material Collection Facility (MCF) for storage of non-biodegradable waste including plastic waste and E waste, for handing over the same to Recyclers/ Local Body , as stipulated by Kerala State Pollution Control Board.
5. Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation phase 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.
6. Low sulphur diesel shall be used as fuel in DG sets.The location of the DG sets may be decided in consultation with Kerala State pollution Control Board. DG sets should not be housed in sub basement levels.
7. 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.
8. The green belt of adequate width and density shall be raised preferably with local species along the periphery of the project site so as to provide protection against particulate matter and noise.
9. Weep holes shall be provided in the compound walls to ensure natural drainage of rain water during the monsoon period.
10. Rain Water Harvesting structures should be installed as per the prevailing provisions of KMBR/KPBR, unless otherwise specified elsewhere. Rain water harvesting measures for roof run-off and surface run-off, as per approved building plan should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 5 m above the highest ground water table.

11. The ground water level and its quality should be monitored regularly in consultation with State Groundwater Department/Central Ground Water Authority.
12. Traffic congestion near the entry and exit points from the roads adjoining the project site must be avoided. Parking should be fully internalized and no public space should be utilized.
13. A Report on the energy conservation measures, conforming to energy conservation norms issued by Bureau of Energy Efficiency, should be prepared incorporating details about building materials & technology, R & U Factors etc and submit to the Ministry in three months time.
14. Energy conservation measures like installation of LED /CFLs/TFLs for the lighting the areas outside the building should be an integral part of the project design and should be in place before project commissioning. Used LED/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. Solar panels may be used to the extent possible.
