

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
(SOUTHERN ZONE BENCH, CHENNAI)**

ORIGINAL APPLICATION NO. 27 OF 2021

In the matter of:
Tribunal on its own motion
Suo Motu based on the news item in
The Hindu E- Paper, Edition dt. 28.01.2021,
"Faecal Contamination high in perandoor,
Edapally Canals"

-VS-

The Principal Secretary to Govt. Of Kerala,
Environment Department,
Room No.406, 4th Floor Annex II,
Secretariat, Thiruvananthapuram and Ors.

----Respondent(s)

**STATUS REPORT FILED BY ADDITIONAL CHIEF SECRETARY,
ENVIRONMENT DEPARTMENT / 1ST RESPONDENT**

Index

S.No	Particulars	Page No.
1.	Status Report	1-4
2.	Report of Awareness Program (Annexure-1)	5-9
3.	Copy of Minutes of Meeting (Annexure-2)	10-17
4.	Report of Field visit by Joint Committee (Annexure- 3)	18-26
5.	Details of Units/ Establishments(Annexure-4)	27-38
6.	Details of Inspection and Penalty imposed by Director of Urban Affairs(Annexure-5A)	39-40
7.	Details of Inspection and Penalty imposed by Director of Panchayats (Annexure-5B)	41-42
8.	Copy of Notice issued to Kochi Corporation (Annexure-6)	43-45

9.	Copy of letter sent to CPCB (Annexure-7)	46-47
10.	Copy of Letter sent to Ministry of Jal Shakthi for NRCD funds (Annexure-8)	48-49
11.	Minutes of Presentation by NEERI (Annexure-9)	50-51

Dated at Chennai on this the 20th March, 2023

for G. J. Jank
20/3/23

M/s. E.K.KUMARESAN

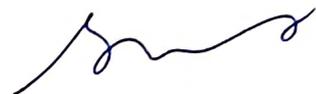
Standing Counsel for State Government of Kerala - NGT(SZ) Chennai Bench

STATUS REPORT FILED BY ADDITIONAL CHIEF SECRETARY
ENVIRONMENT DEPARTMENT, 1ST RESPONDENT IN
O.A.27/2021 BEFORE THE HONOURABLE NATIONAL GREEN
TRIBUNAL, SOUTH ZONE, CHENNAI

The Hon'ble NGT vide order dated 2-2-2023 in OA 27 of 2021 directed to submit a timeline as to when these projects would be approved and when the administrative as well as financial sanction will be granted and complete. Temporary measures are also to be mentioned till such time the projects are completed and to implement the temporary measures like Phytorid Waste water treatment technology which is developed by NEERI and to conduct public awareness programme.

Public awareness program was conducted on 21.01.2023 for creating awareness among the Kerala Hotel & Restaurant Association (KHRA), Residents Associations Apex Council and representatives of the Establishments/Residential apartments on the need to protect water bodies. Copy of the minutes is submitted as **Annexure-1**. The difficulties faced by the public have been identified and the issues were discussed in the meetings with the stakeholders namely Kerala State Pollution Control Board(KSPCB), Kerala Water Authority(KWA) Sewerage circle, Irrigation Department, Regional Joint Director Of Urban Affairs, Ernakulam, Harithakeralam Mission, Suchitwa Mission, Greater Cochin Development Authority (GCDA), Kochi Municipal Corporation, Kochi Metro Rail Limited (KMRL), Kalamassery Municipality on 11.01.2023 and 21.01.2023. Copy of the minutes is submitted as **Annexure-2**. Field visit by the joint committee was also convened to analyse the situation on 23.02.2023 and a copy of the report is submitted as **Annexure-3**.

In order to stop the discharge of untreated waste water from establishments, inspections were conducted by the Kochi Corporation and the KSPCB to identify the apartments/establishments located along the banks of the canals and along the banks of the drains leading to the canal. KSPCB has identified 167 apartments/ restaurants so far as having no valid consent from the Board/ no sewage treatment plant / non functional sewage treatment plant. Notice under section 33A of the Water (Prevention & Control of Pollution) Act, 1974 was issued to those 167 apartment/ restaurants. List of



the units is submitted as **Annexure-4**. Kochi Corporation issued 157 notices on the inspections conducted for not providing STP and not functioning STPs; and a total amount of Rs. 50,000 was imposed as fine in 2023 for illegal dumping of wastes and against illegal outlets. The details of inspections done and fine imposed, as submitted by Director, Urban Affairs, is attached as **Annexure-5A**. The details of inspections done and fine imposed, as submitted by Director of Panchayats, is attached as **Annexure-5B**. The Kochi Municipal Corporation has reported that out of 889 hotels functioning, 589 have sufficient temporary measures for waste management. For rest of the 300 hotels, notice have been issued from the Corporation. 52 out of these 300 hotels have arranged for ETP provisions. The license of rest of the 248 hotels need to be renewed on April 1, 2023. License shall be renewed / cancelled as per the inspections done during the renewal. The following two activities are carried out by Kochi Corporation as part of cleaning canals:

DRAIN CLEANING ACTIVITIES IN THE YEAR

- 2023-2024: Proposed project for cleaning of polapayal, waste removal and desilting work of 74 small drains and 178 big drains for an amount of Rs. 19,77,61,450. Technical sanction obtained. Tender floated.
- Work has been executed for cleaning polapayal and waste removal for entire stretch of Edappally canal from Kaniyampuzha till Muttarpuzha for an amount of Rs 41,99,800. Work is in progress.

NET FENCING TO PREVENT WASTE DUMPING TO WATER BODIES

- Net fencing for Thevara- Perandoor canal were completed for 5.47 km, out of 12 km.
- Project Proposed for fencing of various canals, for an amount of Rs. 156,04,000.
- Erected warning boards at hotspots of waste disposal

The Board issued Notice under Section 33A of the Water (Prevention and Control of Pollution) Act, 1974 to Kochi Corporation to show reasons

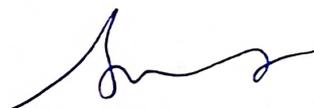


for not levying Environmental Compensation for the failure of preventing the pollutants being discharged in water bodies and failure to implement waste management act/rules. Copy of the Notice is submitted as **Annexure-6**.

In Kochi, besides the two septage treatment plants at Brahmapuram and Wellington island, there are two common STPs, 5 MLD STP at Elamkulam of Kerala Water Authority and 750 KLD STP of GCDA at Kaloor and at present only 3 MLD capacity is utilized in Elamkulam plant and 30 KLD in Kaloor plant. For the full utilization of common STPs at Elamkulam and Kaloor, actions taken by Kerala Water Authority and GCDA are progressing. KWA and GCDA reported to make arrangements for full utilization of their plants by 31.05.2023. Registration of private tankers for carrying sewage from establishments which have no treatment facility to the above common STPs has been started. This will lead to reduction of untreated effluent reaching the lake thereby improving the water quality. The matter is being closely monitored. Desilting of Edappalli canal is also progressing.

Railway station at Ernakulam Junction is identified as one of the major contributors of pollution in Perandoor canal. Though Integrated Consent to Operate valid upto 31/03/2023 was issued to Railway station at Ernakulam Junction with a condition to set the Sewage Treatment Plant, STP is not yet provided and also the area behind the loco shed situated in the South Railway station is contaminated with oil. Several instructions/ notices had been issued to the railway from the Board. No action has been initiated for the remediation of oil contaminated area till date. The matter has been brought to the notice of the Central Pollution Control Board. Copy of the letter is attached as **Annexure-7**. District Collector, Ernakulam has also been entrusted to communicate with Railway authorities regarding the matter.

DPRs prepared by Kochi Metro Rail Limited duly vetted by CUBE-IIT Chennai for STPs and sewer line at Muttar, Perandoor, Vennala, Elamkulam for an amount of Rs.324.28 Crore, Rs.232.68 Crore, Rs 499.26 Crore, Rs.367.63 Crore respectively were forwarded to the Secretary, Ministry of Jal Sakti for consideration of getting funding under NRCD. Copy



of the letter is attached as **Annexure-8**.

As per the order of Hon'ble NGT dated 02.02.2023, it was directed that temporary measure like Phytoid Wastewater Treatment Technology which is developed by the NEERI are implemented till the completion of works which results in permanent solution. Accordingly NEERI was addressed for reporting whether the study can be taken up by NEERI and they expressed willingness to provide scientific and technical support. Further online presentation was conducted on 13.03.2023 to the officials of local bodies, Suchitwa mission and KSPCB. Minutes of the presentation by the NEERI is submitted as **Annexure-9**. The Director, NEERI has been addressed to provide support, by sending Scientist concerned to the State. Further action is being taken in this regard.

It is submitted that in view of the steps being taken as detailed above, some more time is required to complete the process which may kindly be granted. Action taken by various implementing agencies is being closely monitored and directions have been issued to expedite their process.

18-03-2023



ADDITIONAL CHIEF SECRETARY
ENVIRONMENT DEPARTMENT

Report of the Awareness Programme held on 21/01/2023 at Kerala State Pollution Control Board, Regional Office, Ernakulam in connection with OA no.27 of 2021 as per the Order of Hon'ble National Green Tribunal dated 02.01.2023

The Awareness programme commenced at 11.00 A.M at the auditorium and training centre, Regional Office, Kerala State Pollution Control Board, Ernakulam. Former Judicial Member, National Green Tribunal (SZ) Justice. K. Ramakrishnan was the chief guest for the programme. The Chairman, Kerala State Pollution Control Board, the Member Secretary, Kerala State Pollution Control Board and the Additional Secretary, Environment Department, Government of Kerala were present. Officials from Kerala State Pollution Control Board, Kerala Water Authority(KWA) Sewerage circle, Irrigation Department, Regional Joint Director Of Urban Affairs, Ernakulam, Harithakeralam Mission, Suchitwa Mission, Greater Cochin Development Authority (GCDA), Kochi Municipal Corporation, Kochi Metro Rail Limited (KMRL), Kalamassery Municipality and other officers concerned were present to provide their valuable inputs. The programme was attended by representatives from Kerala Hotel & Restaurant Association (KHRA), Residents Associations Apex Council and representatives of the Establishments/Residential apartments along the bank of the Perandoor & Edappally canal. Attendance sheets of the participants are attached as **Annexure-1.**

Sri. Baburajan P K, Chief Environmental Engineer, KSPCB, Regional Office, Ernakulam welcomed all the participants to the meeting and gave brief introduction about the origin of the Original Application no.27 of 2021. He conveyed that the above original application was taken on its motion "Suomotu" based on a Newspaper report published in the Hindu E-paper Edition dated 28.01.2021 under the caption Faecal Contamination high in Perandoor, Edappally canals". Hon'ble NGT through its order dated 05.02.2021 constituted a Joint committee towards the effective implementation of different regulatory mechanisms. He also informed that Hon'ble NGT through its latest order dated 02.01.2023 made some comments which are as follows "*We regret to state that even after almost 23 months, no concrete steps have been taken and the action that are so far taken by the respective authorities are going only at a snail's pace.*"

He added that NGT consider this as a serious issue and that NGT may take drastic measures against the violators. Also the Hon'ble NGT has directed to conduct an awareness programme in this matter

and hence this programme was arranged to discuss the measures to be taken to avoid the pollution of Perandoor & Edappally canals.

Sri. Pradeep Kumar A.B., Chairman, Kerala State Pollution Control Board, explained about the importance of conducting the awareness programme. He added that even though the Board has taken several steps to comply with various directions given by the NGT, but not yet reached in a permanent solution. Some of the Establishments near the bank of the Perandoor & Edappally canal operating without proper treatment facility and discharging waste water directly to the canal. NGT may take strict action against the violators. He informed that this programme is mainly arranged to provide an awareness to those persons about the management of sewage and other waste water in compliance with the environmental laws.

He added the following points:

- Before purchasing a new flat the buyer should check whether all the clearances are obtained from statutory authorities.
- Coliform level is high in Edappally and Perandoor canal and this will lead to the occurrence of various diseases. To avoid this situation waste generated should be disposed in compliance with the environmental laws.
- Board issued several directions/notice to the Establishments/Residential Apartments operating without proper treatment facility and discharging waste water directly to the Perandoor & Edappally canal. But the response is very poor and Board will be forced to initiate legal actions against the violators.
- Kochi Metro Rail Limited (KMRL) have been entrusted the work of Integrated Urban Regeneration and Water Transport System (IURWTS) in Kochi by the Government of Kerala. The proposed project envisages the rejuvenation of the 5 canals and installation of 4 STPs. The major aim of the project is to regenerate the urban area in and around the canals. But this is a time consuming project. Hence there is need to arrange temporary measures to prevent further contamination of water bodies.
- As a temporary measure, he asked about the possibility of transportation of sewage/waste water through containers to the existing treatment plants that are not operating at full capacity under Kerala Water Authority/GCDA.

He also informed that a meeting will be conducted after the awareness program with the officials to chart out the action plans for O.A. 27/2021

Justice. K. Ramakrishnan, Retired Judicial Member, National Green Tribunal (SZ) gave key note address in which he briefly explained about the importance of waste management system and duties and responsibilities of waste generators. He opined that the person who is generating waste should dispose it in a scientific manner and it is the responsibility of public to protect the environment.

He added the following points:

- The effluent flowing through the outlets of establishments into Edappally & Perandoor canal ultimately reaches to the various canals and this will lead to the contamination of water bodies.
- Local bodies should take initiative to collect the waste including biodegradable waste from each and every house.
- Secretaries of Association of residential apartment must ensure that the apartments are functioning in compliance with the environmental laws, having proper STP and consent to operate of the Board.
- Residence associations have their own responsibility to implement the waste management in an effective manner.
- Local Self Government Department shall conduct the Gramasabha meeting and problems faced by public related to waste management should be discussed in the meeting.
- Importance of protecting environment and Importance of rain water harvesting.

As part of protecting the environment, the Board should take actions to close down the Establishments/Units that are operating without complying Environmental laws and without having proper treatment facility.

He also included the following points regarding the effective utilization of waste materials.

- Water hyacinth found in the water bodies can be used to make various products
- Plastic waste can be recycled and reused

- Certain percentage of compost from the biodegradable wastes of households can be used as manure. Local bodies have the responsibility to supervise this.

The Chairman, Kerala State Pollution Control Board requested the participants to share the various problems faced by them for providing proper waste management and complying with the statutes

- Sri.Rangadasa Prabhu, President, Ernakulam District Residents Associations Apex Council (EDRAAC) informed that, environment should be protected and for this education program is needed and Apex council will initiate actions for the same, and requested support from the Kerala State Pollution Control Board .
- One of the flat representative enquired that, if there are any government consultancy for STP management as they are facing many difficulties while approaching the private agencies.
- Sri,Jeevan, Association president, Dream Flower Bonita apartment informed that since they have space limitations and not having enough space for gardening they cannot reuse the treated water.

Justice. K. Ramakrishnan suggested that gardening can be done effectively by using commercially available grow bags, and planting grass around the ground. Effective methods like vertical gardens also can be used.

- Sri.Saju, flat representative, informed that their apartment was built in 1997. Since it is an old complex space limitations are there and it is very difficult to maintain the clearance as per PCB norms. He also suggested that common STP should be constructed at all possible places and increase the capacity of Elamkulam STP and he complained that there are many houses on the bank of Perandoor canal discharging waste water directly to the canal, but the PCB taking action against the flats only.

Justice K. Ramakrishnan replied that as the quantity of waste generation from the flats is more compared to houses and hence waste water from flats should be addressed.

- Sri.Kumar, flat representative complained that daily garbage collection is not often done and garbage is collected in weekly only. He opined that the Corporation is responsible for this. Also he suggested that awareness program should be given to the individual houses through the councilors.
- Sri.Ajith Kumar, Secretary, Ernakulam District Residents Associations Apex Council

(EDRAAC), informed that lack of coordination between various departments will affect the successful implementation of projects. He opined that, local bodies should issue licenses to the waste collection vehicles to avoid the dumping of waste near the road side/public areas etc.

- The Executive Engineer, Kerala Water Authority reported that they are providing assistance to all the Municipalities and Corporations who are cooperating with the Water Authority for the implementation of underground sewage system projects and she informed that a master plan has been prepared for Kochi Corporation and currently a 5MLD treatment plant is operational at Elamkulam. DPR for pipe network is prepared. Another 5MLD proposal has been submitted under Amrut Scheme. She informed that DPR preparation of STP projects of KMRL in Elamkulam, Perandoor, and Muttar is completed.

After the discussion former Justice. K. Ramakrishnan put forward the following suggestions.

- Underground sewage system must be implemented and it should be connected to all the individual houses and sewage charge should be collected from each house.
- Methods like Phytoremediation can be utilized to clean the drain.

Dr. Sheela A.M., Member Secretary, Kerala State Pollution Control Board concluded the programme requesting the cooperation of all the stakeholders for the protection of water bodies. As Kerala Water Authority reported that around 3.5MLD of wastewater collected through pipelines are discharged to the newly installed 5MLD STP at Elamkulam and GCDA reported under utilization of 750 kLD plant at Kaloor, action is to be taken by Kochi Corporation, Kerala Water Authority and GCDA for the diversion of waste water from old flats which are having space limitation. The Member Secretary, KSPCB requested the Kerala Water Authority and GCDA officials to report the possibility of treatment of wastewater in the underutilized sewage treatment plants. Kochi Corporation was also requested to implement the licensing of unregistered tankers. Online tracking system from wastewater tankers as done in Thiruvananthapuram has to be provided for proper tracking of registered vehicles, in order to avoid unauthorized discharge of waste water to the water bodies. She thanked all the officials from various stakeholder departments and gathered representatives of various residential apartments/establishments.

The meeting concluded by 1.00pm.


CHAIRMAN

Minutes of the Meeting conducted at 2.00 pm on 11/01/2023 regarding Perandoor Canal in O.A No. 27/2021

The meeting commenced at 2.00 pm with the Chairman presiding. The following officers were present:-

- | | | |
|---------------------------|---|---|
| 1. Dr. Sheela A M | - | Member Secretary |
| 2. Sri. Baburajan P.K. | - | Chief Environmental Engineer,
Regional Office, Ernakulam |
| 3. Smt. Bindhu V. Gopal | - | Senior Environmental Engineer-1, HO |
| 4. Smt. Sreelakshmy P. B. | - | Environmental Engineer,
DO-I, Ernakulam |
| 5. Smt. Ramya G | - | Environmental Engineer-1, HO |
| 6. Smt. Bincy B.S. | - | Environmental Engineer-3, HO |
| 7. Smt. Pravitha P.K. | - | Assistant Environmental Engineer-1,
HO |
| 8. Smt. Shahna | - | Assistant Environmental Engineer, RO |
| 9. Smt. Nazni N | - | Assistant Engineer-17, HO |

The Chairman discussed about the latest NGT order dated 02/01/2023. Hon'ble NGT has directed the concerned authorities to file report before 02/02/2023. The Environmental Engineer, District Office-I, Ernakulam informed that there is no industrial discharge to Perandoor Canal. Only sewage contamination has been reported in the canal, for which the local body should initiate action. The Member Secretary enquired about the units namely flats, hotels, hospitals, malls for which the Board issued consent and on compliance status of such units. Environmental Engineer, DO1 informed that some units are complying with standards. It was informed that Ernakulam Railway (South) has not provided waste water treatment plant and also pollution problems exists from their Locomotive plant. The Member Secretary informed that Kochi Corporation was earlier directed to ensure that there are no waste water outlet pipes into the drains in connection with direction of OA 147/2022 which pertains to Vembanad lake. Regarding the utilization of existing sewage treatment plants at Elamkulam of Kerala Water Authority and that of GCDA at two places namely Kaloor and Palarivattom, it was reported that same is only partially utilized. Waste

water from flats, hotels in nearby areas can be brought to these STPs for full utilization. Environmental Engineer DO1 reported that action has been taken to prevent the discharge of any waste water from Kaloor slaughter house, as the same is taken to Brahmpuram Septage plant through tankers. The need to give separate treatment for sewage and sullage so that fecal coliform is not reaching the canals was suggested. The Chief Environmental Engineer, Regional office informed that Assistant Engineer from Regional office, Ernakulam can be engaged for the works relating to NGT order. Chairman suggested to conduct meeting with the concerned departments and stakeholders to work out the way forward in case of old flats who do not possess the consent of the Board. The following decisions were taken in the meeting.

1. Conduct public awareness program on 21/1/2023 that includes stake holders, Kerala Water Authority and Kochi Metro as directed in the order. Both former Justice Ramakrishna Pillai, SLMC Chairman and former NGT Justice K. Ramakrishnan are to be invited for the meeting. The departments can sit together after hearing the stakeholders and chart out a feasible program.
2. Issue notice to Divisional Office of Railway for non compliance of directions for installation of STP. Status of compliance of all railway stations is to be reported by concerned sections.
3. Prepare list of flats/hospitals/malls that are complying, partially complying and non complying with Board's directions/consent conditions along the banks of T.P canal. The quantification of effluent generated from the establishments namely flats, hospitals, high rise buildings is to be assessed in connection with the usage of common STPs.
4. Action taken by Corporation against unregistered tankers is to be collected.
5. Issue notice to all hotels and other establishments for non compliance.

6. Report the status of the 23 establishments mentioned in the NGT order that are given notices by Board.
7. Feasibility of remedial measures to be adopted for discharge of waste water from flats suggested by EE, DO-1, EKM is to be checked.
8. Solid waste management shall be as per Solid Waste Management Rules, 2016 and Plastic Waste Management Rules, 2016. Measures shall be taken to prevent the entry of any plastic waste into the canals.
9. The progress on the projects of agencies like KMRL is to be ascertained.
10. The CEE will support the District Office by providing a staff for the works.
11. The above activities are to be brought to the notice of the District Collector, Ernakulam and its progress is to be reviewed regularly. Meeting came to a close at 3.30



CHAIRMAN

Report of the Awareness Programme held on 21/01/2023 at Kerala State Pollution Control Board, Regional Office, Ernakulam in connection with OA no.27 of 2021 as per the Order of Hon'ble National Green Tribunal dated 02.01.2023

The Awareness programme commenced at 11.00 A.M at the auditorium and training centre, Regional Office, Kerala State Pollution Control Board, Ernakulam. Former Judicial Member, National Green Tribunal (SZ) Justice. K. Ramakrishnan was the chief guest for the programme. The Chairman, Kerala State Pollution Control Board, the Member Secretary, Kerala State Pollution Control Board and the Additional Secretary, Environment Department, Government of Kerala were present. Officials from Kerala State Pollution Control Board, Kerala Water Authority(KWA) Sewerage circle, Irrigation Department, Regional Joint Director Of Urban Affairs, Ernakulam, Harithakeralam Mission, SuchitwaMission, Greater Cochin Development Authority (GCDA), Kochi Municipal Corporation, Kochi Metro Rail Limited (KMRL), Kalamassery Municipality and other officers concerned were present to provide their valuable inputs. The programme was attended by representatives from Kerala Hotel & Restaurant Association (KHRA), Residents Associations Apex Council and representatives of the Establishments/Residential apartments along the bank of the Perandoor & Edappally canal. Attendance sheets of the participants are attached as **Annexure-1.**

Sri. Baburajan P K, Chief Environmental Engineer, KSPCB, Regional Office, Ernakulam welcomed all the participants to the meeting and gave brief introduction about the origin of the Original Application no.27 of 2021. He conveyed that the above original application was taken on its motion "Suomotu" based on a Newspaper report published in the Hindu E-paper Edition dated 28.01.2021 under the caption Faecal Contamination high in Perandoor, Edappally canals". Hon'ble NGT through its order dated 05.02.2021 constituted a Joint committee towards the effective implementation of different regulatory mechanisms. He also informed that Hon'ble NGT through its latest order dated 02.01.2023 made some comments which are as follows "*We regret to state that even after almost 23 months, no concrete steps have been taken and the action that are so far taken by the respective authorities are going only at a snail's pace.*"

He added that NGT consider this as a serious issue and that NGT may take drastic measures against the violators. Also the Hon'ble NGT has directed to conduct an awareness programme in this matter

and hence this programme was arranged to discuss the measures to be taken to avoid the pollution of Perandoor & Edappally canals.

Sri. Pradeep Kumar A.B., Chairman, Kerala State Pollution Control Board, explained about the importance of conducting the awareness programme. He added that even though the Board has taken several steps to comply with various directions given by the NGT, but not yet reached in a permanent solution. Some of the Establishments near the bank of the Perandoor & Edappally canal operating without proper treatment facility and discharging waste water directly to the canal. NGT may take strict action against the violators. He informed that this programme is mainly arranged to provide an awareness to those persons about the management of sewage and other waste water in compliance with the environmental laws.

He added the following points:

- Before purchasing a new flat the buyer should check whether all the clearances are obtained from statutory authorities.
- Coliform level is high in Edappally and Perandoor canal and this will lead to the occurrence of various diseases. To avoid this situation waste generated should be disposed in compliance with the environmental laws.
- Board issued several directions/notice to the Establishments/Residential Apartments operating without proper treatment facility and discharging waste water directly to the Perandoor & Edappally canal. But the response is very poor and Board will be forced to initiate legal actions against the violators.
- Kochi Metro Rail Limited (KMRL) have been entrusted the work of Integrated Urban Regeneration and Water Transport System (IURWTS) in Kochi by the Government of Kerala. The proposed project envisages the rejuvenation of the 5 canals and installation of 4 STPs. The major aim of the project is to regenerate the urban area in and around the canals. But this is a time consuming project. Hence there is need to arrange temporary measures to prevent further contamination of water bodies.
- As a temporary measure, he asked about the possibility of transportation of sewage/waste water through containers to the existing treatment plants that are not operating at full capacity under Kerala Water Authority/GCDA.

He also informed that a meeting will be conducted after the awareness program with the officials to chart out the action plans for O.A. 27/2021

Justice. K. Ramakrishnan, Retired Judicial Member, National Green Tribunal (SZ) gave key note address in which he briefly explained about the importance of waste management system and duties and responsibilities of waste generators. He opined that the person who is generating waste should dispose it in a scientific manner and it is the responsibility of public to protect the environment.

He added the following points:

- The effluent flowing through the outlets of establishments into Edappally & Perandoor canal ultimately reaches to the various canals and this will lead to the contamination of water bodies.
- Local bodies should take initiative to collect the waste including biodegradable waste from each and every house.
- Secretaries of Association of residential apartment must ensure that the apartments are functioning in compliance with the environmental laws, having proper STP and consent to operate of the Board.
- Residence associations have their own responsibility to implement the waste management in an effective manner.
- Local Self Government Department shall conduct the Gramasabha meeting and problems faced by public related to waste management should be discussed in the meeting.
- Importance of protecting environment and Importance of rain water harvesting.

As part of protecting the environment, the Board should take actions to close down the Establishments/Units that are operating without complying Environmental laws and without having proper treatment facility.

He also included the following points regarding the effective utilization of waste materials.

- Water hyacinth found in the water bodies can be used to make various products
- Plastic waste can be recycled and reused

- Certain percentage of compost from the biodegradable wastes of households can be used as manure. Local bodies have the responsibility to supervise this.

The Chairman, Kerala State Pollution Control Board requested the participants to share the various problems faced by them for providing proper waste management and complying with the statutes

- Sri.Rangadasa Prabhu, President, Ernakulam District Residents Associations Apex Council (EDRAAC) informed that, environment should be protected and for this education program is needed and Apex council will initiate actions for the same, and requested support from the Kerala State Pollution Control Board .
- One of the flat representative enquired that, if there are any government consultancy for STP management as they are facing many difficulties while approaching the private agencies.
- Sri,Jeevan, Association president, Dream Flower Bonita apartment informed that since they have space limitations and not having enough space for gardening they cannot reuse the treated water.

Justice. K. Ramakrishnan suggested that gardening can be done effectively by using commercially available grow bags, and planting grass around the ground. Effective methods like vertical gardens also can be used.

- Sri.Saju, flat representative, informed that their apartment was built in 1997. Since it is an old complex space limitations are there and it is very difficult to maintain the clearance as per PCB norms. He also suggested that common STP should be constructed at all possible places and increase the capacity of Elamkulam STP and he complained that there are many houses on the bank of Perandoor canal discharging waste water directly to the canal, but the PCB taking action against the flats only.

Justice K. Ramakrishnan replied that as the quantity of waste generation from the flats is more compared to houses and hence waste water from flats should be addressed.

- Sri.Kumar, flat representative complained that daily garbage collection is not often done and garbage is collected in weekly only. He opined that the Corporation is responsible for this. Also he suggested that awareness program should be given to the individual houses through the councilors.
- Sri.Ajith Kumar, Secretary, Ernakulam District Residents Associations Apex Council

(EDRAAC), informed that lack of coordination between various departments will affect the successful implementation of projects. He opined that, local bodies should issue licenses to the waste collection vehicles to avoid the dumping of waste near the road side/public areas etc.

- The Executive Engineer, Kerala Water Authority reported that they are providing assistance to all the Municipalities and Corporations who are cooperating with the Water Authority for the implementation of underground sewage system projects and she informed that a master plan has been prepared for Kochi Corporation and currently a 5MLD treatment plant is operational at Elamkulam. DPR for pipe network is prepared. Another 5MLD proposal has been submitted under Amrut Scheme. She informed that DPR preparation of STP projects of KMRL in Elamkulam, Perandoor, and Muttar is completed.

After the discussion former Justice. K. Ramakrishnan put forward the following suggestions.

- Underground sewage system must be implemented and it should be connected to all the individual houses and sewage charge should be collected from each house.
- Methods like Phytoremediation can be utilized to clean the drain.

Dr. Sheela A.M., Member Secretary, Kerala State Pollution Control Board concluded the programme requesting the cooperation of all the stakeholders for the protection of water bodies. As Kerala Water Authority reported that around 3.5MLD of wastewater collected through pipelines are discharged to the newly installed 5MLD STP at Elamkulam and GCDA reported under utilization of 750 kLD plant at Kaloor, action is to be taken by Kochi Corporation, Kerala Water Authority and GCDA for the diversion of waste water from old flats which are having space limitation. The Member Secretary, KSPCB requested the Kerala Water Authority and GCDA officials to report the possibility of treatment of wastewater in the underutilized sewage treatment plants. Kochi Corporation was also requested to implement the licensing of unregistered tankers. Online tracking system from wastewater tankers as done in Thiruvananthapuram has to be provided for proper tracking of registered vehicles, in order to avoid unauthorized discharge of waste water to the water bodies. She thanked all the officials from various stakeholder departments and gathered representatives of various residential apartments/establishments.

The meeting concluded by 1.00pm.


CHAIRMAN

Report on Site Visit conducted by Committee members on 23-2-2023 in connection with orders of Hon'ble National Tribunal in OA 147/2022 on Vembanad lake and Ashtamudi lake

The Committee members visited the Vembanad lake and its surrounding area on 23-2-2023. Member Secretary, Kerala State Pollution Control Board; Director, Directorate of Environment and Climate Change, who is also the Member Secretary of SWAK and Kerala Coastal Regulation Zone; Directorate of Urban local bodies; Directorate of Panchayaths; District officials from Pollution Control Board, Industries department, local bodies were present during site visit. Prior information regarding the site visit was already conveyed to all committee members. All members except representatives from Tourism and Central Pollution Control Board were present. Central Pollution Control Board informed the inability to attend the meeting due to short notice.

1. Pallathuruthy, House boat landing area, Alappuzha Municipality(Fig.1)

The committee visited the houseboat landing area at Pallathuruthy. During visit, it was reported that Muthoot is having nine houseboats of which five are operational and the wastewater is collected in a collection tank and is diverted to sewage treatment plant for treatment. For the other houseboats, no such arrangements are provided at the site. Health official from the Alappuzha Municipality informed that they had already arranged a meeting with Houseboat association and Pollution Control Board on 24-2-2023. It was instructed to have arrangements for treatment of waste water from houseboats and to make arrangements for the collection of segregated solid waste from landing area to authorised collectors namely Haritha Karma Sena.

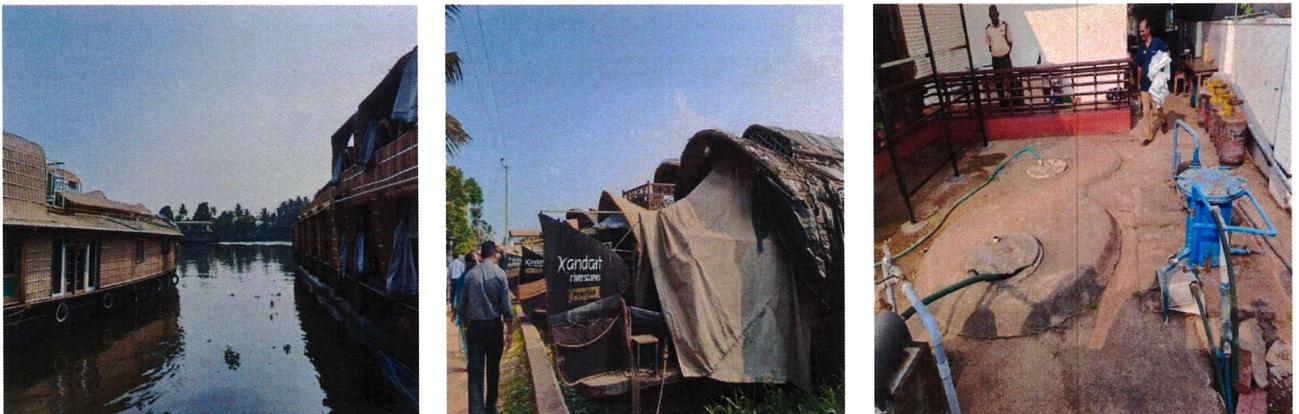


Fig. 1 Houseboat landing area, Pallathuruthy, Alappuzha

2. DEWATS system, Chathanad(Fig.2)

DEWATS system provided at Chathanad was visited. It is a decentralised waste water treatment system provided for a slum area with fifty houses. It consists of Anaerobic Baffle Reactor and constructed wetland and the maintenance cost is very low for such system. This system is operating for more than three years continuously. Health official of Alappuzha Municipality informed that they are providing such system at Alissery slum and Zakariah Bazar.



Fig.2 DEWATS, Chathanad, Alapuzha

3. Punnamada Finishing point of DTPC

There was no official from DTPC present at the site and hence was not able to discuss with them on the issues. The Officials from Alappuzha municipality were present at the site. Many big houseboats were seen landed in this area. The lake water in this area was seen polluted with waste water and plastic. The information regarding the disposal of waste water from these houseboats could not be collected due to the absence of officials of DTPC. Though a shed for thumbboomuzhi was provided by Municipality in the premises, it was seen not utilised.

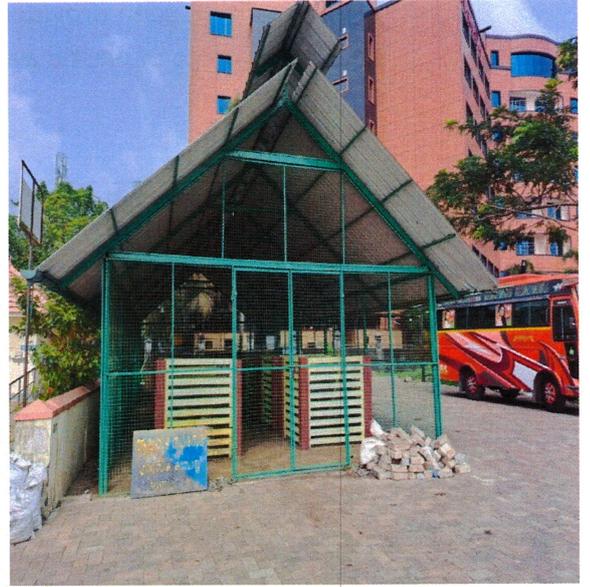


Fig.3 Houseboat landing area, Punnamada

4. Alappuzha Cherthala Canal

Alappuzha Cherthala Canal was seen covered with vegetation and there was no flow of water in this canal.

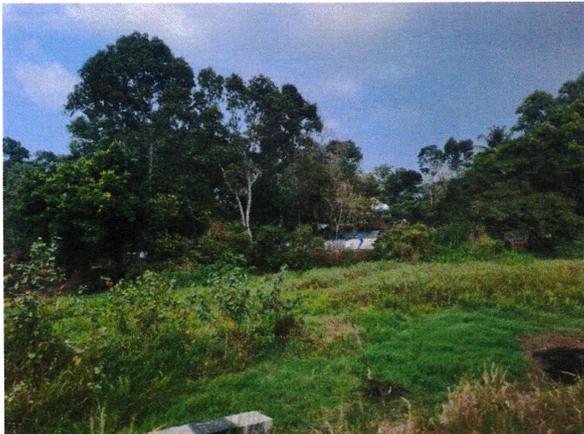


Fig.4 Alappuzha-Cherthala Canal

5. Faecal Sludge treatment plant, Cherthala (Fig.5)

The President, Vice President, Council Member and officials of Cherthala Municipality were present at the site. The construction of FSTP started and it was informed that the plant will be commissioned in eight to ten months. Material collection facility of

Municipality is seen provided near the site and electric auto was also seen provided for the conveyance of plastic waste.



Fig. 5 Cherthala Municipality FSTP, MCF, e-auto

6. Mega Food Park, Aroor-2 MLD CETP(Fig.6)

The committee members visited the Mega Food Park of KSIDC at Aroor. It is a 2MLD plant consisting of chemical addition, MBBR and filter press. Five factories have already been connected to this treatment plant and 500KLD is treated in CETP. The representative informed that action is taken to divert waste water from other factories to CETP. They were asked to report on the utilization of treated effluent.



Fig.6 CETP Mega food park, Aroor

7. Littering on road sides

Littering of solid wastes was observed on the road sides of Eramalloor paanchayath, Thykkattussery, and Chandiroor and also observed on the road sides of Oachira Municipality and also at Thammanam near HO petrol pump of Kochi Corporation.

8. Sea food factory, Keltron kadavu (Fig.7)

The committee members visited the CETP of sea food factory at Keltron Kadavu. It is also working underutilized.

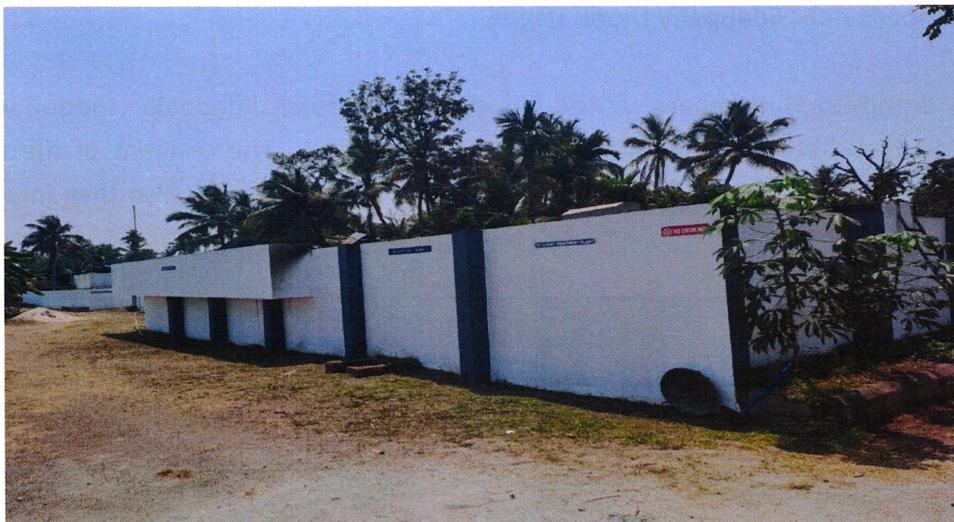


Fig.8 Sea food factory-CETP, Aroor

9. Vembanad lake, Keltron kadavu(Fig.8)

Keltron kadavu of Vembanad lake, which is one of the water quality monitoring stations was visited. Some peeling units are situated near the drain in this area. This is an area having tidal influence.



Fig.8 Vembanad lake-Keltron kadavu

10. Aroor Industrial estate

The official from Aroor panchayath informed that there is discharge of waste water from the units in this area. It was instructed to have a joint inspection of Pollution Control Board, DIC and Panchayath in these units and to take action accordingly.

11. Apartment near Edappally thodu (Fig.9)

The Committee members visited an apartment near Edappally thodu, which was constructed before 2006 and having space limitation. The resident of the apartment informed that they have blocked the discharge into the canal. Also they informed that area near the lake has been acquired for the project of Water Metro.



Fig. 9 Apartment near Edappally canal

12. 750KLD GCDA plant, Kalloor (Fig.10)

The Committee members visited the GCDA plant at Kalloor. It is a 750 KLD plant of which only they are getting 30KLD. As they were taking waste water from hotels, high content of oil, maida created problems to their plant and is being rectified. Kochi Corporation officials and GCDA were asked to take action for the complete utilization of CSTP. The Additional Secretary, Kochi Corporation was asked to explore the possibility of full utilisation of CSTP by bringing waste water from nearby flats and hotels. Additional Secretary, Kochi Corporation informed that byelaw for registration of tankers and online tracking will be placed in the Council meeting on 28th February, 2023 and after that action will be taken for registering tankers.



Fig.10 CSTP GCDA, Kalloor

13. 5MLD plant of Kerala Water Authority at Elamkulam (Fig.11)

5 MLD plant of Kerala Water Authority at Elamkulam was visited. 3MLD waste water is reaching this plant and the plant is seen underutilized with a gap of 2 MLD. The Additional Secretary, Kochi Corporation was asked to explore the possibility of full utilisation of CSTP by bringing waste water from nearby flats and hotels. KWA official reported that Administrative sanction was obtained for dilution tank and will be commissioned by 31.05.2023 by modifying existing tank. The Additional Secretary Kochi Corporation informed that Counsel meeting for bye law of online tracking will be held on 28.02.2023 and after that action will be taken for registering unregistered tankers.

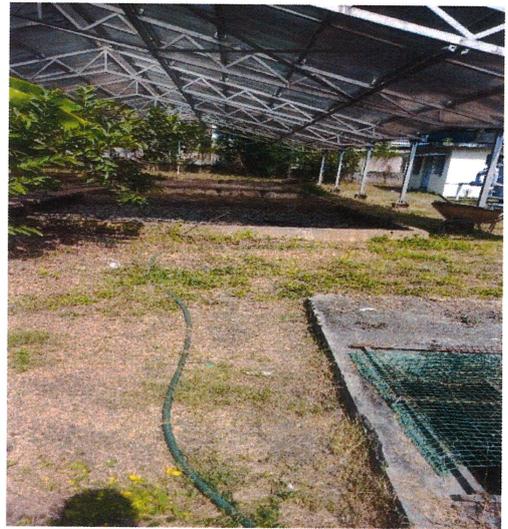
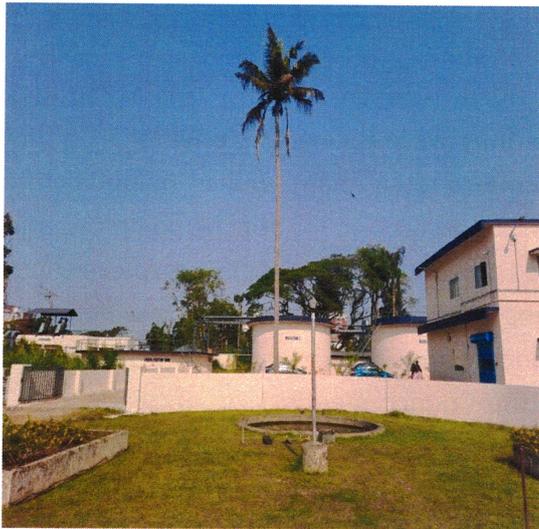


Fig. 11 CSTP of KWA, Elamkulam

14. Thanneermukkom barrage (Fig.12)

In the area near Thanneermukkom barrage, a large quantity of plastic wastes were seen littered. There was no bin provided the street vendors in this area. As per the Solid waste management rules, bins are to be provided by street vendors and the collected waste is to be collected by the concerned local body.

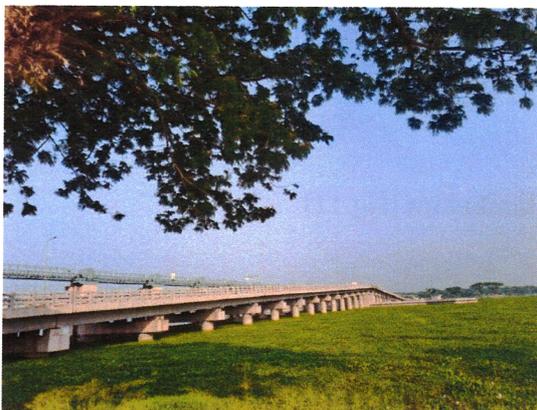


Fig.12 Thanneermukkom barrage

15. Common STP at Kumarakom for houseboats

Common STP for houseboats is having a capacity of 125 KLD. But only 25 KLD is treated here. This CSTP is also seen underutilized.



Fig.13 Common STP for houseboats at Kumarakom

Major observations:

1. CSTP of Kerala Water Authority at Elamkulam; CSTP of GCDA at Kaloor; CSTP at Kumarakom and CETP of Megafood park and Sea food park are seen underutilised and the same are to be made fully utilized.
2. Action is to be taken for the abatement of pollution from industrial units namely sea food processing units in Alappuzha by the joint efforts of DIC, PCB and local bodies.
3. Urgent action is required in the case of houseboats on the disposal of waste water and solid wastes by DTPC.

27-2-2023

Sheela J
Member Secretary

Annexure 1								
Details of establishments / units for which notice issued as per Minutes of Meeting held on 25/02/2023 on the matter of OA 147/2022								
SI No	Date	Company	Type of unit(Apartment/ Commercial building/Hotel/ Resort/Industry/ others)	District	PCB office	LSGI	Findings	Notice
1	01.03.2023	M/s Century terrace Yuvajana Samajam road,kadavatra 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
2		M/s ABM Tower behind GCDA, Kadavantra 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
3		M/s Penta queen apartment B2 Padivattom, Edapally - 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
4		M/s Penta queen apartment B3 Padivattom, Edapally - 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
5		M/s Penta queen apartment A Padivattom, Edapally - 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
6		M/s Penta queen apartment C Padivattom, Edapally - 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
7		Galaxy Arcade Peediakkal road SRM Road - 682018	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
8		M/s West Rock One Apartment P J Anony Road Pachalam - 682012	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
9		M/s Watermelon Apartment Kathrikadavu, Kaloore 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
10		Vigyana sagar hostel Marine engineering training institute Giri nagar, Shipyard Ltd.	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
11		Vanshika Apartments Vidhta nagar road Panampilly nagar- 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
12		The tapioca restaurant mylady chambers, pottakuzhi rd, kaloore- 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
13		Star homes south star Kathrikadavu, Kaloore 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued

14	Skyline Zircon Apartment panampilly link road,Kadavantra 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
15	Skyline Marble Arch Apartment owners, Kattakar road west, Kathrikadavu 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
16	Galaxy Wintage Apartment Aryapadam Lane, Mamangalam Elamakkara, 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
17	J K Royal House Kathrikadavu, Kaloor 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
18	J M Manor Link avenue road, Kaloor 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
19	Little Soi. Aditya tower Panampilly nagar 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
20	NB Spring Terrace Apartment Tagore lane, Elamakkara 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
21	PMJ Towers Vidhya nagar, Kadavantra 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
22	Presidency Homes Journalist Colony, Kathrikadavu 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
23	Skyline Belair Apartment Shihab Thangal Road Panampilly nagar, 682036	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
24	Dadd's Extended stay Canal road, Gandhinagar	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
25	D D Rose Gate Kadavantra, Ernakulam 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
26	Vinayaka Boys hostel Banerji road, Kaloor 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
27	The wood Ford Yuvajana samajam road. Kadavantra 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, STP not working	Issued
28	Namasita Apartment, Vidhya nagar road, Panampilly nagar, 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued

29		Skyline Primrose, Pachalam, Pottakuzhi road, Mamangalam- 682018	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, STP not working	Issued
30		Kalpaka Rajmahal Apartments, BTS Roadd, Edapally 682024	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
31		Amar Samrat Apartments, Kathrikadavu- 682017	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, STP not working	Issued
32		ACE Homes, Kaloor, Kochi- 682017	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, STP not working	Issued
33		Jewel Oak Field, SRM Road, Kaloor, Kochi, 682012	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, STP not working	Issued
34		Mandalay Point Flat, Edappally, NH 66 Service road, 682024	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
35		Dreamflower Bonita Owners Association (DBOA), Green Ripple Road, Swamipadi, Elamakara, Ernakulam - 682026	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, STP not working	Issued
36		Malabar Gate Apartments, Marottichodu Road, Edapally – 682 026	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
37		Galxy Homes Galaxy Dane Vidya Nagar Panampilly nagar, 682036	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, STP not working	Issued
38		Galaxy Marvel Apartment, Edapally Raghavan pilla road 682026	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
39		Rds Avenue One, Shihab Thangal Road Near Passport Office Panampilly Nagar, 682036	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
40		The Salt Restaurant, 16/1444, Thoppumpady, Kochi, Ernakulam – 682 005	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
41		Galaxy Hamilton, Galaxy Kingston, Galaxy Winston, Chilavannoor Road, Chilavannoor, Kadavanthra, Kochi – 682 020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
42	15.03.2023	BLUE LAGOON APARTMENT, VMRRA - 110, MARKET ROAD VADUTHALA 682023	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
43		HORIZON DAFFODILS,PADAM ROAD, VADUTHALA, ERNAKULAM, 682023	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
44		J.M HABITAT,SHASTRI ROAD, VADUTHALA ERNAKULAM, 682023	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
45		J.M TOWERS ,VADUTHALA ERNAKULAM, 682023	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
46		J.M GARDEN,VADUTHALA, ERNAKULAM, 682012	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued

47	ORIENT PARK,POPULAR ROAD, VADUTHALA KOCHI, 682012	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
48	LORDS COTTAGE,KARSHAKA ROAD, VADUTHALA ERNAKULAM, 682012	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
49	GALAXY METRO EDAPPALLY RAGHAVAN PILLAI RD, ELAMAKKARA, ERNAKULAM, KERALA - 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
50	SPARKLE SCAPES APARTMENTS, TAGORE LANE, ELAMAKKARA, ERNAKULAM, 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
51	MON AMOUR APARTMENTS, ELAMAKKARA, KOCHI, 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
52	MON COEUR, VIVEKANANDA NAGAR ROAD, ELAMAKKARA,ERNAKULAM - 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
53	LOTUS ENCLAVE Puthukkalavattom Rd, Elamakkara, Kochi, 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
54	ANASWARA SOUPARNIKA Puthukkalavattom Rd, Elamakkara, Kochi, Kerala 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
55	RDS FLAIR, EDAPPALLY RAGHAVAN PILLAI RD, ELAMAKKARA, ERNAKULAM - 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
56	CVC CALISTA EDAPPALLY RAGHAVAN PILLAI RD, ELAMAKKARA, ERNAKULAM - 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
57	DREAM FLOWER SONATA Mercy Lane 2, Elamakkara, Ernakulam, Kerala 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
58	DREAM FLOWER ZETA Punnakkal Mercy Lane, Punnakkal, Elamakkara, Kochi, Kerala 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
59	GOOD EARTH HEAVEN, Perandoor Rd, Mamangalam, Elamakkara, Ernakulam, Kerala 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
60	VB ROYAL, opp. Gayathri Kalayanamadapam, Edappally, Ernakulam, Kerala 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
61	KALPAKA CASTLE, Subhash Nagar Elamakkara, Subhash Nagar Road, Ponekkara, Edappally, Kochi, Kerala 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
62	ABAD OLYMPUS APARTMENT,Near Madom Junction, Edappally Ragavanpillai Road, Edappally P. O., Kochi, Kochi, Kerala 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
63	ORION APARTMENT, OPP. AL AMEEN PUBLIC SCHOO;, CHERANALLOOR, EDAPPALLY	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
64	NATIONAL AVENUE, National Avenue, Manimala Cross Road, Ponekkara, Edappally, Ernakulam, Kerala 682024,	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
65	NATIONAL NANDANAM, Edapally Palace Rd, Ponekkara, Edappally, Ernakulam, Kerala 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued

66	ANASWARA SOUPARNIKA APARTMENT Puthukkalavattom Rd, Elamakkara, Kochi, Kerala 68202A	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
67	SI flat, Kurishupally Rd, Ravipuram, Perumanoor, Ernakulam, Kerala 682036	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
68	KB plaza flat, K B PLAZA OWNERS ASSOCIATION ELAMMAKARA ROAD EDAPPALLY, Kerala is 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
69	Pooja flat, Thamburatti Parambu Rd, Mamangalam, Elamakkara, Ernakulam, Kerala 682565	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
70	Galaxy cherry wood, Kaloore, Kochi, Kerala 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
71	OLIVE GARDENS, NH BYPASS, NEAR OBERON MALL, PADIVATOM, EDAPPALLY, ERNAKULAM, 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
72	REGAL APARTMENTS, STADIUM ROUND, JAWAHARLAL NEHRU INTERNATIONAL STADIUM, KALOOR, KOCHI, 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
73	REGAL PALMS, ERAMATH W RD, CHEMBUMUKKU, EDAPPALLY, ERNAKULAM, 682037	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
74	JM Crescent Apartments, P.J. Antony Road, Sonia Nagar, Mamangalam, Edappally, Ernakulam - 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
75	Infra Splendor Apartments, Edappally, Ernakulam - 682565	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
76	Sky park residency, Janatha Rd, Mamangalam, Elamakkara, Kochi - 682025	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
77	Mayura Apartments, 3rd Cross Rd, Girinagar Housing colony, Giri Nagar, Kadavanthra - 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
78	Galaxy vesta 2845+R39, Punathil Padam Rd, Sonia Nagar, Padivattom, Palarivattom, Kochi, Kerala 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
79	Garden court 277W+XJC, Elamakkara, Kochi, Kerala 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
80	Sapphire heights Vennala, Ernakulam, Kerala 682028	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued

81	Kent illam Vennala, Ernakulam, Kerala 682028	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
82	National empress Garden apartments 33/442D, Vennala High School Rd, Arakkakadavu, Vennala, Kakkanad, Kerala 682028	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
83	Yeshoram tejus apartments 283C+FP5, Vennala High School Rd, Vennala, Ernakulam, Kerala 682028	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
84	Panjos apartments 2869+8MV, Civil Line Rd, Chembumukku, Edappally, Ernakulam, Kerala 682021	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
85	Halton heights 2848+4JV, Alinchuvadu Road, Vennala, Kochi, Kerala 682028	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
86	Kanchenjunga Apartments 2836+H7V, Civil Line Rd, Kesaveeyam, Palarivattom, Ernakulam, Kerala 682025	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
87	Moon Stone Residency Nethaji Rd, Nethaji Nagar, Kadavanthra, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
88	Asset home Panampilly Nagar, Ernakulam, Kerala 682036	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
89	Yashoram abode, Draupathy road X8M4+9CX, Thammanam - Pullepady Rd, Draupathi Lane, Thammanam, Ernakulam, Kerala 682032	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
90	Unitac avonlea X8JF+4GP, Dhanya S Rd, Chalikkavattom, Vennala, Ernakulam, Kerala 682028	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
91	Highway gardens, 1914, Mambra Rd, Ponnurunni, Vyttila, Kochi, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
92	Plum flower, Nursery school road X8JC+449, Ponnurunni, Vyttila, Ernakulam, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued

93	Royal park, Service Rd, Ponnurunni East, Ponnurunni, Vyttila, Ernakulam, Kerala 682028	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
94	Mather Serene Orchard X832+GJ9, Vidya Nagar Rd, Vidya Nagar, Kadavanthra, Kochi, Kerala 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
95	Jewel planet, Vaikom road, Vyttila SH15, Vyttila, Ernakulam, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
96	Santhi river dail, Vaikom road, Vyttila	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
97	Vrindavan apartment, Vyttila junction	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
98	Aiswarya Apartment, Chambakkara - Kannadikadu Road	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
99	Lotus A/C city, Bhuvanewari Temple Rd, near Chambakkara, Chambakkara, Upasana Nagar, Maradu, Ernakulam, Kerala 682304	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
100	Toch Retreat flat, Janatha road, Vyttila	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
101	Choice garden, TocH road end, Vyttila	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
102	Jewel homes, Vyttila Janatha road, near manamel temple	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
103	DLF riverside, near manamel temple, Vyttila Janatha road	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
104	Paradise tower, south Chittoor, Chittoor 682027	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
105	Galaxy high field, Vidya nagar, Panampilly nagar 682036	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
106	Metro paradise apartment, Chittoor Cheranalloor road, Amrita nagar, Edapally, Ernakulam 682024	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
107	Sparcle scape apartment, Tagore lane, Elamakkara 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
108	Zaatar Restaurant, HP 17,Main Avenue, Panampilly Nagar, Ernakulam, 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
109	Fruitbae, Panampilly, 5th Cross Rd, K.V. Nagar, Panampilly Nagar, 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
110	Starbucks,G-258, Main Avenue, MIG Housing Society, Panampilly Nagar, Kochi - 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued

111	Coldstone, Door No. 56/299, Panampilly Nagar, Main Avenue, Opp. Hotel Aryas, 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
112	Kunafa World, HIG,36 , Panampilly Nagar, Main Avenue, Kochi - 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
113	Ali Baba and 41 Dishes, 27/701, Panampilly Main Rd, Opp. South Indian Bank, MIG Housing Soccity, 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
114	Happy Cup Cafe, Main Avenue, MIG Housing Soccity, Panampilly nagar, kochi - 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
115	Juicy, Panampilly Nagar, Service Rd, Main Avenue, 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
116	Gokul Oottupura, Vegetarian Restaurant, Ground floor, Ittys Building, Main Avenue, MIG Housing Soccity, Panampilly Nagar, 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
117	Bab Arabia, 56/2568, Opp. YES Bank, SBT Ave, Panampilly Nagar, 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
118	Heatz - Healthy Eating Zone, Ambalathingal House, Kizhavana Road, Panampilly Nagar, 682036	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
119	Burger Junction, Kizhavana Rd, Above Union Bank, Panampilly Nagar, 682015	Restaurant	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
120	ABCG Midtown Pavamana Heights, Shihab Thangal Road, Panampilly Nagar, Ernakulam, Kerala 682015	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
121	Mansion kharisma X73X+HGM, Shihab Thangal Road, Panampilly Nagar, Ernakulam, Kerala 682015	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
122	Ac Pacific rose apartments X74X+3C7, Panampilly Nagar, Ernakulam, Kerala 682015	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
123	Aurum Residences, SBT Ave, Panampilly Nagar, Kochi, Kerala 682036	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
124	Skyline Royale X75X+33H, Panampilly Nagar Link Rd, LIG Housing Society, Panampilly Nagar, Ernakulam, Kerala 682036	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
125	SS Enclave G278, Panampilly Nagar Ave, MIG Housing Society, Panampilly Nagar, Ernakulam, Kerala 682036	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued

126	Kairali Apartments X74W+4PF, Panampilly Nagar Ave, Panampilly Nagar, Kochi, Kerala 682036	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
127	Royal Stadium Mansion Market Road, Market, near Kadavanthra, Gandhi Nagar, Kadavanthra, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
128	Jewel homes Canal, Mamangalam, Elamakkara, Ernakulam, Kerala 682026	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
129	Holiday Grandeur X7HV+VW9, P.O, Chemmath Rd, Gandhi Nagar, Kaloer, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
130	Marvel Mansions X7JX+W3Q, Thammanam - Pullepady Rd, Kathrikad Kaloer, Ernakulam, Kerala 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
131	Pulickal Avenue, St Francis Xavier Church Rd, Kathrikadavu, Kaloer, Ernakulam, Kerala 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
132	DD nest Pipeline Rd, Kathrikadavu, Thammanam, Ernakulam, Kerala 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
133	IMA House Behind Jawaharlal Nehru International Stadium, Kathrikadavu, Palarivattom, Kochi, Kerala 682025	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
134	jewel pearl X8Q2+99C, Vattaparambu West Lane, Kathrikadavu Kaloer, Ernakulam, Kerala 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
135	Kent hail garden X8R2+7HM, Kathrikadavu, Kaloer, Ernakulam, Kerala 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
136	Vismaya Apartments Kaloer, Kochi, Kerala 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
137	Seiken Eastend Ponoth Rd, Kaloer, Ernakulam, Kerala 682017	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued

138	Vanchinad Residency Apartment Kaloor, Ernakulam, Kerala 682017	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
139	Green city Orchid 275W+F8P, Pottakuzhi - Mamangalam Rd, Mamangalam, Elamakkara, Ernakulam, Kerala 682026	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
140	Dream Flower Celesta Vivekananda Nagar Rd Extention, Elamakkara, Ernakulam, Kerala 682026	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
141	Orient Park Vaduthala 276J+V8X, Popular Road, Vaduthala, Kochi, Kerala 682012	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
142	Kayaloram Apartments Thevara Ferry Road, Thevara, Ernakulam, Kerala 682013	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
143	Seiken Sailwind W7PW+CW9, Pandit Karuppan Rd, Thevara, Ernakulam, Kerala 682013	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
144	Chakolas Waterford Pandit Karuppan Rd, Thevara, Ernakulam, Kerala 682013	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
145	Avern Pass W7PX+MV4, Thevara, Kochi, Kerala 682013	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
146	Galaxy clifford Neptune Country, Chilavannoor, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
147	Sylvan Heights X835+8C4, Chilavannur Rd, Vinoba Nagar, Chilavannoor, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
148	Heera Waters, X836+CQQ, Bund Rd, Chilavannoor, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
149	Perals Gardens View , Amalabhavan Rd, near Kochu Kadavanthra, Vinoba Nagar, Chilavannoor, Kochi, Kerala 682020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued

150	Yasoram Pancharatna Apartments X877+96J, Toc-H Rd, Near Janatha Road, Janatha, Vyttila, Ernakulam, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
151	Yasoram Valluvassery Enclave X875+793, Water Land Rd, Chilavannoor, Kochi, Kerala 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
152	Jomer Residency Apts Ravindran Rd, Chilavannoor, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
153	Fern Icon Panchavati Colony, Vyttila, Ernakulam, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
154	Panchavadi Apartment X8C5+FMV, Panchavati Colony, Vyttila, Kochi, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
155	Pittappillyi Enclave X8C5+F9R, Panchavati Colony Rd, Panchavati Colony, Kadavanthra, Kochi, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
156	Orchid Court Apartment X8C5+FCX, Panchavati Colony Rd, Panchavati Colony, Vyttila, Ernakulam, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
157	Blue moon pearl apartment X8F5+2P7, Vyttila, Kochi, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
158	Abad Harmony Paradise Rd, Vyttila, Kochi, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
159	Paradise Apartment PRRA-18, Vyttila, Kochi, Kerala 682019	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
160	Betron Towers Elamkulam, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued
161	Jerusalem Residency Blossom Road, Elamkulam, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DOI	Kochi Corporation	No Consent, No STP	Issued

162	Golden Heights Apartments X79X+7RQ, Excel Rd, Elamkulam, Kochi, Kerala 682020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
163	Nakshatra Malika Apartment Kunjanbava Rd, Ponnurunni, Vytila, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
164	Bluemoon Apartments Emerald and Ruby Ponnurunni, Vytila, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
165	Skyline rosemount Kunjanbava Rd, Ponnurunni, Vytila, Kochi, Kerala 682019	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
166	Abad Silver Crest Subhash Chandra Bose Rd, Kadavanthara, Jawahar Nagar, Elamkulam, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued
167	Skyline City Park X8F2+R89, Jawahar Nagar Ave, Jawahar Nagar, Kadavanthra, Ernakulam, Kerala 682020	Apartment	Ernakulam	Ernakulam DO1	Kochi Corporation	No Consent, No STP	Issued

NGT OA 395 പെരിയാർ നദീ സംരക്ഷണം

		Health and Night Squads				Institutional STPs - enforcement			Illegal outlets			
		No. of inspections done by Health Squad in current FY	Total amount of fine imposed against Single Use Plastic in current FY (in Rs)	No. inspections done by Night Squads in current FY	Total amount of fine imposed against illegal dumping in public places and water bodies in current FY (in Rs)	No. of institutions having no STPs identified in above list as on date	No. of institutions having non-functional STPs as on date	No. of notices issued to institutions with no STPs and non-functional STPs in the last 12 months	Total No. of illegal outlets to the drainages & waterbodies identified by the ULB	No. of illegal outlets closed by the ULB in current financial year	Total amount of fine imposed against illegal outlets in current financial year (in Rs)	No. of prosecutions initiated by the ULBs against illegal outlets in current financial year
1	ADIMALI	5	90000	0	0	0	0	0	0	0	0	0
2	AYHYAPPAN KOVIL	2	10000	0	0	0	0	0	0	0	0	0
3	ELAPPARA	25	0	0	20000	0	0	0	0	0	0	0
4	KANJIKKUZHY	2	0	0	8000	0	0	0	0	0	0	0
5	KANCHIYAR	4	17000	0	0	0	0	0	0	0	0	0
6	KONNATHADI	5	90000	0	0	0	0	0	0	0	0	0
7	KUMALY	46	58000	20	128000	24	0	7	7	7	15000	0
8	MARIYAPURAM	2	7500	0	7500	0	0	0	0	0	0	0
9	MUNNAR	13	10000	5	89800	68	27	12	25	9	0	0
10	PEERIMEDU	6	10000	7	7000	4	0	0	2	2	0	0
11	UPPUTHURA	7	0	2	10000	0	0	0	7	5	0	0
12	VANDIPERIYAR	3	0	0	0	0	0	0	0	0	0	0
13	VATHIKKUDY	6	0	2	0	0	0	0	0	0	0	0
14	VAZHATHOPPU	3	1000	2	0	0	0	0	0	0	0	0
15	VELLATHOOVAL	36	39000	15	32000	0	1	0	0	0	0	0
16	VADAKKEKARA	2	0	0	0	0	0	0	0	0	0	0
17	MALAYATOOR-NELEESWARAM	2	500	0	0	0	0	0	0	0	0	0
18	PUTHANVELIKKARA	1	2000	0	0	0	0	0	0	0	0	0

19	VAZHAKULAM	1	0	0	0	0	0	0	0	0	0	0
20	KOOVAPADY	1	0	0	10000	0	0	0	0	0	0	0
21	KEERAMPARA	1	0	0	5000	0	0	0	0	0	0	0
22	KARUMALLOOR	1	2000	0	0	0	0	0	0	0	0	0
23	KALADY	2	0	0	5500	0	0	0	0	0	0	0
24	CHENNAMANGALAM	1	3000	0	10000	0	0	0	0	0	0	0
25	KUTTAMBUZHA	2	0	0	0	0	0	0	0	0	0	0
26	KANJAR	3	0	0	0	0	0	0	0	0	0	0
27	KOTTAPPADY	4	0	0	0	0	0	0	0	0	0	0
28	CHOORNIKKARA	2	20000	0	15000	0	0	0	0	0	0	0
29	SREEMULANAGARAM	2	0	0	0	0	0	0	0	0	0	0
30	KEEZHMADU	1	3500	0	0	0	0	0	0	0	0	0
31	CHERANELLOOR	3	13000	0	27500	0	0	0	0	0	0	0
32	KAVALANGADU	7	3000	0	0	0	0	0	0	0	0	0
33	NEDUMBASSERY	3	0	0	12000	0	0	0	0	0	0	0
34	VARAPPUZHA	2	6000	2	0	0	0	0	3	3	0	0
35	ALANGADU	4	0	2	10000	0	0	0	0	0	0	0
36	KUNNUKARA	4	0	0	0	0	0	0	0	0	0	0
37	KADUNGALLOOR	4	1500	0	28000	0	0	0	0	0	0	0
38	VENGOOR	3	0	1	0	0	0	0	0	0	0	0
39	OKKAL	2	0	0	5000	0	0	0	0	0	0	0
40	PINDIMANA	2	0	0	0	0	0	0	0	0	0	0
41	POYYA	1	0	0	0	0	0	0	0	0	0	0
42	ERIYADU	2	0	0	0	0	0	0	0	0	0	0
43	MAALA	1	10000	0	10000	0	0	0	0	0	0	0
	TOTAL	229	397000	58	440300	96	28	19	44	26	15000	0



☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
E-mail: ms.kspcb@gov.in FAX: 0471 - 2318134, 2318152 web: www.kspcb.kerala.gov.in

KERALA STATE POLLUTION CONTROL BOARD
കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം – 695 004

PCB /HO/EE3/NGT/O.A No.147/2022/06/2022

Date: 15/03/2023

Regd. with A/D

SHOWCAUSE NOTICE

Sub: Non-compliance of Water (Prevention and Control of Pollution) Act 1974

Ref: 1. Water Act (Prevention and Control of Pollution) 1974

2. Environment Protection Act 1986

3. The Hon'ble NGT order dated 28.08.2019 in OA No.593/2017

4. Order dated 02/02/2023 in OA 27/2021 of Hon'ble NGT (SZ)

5. Order dated 06/01/2023 in OA 147/2022 of Hon'ble NGT (PZ)

WHEREAS the Central Government notified the Water (Prevention and Control of Pollution) Act, 1974 (hereafter referred to as Water Act) for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water;

WHEREAS as per Section 24 of Water Act disposal of Polluted matter to stream or well is prohibited

WHEREAS as per Section 24(a), no person shall knowingly cause or permit any poisonous, noxious or polluting matter determined in accordance with such standards as may be laid down by the State Board to enter (whether directly or indirectly) into any [stream or well or sewer or on land];

WHEREAS as per Section 24(b), no person shall knowingly cause or permit to enter into any stream any other matter which may tend, either directly or in combination with similar matters, to impede the proper flow of the water of the stream in a manner leading or likely to lead to a substantial aggravation of pollution due to other causes or of its consequences.

WHEREAS it is observed that the quality of waterbodies in the Kochi Corporation is not conforming to standards prescribed under Environment Protection Rules, 1986;

WHEREAS high level of fecal coliforms in the waterbodies indicate the contamination due to improper treatment and disposal of sewage generated in the Corporation area;

WHEREAS there are cases in Hon'ble NGT (OA 27/2021 & OA 147/2022) on deterioration of water quality of drains and Vembanad lake ;

WHEREAS the Hon'ble National Green Tribunal vide Order dated 22/02/2021 in OA 593/2017 laid down compensation scale for continued failure in implementation of

WHEREAS in various other application also, the Hon'ble NGT passed similar orders, for instance, in the Order dated 20/11/2018 in O.A. No.117/2014, 499/2014 and 102/2014 (ref. 16) the Hon'ble NGT noted as; "Needless to say that statutory authorities under the Environment (Protection and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act,1974 are entitled to assess and recover damages as "Polluter Pay's Principle" in exercise of incidental powers to protect environment".

WHEREAS as per Hon'ble NGT order dated 23/09/2019 in O.A.585/2018, if the rules are violated, the Pollution Control Board can independently proceed against local bodies who are not complying with the rules including initiation of prosecution of those person who are not complying with the same and assessment of damage caused to the Environment;

WHEREAS as per Hon'ble order of NGT dated 28/08/2019 in OA 593/2017 Environment Compensation shall be levied for failure of preventing the pollutants being discharged in water bodies and failure to implement waste management rules and Environment Compensation shall be estimated based on Individual/Authority, capital cost of STP for 1MLD as Rs. 1.75 Cr/MLD (marginal average cost); cost of conveyance system as Rs. 5.55 Cr/MLD (marginal average cost) and annual O&M cost as 10% of the combined capital cost;

AND WHEREAS it is noted that 70 MLD waste water (sewage&sullage) is generated in Corporation area based on population and the improper treatment and disposal of waste water has led to the deterioration of water quality in water bodies;

NOW THEREFORE, in exercise of the powers vested under Section 33 A of the Water (Prevention and Control of Pollution) Act, 1974 you are directed to show cause reasons within 15 days as to why Environmental compensation shall not be imposed as per the order of NGT in OA 593/2017, against the Corporation for the non-compliance of the Water Act.


CHAIRMAN

To

The Secretary,
Kochi Corporation

Copy to:

- | | | |
|---|---|------------------------|
| 1. The Additional Chief Secretary
Local Self Government Department | } | (with covering letter) |
| 2. The Additional Chief Secretary
Environment Department | | |
| 3. The District Collector, Ernakulam | | |
| 4. The Director, Urban Directorate | | |
| 5. The Chief Environmental Engineer, Regional Office, Ernakulam | | |
| 6. The Environmental Engineer, District Office, Ernakulam | | |

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151

e-mail: ms.kspcb@gov.in, FAX: 2318152 web: www.kspcb.kerala.gov.in



KERALASTATE POLLUTION CONTROL BOARD

കേരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram - 695 004

പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004 .

PCB/HO/EE1/SOUTHERN RAILWAY/2023

Dated: 15/03/2023

From

The Member Secretary

To

The Member Secretary

IPC - VII, Central Pollution Control Board

Privesh Bhavan,

East Arjun Nagar,

Delhi - 110032

Sub: Status of compliance with consent conditions - Railway Stations in Kerala - reg.

Ref: 1) Order of the Hon'ble NGT in O.A. No. 141/2014.

2) Letter No. PCB/HO/EE1/SOUTHERN RAILWAY/2023 dated 16/01/2023 & 20/01/2023.

3) Letter no. PCB/EKM/DO-1/OA 444/2015 dated 18/02/2021 & 20/12/2022 .

4) Consent Revocation Intention Notice No.PCB/EKM/DO-1/GEN-07/2021 dated 21/11/2022.

Sir,

Kind attention is invited to the matter cited above. The order of the Hon'ble NGT in OA No. 141/2014 specifies that the Railway Stations fall under the ambit of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 and the rules framed there under. Hence all the major Railway Stations are required to obtain Consent of the Board. Based on the order of the Hon'ble NGT all the major Railway Stations of Kerala had applied for Board's consent and consent was issued

to most of the Railway Stations with a condition to install the ETP within a stipulated time frame. Now it is noted that many of the railway stations have failed to provide the ETP yet, thus violating the condition of the consent issued by the Board. It has also come to notice of the Board that failure of providing proper 'waste water treatment plant in such stations has resulted in pollution of water bodies in the State. Board has brought the matter to the notice of the Divisional Railway Manager vide letter dated 16/01/2023 & 20/01/2023.

Regarding Kochi, deterioration of water quality of drains of Vembanad lake is viewed seriously by Hon'ble NGT in OA 27/2021 (SZ) and OA 147/2022 (PZ). Ernakulam Junction which is a major railway station in Kerala is a contributor of pollution of water bodies in Kerala. This station is issued Integrated Consent to Operate valid upto 31/03/2023 with a condition to set up the Sewage Treatment Plant. But STP is not yet provided and also the area behind the diesel loco shed situated at the South Railway station is contaminated with oil. Though several instructions/ notices had been issued to the railways from the District Office of the Board, no action is initiated for the remediation of oil contaminated area till date. Since the site is severely contaminated with oil sludge which is hazardous in nature it was directed to take immediate action to remediate the area. Advice regarding methodology to be adopted for remediation work had also been issued. Despite the above facts neither the remediation work is taken up nor the STP is constructed. Since such inaction on the part of Railways may impair the quality of nearby water bodies the issue needs urgent resolution. It is requested that your good self may kindly intervene in the matter and necessary instructions to the concerned authorities may please be issued in this regard.

Yours faithfully,

S. S. A. J.

MEMBER SECRETARY



☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
E-mail: ms.kspcb@gov.in FAX: 0471 - 2318134, 2318152 web: www.kspcbkerala.gov.in

KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004

പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

PCB/HO/EE3/OA No.27/2021(SZ)/2021

Date: 31/01/2023

From

URGENT

The Member Secretary

To

The Secretary

Ministry of Jalashakti

Department of Water Resources

River Development and Ganga Rejuvenation

Sub:- Environment Department –Proposals for pollution abatement of selected river stretches -reg.

Ref :-1) D O no. J-27011/1/2022-NRCD-II dated 01.06.2022 from

Ministry of Jalashakti

2) Letter no. A3/140/2022-ENVT from Environment Department

dated 28.06.2022

3) Letter no. KMRL/IURWTS/1/11-2023 dated 31/01/23

Sir,

Kind attention is invited to the letter under reference (1), wherein Govt. of Kerala was asked to submit appropriate proposals for pollution abatement of selected river stretches. Accordingly Environment department asked the Board to submit appropriate proposals for pollution abatement of selected river stretches as annexed, directly to Central Government under intimation. Periyar river comes under priority V polluted stretch. Kochi Metro Rail Limited prepared DPRs duly vetted by CUBE-IIT Chennai for STPs and sewer line at Muttar, Perandoor, Vennala, Elamkulam for an amount of Rs.324.28 Crore, Rs.232.68

Crore, RS 499.26 Crore , Rs.367.63 Crore respectively. The said DPRs are forwarded herewith for your kind consideration for getting funding under NRCD.

Yours faithfully,



MEMBER SECRETARY

Copy to : 1) The Additional Chief Secretary
Environment Department

(with C/L)

- 2) Environment Monitoring Cell
- 3) The General Manger
Kochi Metro Rail Limited
- 4) The Chief Environmental Engineer
Regional Office ,Ernakulam
- 5) The Environmental Engineer
DO-1,Ernakulam

**Minutes of the presentation by NEERI on 13.03.2023 regarding
Phytoid Waste Technology in the matter of
O.A. 27/2021 Perandoor Canal & OA 141/2021 Pallikkalar**

The meeting was convened via VC by the Chairman, Kerala State Pollution Control Board to view and assess the possibility of utilizing phytoid technology as a temporary measure for treatment of sewage as suggested by the NGT in the order dated 02.02.2023 on OA 27/2021 and in the order dated 16.02.2023 on OA 141/2021. Dr .Rithesh Vijay, Senior Principal Scientist and Head, NEERI ;Member Secretary KSPCB; Director, Waste Water Management Suchitwa Mission ;CEE ,Head office; CEE,RO, Trivandrum; CEE,RO, Ernakulam; Senior Environmental Engineer, Head Office, Environmental Engineers Kollam, Pathanamthitta, Alappuzha, Ernakulam, and representatives from Local Bodies namely Kadambanad, Pallickal, Thodiyoor, Poruvazhy attended the online presentation.

The Chairman, KSPCB at the outset gave a brief description about O A 141 and O A 27 and mentioned that as per the latest order NGT has observed that the methodology known as Phytoid Waste water Technology developed by NEERI was suggested to restore Pallikallar and Perandoor canal.

Dr .Rithesh Vijay , Senior Principal Scientist and Head ,NEERI presented the technology in powerpoint.

From the presentation it is presumed that only stones and aggregates along with plants are used in this technology. The existing and ongoing projects taken up by NEERI,with this technology was also shown, during the presentation.

Chairman enquired about the space requirement of the treatment plant and about the removal efficiency with respect to coliforms. Dr .Rithesh Vijay clarified that Scalability of this plant varies from 5.0 KLD to 50 Lakh litres per day, and upper portion works on aerobic principle and bottom portion works on anaerobic principle. So considerable reduction of coliforms will occur but disinfection is required after this.

The time period required for construction was reported as 3 to 4 months. The

Chairman further enquired whether any odour control facilities are associated with the method and Dr .Rithesh Vijay replied that sewage goes to subsurface and no water logging and stagnation and hence there will be no foul smell.

Dr. Praveen K S, Director Waste Water Management, Suchitwa Mission opined that NEERI is not executing any new projects and only gave consultancy service and they have empanelled agencies for execution. He enquired whether this method will be effective during flooding and Dr .Rithesh Vijay , NEERI replied that flooding will not affect the plant as this is constructed slightly above ground level.

The Chairman, KSPCB enquired about the total cost of construction and enquired whether it is a permanent method as NGT mentioned it as "a temporary measure". Dr .Rithesh Vijay , replied that though the initial cost for construction of RCC tank is high, the operational and maintenance cost is low and least .He also clarified that it can be considered as a permanent treatment solution and invited officials concerned for a site visit, to any of the visit where the system has been installed.

The Chairman concluded the meeting by stating that the matter would be informed to Additional Chief Secretary, Environment for filing the report to NGT and with permission, concerned officials can undertake a trip to the nearest such facility operated by NEERI.


CHAIRMAN

**BEFORE THE HON'BLE NATIONAL
GREEN TRIBUNAL
(SOUTHERN ZONE BENCH, CHENNAI)**

**ORIGINAL APPLICATION NO. 27 OF
2021**

In the matter of:
Suo Motu " Faecal
Contaminationin perandoor
edapally canals"

-VS-

The Principal Secretary to Govt. Of
Kerala,
Environment Department, Kerala
and others

----Respondent(s)

STATUS REPORT FILED BY
ADDITIONAL CHIEF
SECRETARY, ENVIRONMENT
DEPARTMENT/ 1ST RESPONDENT

E.K. KUMARESAN,
Standing Counsel for Government
of kerala

No.6, Indian Chambers (SICCI)
Annex Building, Ground Floor,
Esplanade, Chennai - 600 108.

Cell No: 94443 98701