

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

**ORIGINAL APPLICATION No. 233 of 2020(SZ), O.A. No. 243 of
2020(SZ), O.A. No. 251 of 2020 (SZ) & O.A. No. 252 of 2020(SZ)**

IN THE MATTER OF:

- | | |
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| 1. Sajith | Applicant |
| Versus | |
| The State of Tamilnadu & Ors. | Respondent(s) |
| 2. Juhu Beach Residents Association | Applicant(s) |
| Versus | |
| Ministry of Environment, Forest and Climate Change & Ors. | Respondent(s) |
| 3. Singaravellar Ocean Side Residents Welfare Association & Ors. | Applicant(s) |
| Versus | |
| The State of Tamilnadu & Ors. | Respondent(s) |
| 4. Sri Kapaleeswarar Nagar Residents Welfare Association & Ors. | Applicant(s) |
| Versus | |
| The State of Tamilnadu & Ors. | Respondent(s) |

INDEX

SI. No.	PARTICULARS	PAGE NO.
1	Joint Committee Report with Annexures	
2	Dissenting report received from two members of the Joint Committee with Annexures.	

Place: Chennai

Date:02/04/2021

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

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REPORT OF THE JOINT COMMITTEE CONSTITUTED IN THE O.A. No. 233 of 2020(SZ), O.A. No. 243 of 2020(SZ), O.A. No. 251 of 2020 (SZ) & O.A. No. 252 of 2020(SZ).

Report of the Joint Committee constituted in the O.A. No. 233 of 2020(SZ), O.A. No. 243 of 2020(SZ), O.A. No. 251 of 2020 (SZ) & O.A. No. 252 of 2020(SZ) before the Hon'ble National Green Tribunal, (SZ), Chennai.

1. Introduction:

In order to ascertain the factual status and also the nature of alleged violation said to have been committed in carrying out the construction of Storm Water Drain along East Coast Road between Kottivakkam to Uthandi referred therein the above original applications and also its alleged impact on the coastal aquifer system and environmental damage, the Hon'ble National Green Tribunal, Southern Zone, Chennai vide Orders dated 27.10.2020, 20.11.2020 and 04.12.2020, appointed a Joint Committee comprising the members of (1) a Senior Officer from Ministry of Environment, Forest and Climate Change (MoEF&CC), Regional Office, Chennai, (2) a Senior Officer from Tamil Nadu Coastal Zone Management Authority (TNCZMA), (3) The Superintending Engineer from Public Works Department (PWD) and Water Resources Organisation (WRO) of that area, (4) a Senior Officer from Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) and (5) a Senior Scientist from National Institute of Ocean Technology (NIOT), Chennai, with the direction to inspect the area under question and evaluate the project and submit a consolidated report on the terms of reference issued to the Committee as well as action taken report. In the above said Orders, Hon'ble NGT appointed Ministry of Environment Forest and Climate Change, Regional Office, Chennai as nodal agency for the co-ordination purpose.

2. Constitution of the Joint Committee:

In compliance with the directions of the Hon'ble NGT in the above said matters, as a nodal agency Regional Office of MoEF&CC at Chennai vide O.M. No. EP/12.7/NGT(SZ)/067/2020 dated 22.12.2020 constituted a Joint Committee comprising of the following members based on the Officers deputed / nominated from the Authorities concerned:

- (i). Er. A. Muthaiya, Superintending Engineer, WRD, Palar Basin Circle, PWD, Chennai.
- (ii). Dr. Vijaya Ravichandran, Scientist – G, Coastal & Environmental Engineering Group, National Institute of Ocean Technology, Chennai – 600 100.

- (iii). Dr. S. Subramanian, Scientist – D (Sr. Hydrogeologist), Central Ground Water Board on behalf of Tamilnadu State Coastal Zone Management Authority.
- (iv). Er. P. Ashok Kumar, Superintending Engineer (South), Chennai Metropolitan Water Supply and Sewerage Board.
- (v). Dr. M.T. Karuppiah, Scientist – E, Ministry of Environment, Forest and Climate Change, Regional Office, Chennai.

3. Terms of reference (TOR) to the Joint Committee:

The Terms of the Reference (ToR) to the Joint Committee referred therein the Orders dated 27.10.2020, 20.11.2020, 04.12.2020 and 11.01.2021 of Hon'ble NGT in the above matter inter-alia include the following:

- (i). The committee shall go in to the question as to whether the project requires any CRZ Clearance.
- (ii). whether the project will have any environmental impact on the aquifer and the coastal zone due to construction of concrete storm water drain in the aquifer region.
- (iii). what are the alternate methods by which the apprehension of the people affecting natural percolation and water recharge system in the aquifer area can be protected, if this project has to proceed with.
- (iv). Submission of factual as well as action taken report, if there is any violation found.
- (v). Suggest and recommend the methods by which the project can be proceeded with, without causing much environmental impact on coastal area and aquifer region, if it is legally permissible to continue.
- (vi). Submit the final report regarding the nature of all constructions in violations of the CRZ Notification in CRZ-II as well CRZ-1(A) as alleged by the applicant after verifying the same by super imposing the Coastal Regulation Zone Management Plan prepared under the notification and submit a final report including these aspects and producing the plan prepared showing the nature of constructions made in the respective zones in which it has been constructed, so as to enable this Tribunal to ascertain the true facts for the purpose of effective disposal of the case.
- (vii). Assessing the environmental compensation caused on account of the damage to the marine ecology on account of constructions and mention the same as well in the report.

(viii). The counsel for the applicants in all the cases are at liberty to serve the document if any, with them to the committee members regarding the alleged construction if any, made by the corporation after the stop memo has been served on them and the committee can consider those aspects also, while filing the further report to be submitted regarding the violations committed and to assess the environmental compensation.

4. Background of the project:

Reportedly in the year, 2014, in the INDO – GERMAN bilateral meeting, the commitment was given by KFW, the German Development Bank to fund the construction of Integrated Storm Water Drain Project in Kovalam Basin. Accordingly, a study was conducted in the year 2012 through a hydrology consultant M/s Tetrattech, for preparation of Flood Mitigation master plan DPR for storm water drain network and plan was prepared during 2014 for all the extended areas of the Corporation. The integrated storm water drain (ISWD) for the Kovalam basin is divided into 3 watersheds - M1 covering Pallikaranai marsh area, M2 covering the Buckingham Canal localities and M3- localities in the coastal areas. Total Length of the Storm Water Drain to be constructed in the M3 component is 52 Km. The entire project is funded by the German Development Bank (KFW). M/s Kocks Consultants have been selected by KFW to revisit the DPR for M3 Component already prepared by Tetrattech consultant. M/s. Kocks consultants completed their work on 23.01.2018 for M3 component based on field visits and final tender documents prepared by them and floated with nationwide publicity. The estimated project cost for the Kovalam basin is reportedly (150 Million Euro) Rs.1250 Crore. This includes areas in all the 3 watersheds of M1, M2 and M3. Reportedly the said project activity for the M3 component has been commenced in the month of June, 2020. Alleged on the above activities of the storm water drain network in the M3 component, the above Applicant(s) instituted the present applications before the Hon'ble NGT with the prayer to restrain the Respondents from implementing Storm Water Drain in ECR / Kovalam Basin.

5. Meeting of the Joint Committee:

In compliance with the Orders dated 27.10.2020, 20.11.2020 and 04.12.2020 of Hon'ble NGT passed in the above matters and in continuation to the Joint Committee Constitution vide O.M. dated 22.12.2020 of Regional Office of MoEF&CC at Chennai, the meeting of the Joint Committee was held on 28.12.2020 at Regional Office of MoEF&CC at Chennai. As directed by the Hon'ble NGT and also consented by all the members of the Committee an opportunity was given to the Applicants in the O.As. and also to the project authority M/s the

Greater Chennai Corporation to submit their views before the Committee. The list of participants in the said meeting is enclosed as **Annexure – I**. During the Joint Committee meeting, members discussed the facts, issues and prayers referred therein the above original applications and the Terms of the References (ToR) to the Joint Committee referred therein the Orders of Hon'ble NGT.

5.(i). Submission of the Greater Chennai Corporation:

In the above Joint Committee meeting, on behalf of the Greater Chennai Corporation as a project authority, Chief Engineer (General), Executive Engineer, Assistant Executive Engineer (Storm Water Drain Department) and the Counsel for the Greater Chennai Corporation attended the meeting and made their submissions in connection with construction of Integrated Storm Water Drain in M3 component of Kovalam basin, which inter-alia include the following:

- (a). Primarily M/s the Greater Chennai Corporation completely denied the averments referred therein the O.A.
- (b). Flood Mitigation master plan DPR for the extended areas of the Corporation were prepared by M/s Tetrattech Consultants from 2012 and completed in 2014.
- (c). In the year 2014, under rule 110, Hon'ble Chief Minister of Tamilnadu has announced that the proposal for construction of SWD would be taken up for Rs.4034 Crore for all the four basins.
- (d). In the year, 2014, in the INDO – GERMAN bilateral meeting, the commitment was given by KFW, the German Development Bank to fund the construction of Integrated Storm Water Drain Project in Kovalam Basin (M1, M2 & M3) to the tune of 150 Million Euro (Rs.1250 Crore).
- (e). In the year 2016, a Minutes of Meeting was signed between KFW and the Greater Chennai Corporation to take up this project. Also, it was decided to take up the M3 component (Kottivakkam to Uthandi, east side of ECR) on Fast track basis with retroactive financing facilities from KFW.
- (f). M/s. Kocks Consultants have been selected by KFW to revisit the DPR for M3 Component already prepared by M/s Tetrattech.
- (g). Total length of the Storm Water Drain to be constructed in M3 component is 52 Km.
- (h). Due to rapid urbanization and more paved surfaces 70 to 80 % of the rain water is flowing on the road, since the groundwater table is high in monsoon and infiltration is less, which leads to stagnation of rain water in the roads causing inconvenience to the public.

- (i). It is proposed to provide Rain Water Harvesting Blocks imported from Germany at 20 places in vacant land and play grounds. It is also proposed to provide retention ponds in parks and 171 Nos of Rain Water Harvesting Wells along the road margins and 22450 Nos of Rain Water Harvesting Pits.
- (j). After rain water harvesting by various methods, excess rain water leading to stagnation in the road only flows in to the SWD, thus by stagnation of rain water will be avoided.
- (k). As per CPHEEO guidelines road run of water will be 10% to 20% in undeveloped area. Road run of water will be 70% to 80% in developed areas.
- (l). By implementation of Integrated Storm Water Drain, stagnation of rain water, damages to the roads and other infrastructures and engaging of machineries during monsoon period for bailing of water will be avoided.
- (m). In vacant lands long period of stagnation will lead to unhygienic condition and leads to Mosquito breeding.
- (n). During 2015 floods at about 74 locations, machineries such as JCB and pumping motors were placed by Greater Chennai Corporation for bailing out of rain water and reliving water stagnation.
- (o). As per IRC guidelines IRC: SP: 42/2014, storm water drain has to be constructed for draining of storm water as part of the road infrastructure.
- (p). Only 0.70% of land area is covered with SWD and due to this project, the people live in 86.20 % area will be benefitted and further damages to the road infrastructures will be completely avoided.

5.(ii). Submissions of the Applicants:

On behalf of the applicant(s) in the O.A(s)., their Counsel / authorized representatives attended the meeting and submitted the following points in connection with the alleged Storm Water Drain construction:

- (a). The storm water drains and outfalls on the beach all fall within the CRZ area and thus the project require prior CRZ clearance.
- (b). Tamilnadu Government vide G.O. Ms. No. 146 dated 27.09.2016 notified the beach from Kottivakkam to Kovalam as Olive Ridley Turtle nesting sites, which is CRZ-IA as per the Coastal Zone Management Plan, wherein outfalls construction is not a permissible activity as per Para 3 (v) r/w 8 of CRZ Notification, 2011.
- (c). The alignment approved by NCZMA for the laying of drinking water pipelines in Uthandi is alignment provided by the project authority for

storm water drain, which may lead to mixing of storm water with potable drinking water. Alignment of the Storm Water Drains is identical to alignment of drinking water pipelines being laid by Chennai Metro Water Supply & Sewerage Board (CMWSSB) in Uthandi. Further, in this regard, CMWSSB has obtained CRZ Clearance from the authority concerned.

- (d). M3 area has been classified as an ecologically sensitive area classified as 'Aquifer Recharge Zone' which is to be protected as per the second Master Plan, 2026 of CMDA.
- (e). East Coast Road that fall within the greater Chennai Corporation are not provided with metro water connection or underground sewerage system. Predominantly ground water, through private bores, is used as the source of potable water for all residents in and around ECR. Individual septic tanks are the only source of sewage water disposal in these areas.
- (f). Also, the locality is not a flat terrain and the ground naturally slopes towards the sea, which plays a vital role in allowing the infiltrated water to flow eastward inside the subsoil, without causing any stagnation on surface.
- (g). As per the Second Master Plan 2026 of CMDA the entire stretch running several kilometers on the eastern side of ECR right up to Uthandi is marked as aquifer recharge area.
- (h). Possible interference between sewerage schemes with new underground installations for water.
- (i). There can not be a uniform design for storm water drain.
- (j). The important issues raised in connection with the design aspects are:
 - Designs of M/s Kocks Consultants are not in line with the parameters set out in "Manual on Storm Water Drainage Systems" issued by the Central Public Health and Environment Engineering, Organisation (CPHEEO), Ministry of Housing & Urban Affairs, Government of India.
 - If executed to this design, almost the entire rain water will be discharged into the sea, without contributing to ground water.
 - The proposed "Outfalls" are proposed to be laid with "gabions" or "link mattresses", which are wire-mesh boxes or containers that are filled with small stones / aggregates. High salinity of the sea water would erode the iron wire meshes of gabions at a fast pace leaving just dumps of stone aggregate on the beach. The CPHEEO Manual does not suggest the use of gabions for storm water drains along the coast.

- The SWD layouts are not designed to properly accommodate the existing underground utilities such as water pipes, power cables, communication cables, etc. After constructing the SWD, it will be difficult to access these utilities for any attention.
- M/s Kocks Engineers have not seemingly obtained the drawings from CMWSSB and evolve the designs of SWD to suit the configuration of underground water and sewage pipes.
- The design drawings do not give details of any filtration or separation system at the entry of SWD, which feature will lead to ingress of unwanted materials. The larger materials that are unable to make their way through the drain holes would stagnate near the entry of the drains causing it to clog. The clogging would in turn impact the flow of runoffs, which would only add to the pollution of ground water, having an effect contrary to the very purpose of the drains. The smaller materials and water-soluble chemicals would be carried through the SWD, right to the outfalls, would flow on the beaches and eventually would be dumped into the sea. This may affect the aquatic system and cause erosion.

(k). The issues raised in connection with the execution aspects are:

- Kocks Engineers' role excludes active monitoring of the work at site and documenting the parameters of work and ensuring QA-QC.
- Levels and alignments are not accurately set out using appropriate survey instruments, even though Kocks have provided the layout plans and longitudinal sections to define the parameters for SWD configuration. Level and Alignment Markers are not erected at site.
- It is doubtful as to whether dewatering is fully carried out before laying concrete for bottom slab of duct. Effectiveness of the curing of concrete, especially in the top and vertical slabs is doubtful. The box is expected to sustain the weight of heaviest trucks, which may come over the drain, because the SWD becomes part of the road in many places.
- It is not known whether concrete test-cubes are cast at site to decide the cube strength. It is also not known whether the steel rods are subjected to test from time to time.

6. Status of Statutory requirements:

(i) In exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, Ministry of Environment, Forest & Climate Change had notified the Coastal Regulation Zone Notification, 1991 on 19th February, 1991, which, *inter-alia*, provided classification of Coastal Regulation Zone (hereinafter referred to as CRZ)

areas and norms for regulating developmental activities referred therein. This Notification was subsequently amended from time to time.

(ii). Subsequently, in supersession of the CRZ Notification, 1991, the Coastal Regulation Zone Notification, 2011 was notified on 6th January, 2011 for regulation of developmental activities along the coastal stretches and to ensure the livelihood security to the fisher communities and other local communities, living in the coastal areas, to conserve and protect coastal stretches.

(iii) All the developmental activities / projects attracting the provisions of the CRZ Notifications 2011 are required to obtain prior CRZ clearance from the authorities concerned.

(iv). As per the CRZ notification, the State Coastal Zone Management Authorities (SCZMAs) are primarily responsible for enforcement and implementation of the provisions of the notification. For the purpose of implementation and enforcement of the provisions CRZ Notification, the powers either original or delegated, under the Environment (Protection) Act, 1986 with the State Governments and State Coastal Zone Management Authorities (SCZMAs).

(v). MoEF&CC vide letter No. 12-8/2018-IA.III dated 24.10.2018 has approved the Coastal Zone Management Plan (CZMP) of Tamil Nadu for all its coastal districts as per the provisions of the CRZ Notification, 2011.

(vi). As approved by the Union Cabinet the new CRZ Notification, 2019 was notified vide S.O. GSR 37(E) dated 18.01.2019. However, CRZ Notification, 2019 come into force only after the respective Coastal Zone Management Plan (CZMP) framed to the CRZ Notification, 2011 have been revised / updated by the States / UTs, as per the provisions of the new CRZ Notification and approved by the Ministry of Environment, Forest & Climate Change. Para 6 (i) of CRZ Notification, 2019 inter alia states as under:

(i) "All coastal States and Union territory administrations shall revise or update their respective coastal zone management plan (CZMP) framed under CRZ Notification, 2011 number S.O. 19(E), dated 6th January, 2011, as per provisions of this notification and submit to the Ministry of Environment, Forest and Climate Change for approval at the earliest and all the project activities attracting the provisions of this

notification shall be required to be appraised as per the updated CZMP under this notification and until and unless the CZMPs is so revised or updated, provisions of this notification shall not apply and the CZMP as per provisions of CRZ Notification, 2011 shall continue to be followed for appraisal and CRZ clearance to such projects.”

(vii). Before finalizing the CZMP concerned State / Union Territories / Coastal Zone Management Authorities are required to adopt due procedure in preparation of CZMPs as stipulated in Para 6 (iii) of CRZ Notification, 2019, which includes public consultation. Para 6 (iii) of said notification inter-alia states as under:

(iii). "The coastal States and Union territories shall prepare draft CZMP in 1:25,000 scale map identifying and classifying the CRZ areas within the respective territories in accordance with the guidelines given in Annexure-IV to this notification, which involve public consultation." All developmental activities listed in this notification shall be regulated by the State Government, Union territory administration, the local authority or the concerned Coastal Zone Management Authority within the framework of such approved CZMP, as the case may be, in accordance with provisions of this notification.

(viii). In accordance with the provisions of the sub-clause (b) clause(v) of Para 3 of CRZ Notification, 2011, the storm water drains and ancillary structures for pumping is permissible activity (except in the NDZ) and needs to be regulated in accordance with the provisions of Para 4 of CRZ Notification, 2011. Thus, the said activity requires prior permission / clearance from the competent authority before the commencement of the activity. Para 4.2 of CRZ Notification, 2011 prescribes the procedure for clearance of permissible activities attracted under this notification.

(ix). In accordance with the provisions of the clause(xii) of Para 3 of CRZ Notification, 2011, construction activities in CRZ-I are prohibited except those specified in para 8 of this Notification. In sub clause (i) under clause 8 (I) of para 8 of CRZ Notification, 2011 stipulates that no new construction shall be permitted in CRZ-I except the activities referred therein the sub-clause. **In the said proviso constructions for the storm water drain in the CRZ-I having the area of ecologically sensitive and geomorphological features are not expressly permitted.**

(x). In accordance with the provisions of the clause (i) of Para 8 of CRZ Notification, 2011, the development or construction activities in different categories of CRZ shall be regulated by the concerned CZMA in accordance with the norms referred therein the Notification.

7. Site inspection of the project under construction and views of stakeholders:

In continuation to the preliminary meeting held on 28.12.2020, site inspection of the alleged project area has been undertaken on 07.01.2021 by the Joint Committee members along with project authority, Counsels of Applicants and residents of that locality during the ideal condition immediately after a heavy rainfall till 06.01.2021. During the visit the Joint Committee inspected the project area, where the construction activities are undertaken from Kottivakkam to Uthandi. Project authority explained the activities undertaken by them. The Committee interacted with the local residents of the area inter-alia including the fishermen. During the visit, it has been observed that there was water logging in certain area of the project and in some of the area no water logging has been noticed. Photographs taken during the visit is placed as **Annexure-II/1-12**. No construction activity was in progress during the site inspection as the work has been temporarily suspended based on the stop order issued by the TNCZMA. Project authority has expressed that there is no any suggestion in the DPR for getting CRZ clearance. Further, they expressed that it is not mandated for getting CRZ clearance, since the said project activity is funded by the international agency and also part of the road infrastructure in accordance with IRC guidelines IRC: SP: 42/2014. They also of the view that in some of the CRZ areas, water supply has been executed without getting CRZ clearance by the Metropolitan Water Supply and Sewerage Board. The Counsel of applicant to the O. As. expressed, that the DPR has not been placed on the public domain till date and the views / suggestions from the public has not been sought. Reportedly as informed by the project authority, public hearing was held at the Office of Greater Chennai Corporation. The Joint Committee clarified that as per the extant statutory provisions any developmental activity falling within the CRZ area needs to be regulated in accordance with the provisos of the CRZ Notification. Further, any kind of international funding can not override the laws / rules enacted /notified within the ambit of Constitution of India. During interaction with the residents of that areas, some of them are opposed the said project activity based on the following grounds:

- (i). The construction activity of the project is commenced without mandated CRZ clearance.

- (ii). The rain water never percolate through the concrete structures of the drain and entire rain water will be discharged in to the sea as a waste.
- (iii). Storm is not a frequent phenomenon.
- (iv). The storm water drain will become a drain for the illegal discharge of domestic wastewater of the locality and it may damage the shoreline of the coast, deteriorate ground water quality and marine environment including the notified Turtle nesting beach area.
- (v). Discharge of the storm water leads to the erosion of the beach as claimed **(photograph placed at Annexure-II/6 of this report)**.
- (vi). Possible reverse flow / sea water ingress ion during high tide time.

Some of the residents supported this project on account of the following grounds:

- (i). During the rainy season the area become water logged and it leads to problem in the day-to-day activities of the people, frequent power failures and resolving such issues in the transformers located in the water-logged area.
- (ii). Inundation of water into the residential area.

Important observations by the Committee Members:

- (i). The construction of integrated storm water drainage project is having stand-alone outfall and not inter-connected while being spread over a large area.
 - Project authority claimed that they are providing recharge structures inside along the drain constructed, through which the storm water gets recharged. During the visit even after a day of rain, the water was stagnant on the recharge structure as shown in the **Photograph placed at Annexure-II/10**. Percolation pit designed at the bottom of SWD is filled with cement and mud during constriction time then how it will infiltrate the water into the ground water regime.
- (ii). The Committee felt that for recharge to the ground water several hydrogeological factors are associated such as formation of the area, soil permeability, residence time, ground water level, infiltration capacity etc. Storm water will be generated only in the instances of heavy or continuous rainfall and in such circumstances the possible recharge in the area under consideration by the method proposed by the project authority is limited, since this area predominantly governed with the perched aquifer system having shallow ground water table, soil will be saturated and there will not be sufficient residence time during the flow, whatever the recharge that will be a rejected recharge.

- (iii). It has been observed that one of the locations near VGP Golden Beach, the existing out fall discharging storm water on to the beach become a nalla with deep depression, which may result discontinuity to the beach / shoreline changes.
- (iv). Inadequate alignment of storm water drain has been observed in few locations.
- (v). In certain area the underground cables and electrical wiring are encountered during the construction of the storm water drain. Details of the restoration to the original condition shall be ensured with the knowledge of residents.
- (vi). During the visit it has been observed that in some of the areas of the said project, the common public roads leading towards the coast have been blocked / restricted for the public movement by constructing check post and deploying security persons. Such illegal restrictions may enhance the possibility of illegal encroachments, discharges etc.
- (vii). It has been noticed many residents of that area have encroached the road and constructed paved ramp, which also affect the natural flow of the water and infiltration on the roads / streets.
- (viii). All the outfalls (27 nos) will likely to lead loss of beach.

8. Observation of the Joint Committee on the TOR to the Committee:

Based on the deliberations held during the first meeting and subsequent site inspection of the Joint Committee the following observations are made on the TOR:

(i). whether the project requires any CRZ Clearance:

- (i). Though the project authority admitted the fact that the part of the project area falls in the CRZ-II and CRZ-III, so far they have not even applied for CRZ clearance for the above said project activity and claimed that the said project is not attracted under the provisions of the CRZ Notification, since the project is fully funded by International agency governing with international agreement. The Committee is completely disagreeing with the above averment made by the project authority and confirmed that the alleged project activity falls in the CRZ classified area of CRZ-IA, CRZ-II and CRZ-III. Further, any kind of international funding or agreement cannot override the laws / rules enacted /notified within the ambit of

Constitution of India. The Committee confirmed the requirement of Clearance from the Authority concerned under the provisions of the CRZ Notification. The project authority has not obtained the same prior to the commencement of the activities for construction of the alleged Storm Water Drain.

(ii). Whether the project will have any environmental impact on the aquifer and the coastal zone due to construction of concrete storm water drain in the aquifer region:

In order to answer to this point, one must see holistically the following factual status:

- (a). Tamilnadu Government vide G.O. Ms. No. 146 dated 27.09.2016 notified the beach from Kottivakkam to Kovalam as Olive Ridley Turtle nesting sites, which is CRZ-IA as per the Coastal Zone Management Plan, wherein outfalls construction is not a permissible activity as per Para 3 (v) r/w 8 of CRZ Notification, 2011.
- (b). As admitted by the project authority, there is no dispute in the fact that part of the project area falls within the CRZ- II and CRZ-III. Project authority informed that no out-fall / construction of the structures falling in the area of CRZ-IA. All the out-fall locations are left at the end of the road towards beach and thereafter natural flow will be maintained. In order to ascertain the present existing out-fall locations constructed, geo-coordinates of the present out-fall locations were measured by the Committee and the same was superimposed on the approved CZMP through Tamilnadu State Coastal Zone Management Authority and confirmed that some of the present out-fall locations constructed are falling within the area of CRZ IA having classified as ecologically sensitive area. The same is placed as **Annexure-II/2-5**.
- (c). Even if the locations of the outfalls are restricted by realignment well within the area of CRZ – II or CRZ-III, as per the present proposal the final discharge invariably be discharged into the area of CRZ-IA and notified Ridley Turtle nesting sites.
- (d). As admitted by the project authority part of the project area falls within the CRZ II and III. Project authority informed that no out fall / construction of the structures falling in the area of CRZ-IA. All the out-fall locations are left at the end of the road towards beach and thereafter natural flow will be maintained. In order to ascertain the locations of the out-falls constructed, the geocoordinates of the present out-fall locations were measured by the Committee and sharing the same requested the TNSCMA to provide the classification in accordance

with the approved CZMP. Based on the input furnished by the TNSCMA it has been observed that some of the outfall locations constructed are falling within the area of CRZ-IA.

- (e). Conclusively, the alleged project activity falls within the area of CRZ - IA, CRZ- II & CRZ -III. In accordance with the provisions of the clause(xii) of Para 3 of CRZ Notification, 2011, construction activities in CRZ-I are prohibited except those specified in para 8 of this Notification. In sub clause (i) under clause 8 (I) of para 8 of CRZ Notification, 2011 stipulates that no new construction shall be permitted in CRZ-I except the activities referred therein the sub-clause. **In the said proviso constructions for the storm water drain in the CRZ-I having the area of ecologically sensitive and geomorphological features are not expressly permitted.**
- (f). The project area is characterized by granular zones separated by clayey layer and underlain by weathered & fractures rock. The aquifer system in the above area can be considered as two aquifer system, viz, top sandy aquifer and weathered and fractures aquifer (Basement). The groundwater occurs under unconfined condition in top sandy aquifer and under semi confined condition in the underlying basement. The Coastal aquifer located in Tiruvanmiyur – Kovalam Tract is a multi-aquifer system. It is characterized by sand dunes, which also forms a part of Multi aquifer system with limited extensions.
- (g). Construction of underground sewer lines in part of the project area has been completed and part of the area is not having any underground sewer lines. During the site inspection, it has been observed that in several places domestic effluents are directly discharged through open drains into the marine environment (**Annexue-II/7**). In such circumstances, local community expressed that the structure constructed for the Storm Water Drain may become a feeder channel for the drainage and lead to vulnerable and damage to the marine environment as well as the ground water regime of the said project area.
- (h). The project area under question is having shallow water table 2 to 3.5 m bgl during post monsoon and 4 to 5 m bgl in pre-monsoon and thus if discharge is with any contamination, it will definitely have an impact on the ground water / aquifer system. Alternately, it needs to be also noted that since the present method of collection of stormwater and discharge on the beach is concentrated, it will flow into the sea without recharging the hitherto recharged coastal aquifer or local aquifers which is likely to impact groundwater resources in M3. Also, during rains, since the ground is already saturated no percolation will occur if collected immediately.

In view of the above, the environmental impact on the aquifer and the coastal zone due to construction of concrete storm water drain in the aquifer region depends on the nature, magnitude and duration of the discharge of the water.

(iii). What are the alternate methods by which the apprehension of the people affecting natural percolation and water recharge system in the aquifer area can be protected, if this project has to proceed with causing least environmental damage:

- (a). The project can be revisited for the feasibility of collection and re-use of the rain water.
- (b). In order to ascertain the exact non committed surplus runoff, number of recharge structures constructed (as per building by law) in the residential area may be considered. This will give the exact amount of the non- committed surplus runoff so that based on this, sufficient number structures are to be formulated including the suitable location and size depending on the underground water regime monitoring.
- (c). The surplus rain runoff may be directed to these proposed recharge structures through the storm drain. By this way the outfall point can be avoided.
- (d). Since more than 80 % is covered by the residential plots, it seems that around 200 to 250 M liters can be harnessed by the local residence Rain Water Harvesting structures (as per the building by law). Therefore around 70 to 80 M litres can be considered for as non-committed surface surplus runoff. Therefore, plan or action may be required for the 70 to 80 m liters only.
- (e). Therefore, at selected location this can be tackled, by installing the recharge structures instead of erecting the SWD in entire part of the M3 component.
- (f). Further, anticipated excess quantum of water, if any, beyond the above suggested recharge / reuse methods, discharge can be made in the Buckingham Canal by reviving the same as this area is also part of the other component (M2) of the project instead of discharging into the coastal side by examining the detailed feasibility study by engaging the

agency such as NIOT or any other reputed national institute as desired by the Hon'ble NGT.

- (g). Even if the project is implemented only within the CRZ-II and CRZ-III, requisite clearance needs to be obtained from the CZMA by following the O.M. No. 19-27/2015.III dated 19.02.2021 of MOEF&CC issued on the subject, procedure for dealing with violations arising due clearance for permissible activities.

(iv). Submission of factual as well as action taken report, if there is any violation found:

Tamilnadu State Coastal Zone Management Authority vide R.C.No.P1 / 2190 / 2020-1 dated 23.12.2020 requested the Commissioner, the Greater Chennai Corporation to stop all the activities for construction of Storm Water Drain along the stretch at Sholinganallur, Uthandi, Palavakkam Villages, till further orders. The Counsel of the Applicants of the O.A. and residents alleged that even after the issuance of the stop order the work was continued. In this regard, Officials of the project authority informed that they continued only in the places where the safety measures are required. Subsequently, works have been halted and during the site inspection no work is in progress.

(v). The committee is also directed to suggest and recommend the methods by which the project can be proceeded with, without causing much environmental impact on coastal area and aquifer region, if it is legally permissible to continue:

- (a). The project can be revisited for the feasibility of collection and re-use of the rain water.
- (b). In order to ascertain the exact non committed surplus runoff, number of recharge structures constructed (as per building by law) in the residential area may be considered. This will give the exact amount of the non- committed surplus runoff so that based on this, sufficient number structures are to be formulated including the suitable location and size depending on the underground water regime monitoring.
- (c). The surplus rain runoff may be directed to these proposed recharge structures through the storm drain. By this way the outfall point can be avoided.

- (d). Since more than 80 % is covered by the residential plots, it seems that around 200 to 250 M liters can be harnessed by the local residence Rain Water Harvesting structures (as per the building by law). Therefore around 70 to 80 M litres can be considered for as non-committed surface surplus runoff. Therefore, plan or action may be required for the 70 to 80 m liters only.
- (e). Therefore, at selected location this can be tackled, by installing the recharge structures instead of erecting the SWD in entire part of the M3 component.
- (f). Further, anticipated excess quantum of water, if any, beyond the above suggested recharge / reuse methods, discharge can be made in the Buckingham Canal by reviving the same as this area is also part of the other component (M2) of the project instead of discharging into the coastal side by examining the detailed feasibility study by engaging the agency such as NIOT or any other reputed national institute as desired by the Hon'ble NGT.
- (g). Even if the project is implemented only within the CRZ-II and CRZ-III, requisite clearance needs to be obtained from the CZMA by following the O.M. No. 19-27/2015.III dated 19.02.2021 of MOEF&CC issued on the subject, procedure for dealing with violations arising due clearance for permissible activities.

(vii). to submit the final report regarding the nature of all constructions in violations of the CRZ Notification in CRZ-II as well CRZ-1(A) as alleged by the applicant after verifying the same by super imposing the Coastal Regulation Zone Management Plan prepared under the notification and submit a final report including these aspects and producing the plan prepared showing the nature of constructions made in the respective zones in which it has been constructed, so as to enable this Tribunal to ascertain the true facts for the purpose of effective disposal of the case:

- (a). Based on the site inspection, the Committee has observed that Project Authority has undertaken only construction activity such as excavation and civil construction structures for the storm water drain and the project has not been completed so far and thus the Joint Committee felt that as of now the damage caused to the marine ecology by this project activity is not significant. However, project authority has committed violation as the said project activity was commenced without obtaining the requisite CRZ clearance from the authorities concerned. Further, undisputedly the construction activity was continued even after the issuance of the stop

order by the Tamil Nadu State Coastal Zone Management Authority, which is evident based on the submissions made by the Officers representing the Greater Chennai Corporation during the first meeting of the Joint Committee held on 28.12.2020 that they are unaware about the stop Order issued by the Tamil Nadu State Coastal Zone Management Authority.

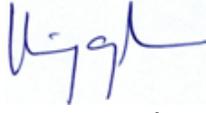
- (b). Immediately a copy of the said communication endorsed to the nodal agency has been handed over to the Officers represented from the Greater Chennai Corporation and requested to comply the directions of the Tamilnadu State Coastal Zone Management Authority. A Copy of the e-mail communication along with the communication dated 23.12.2020 of Tamilnadu State Coastal Zone Management Authority addressed to the Greater Chennai Corporation is placed as **Annexure-III**. Even after the first meeting, communications were received from the local residents of the area stating that the construction activity is in progress. Nodal agency vide e-mail communication dated 06.01.2021 forwarded the same to the Tamilnadu State Coastal Zone Management Authority and the Commissioner, Greater Chennai Corporation with the request to look into the matter. The said communications are placed as **Annexure-IV**. Project authority informed during the site visit that they continued the work only for making precautionary safety measures on the project area.
- (c). By considering the above facts, Hon'ble Tribunal may arrive Environmental compensation / penalty as deem fit under the circumstances of the case based on the financial penalty remaining within the brief of Section 15 of the Environment (Protection) Act, 1986 or on the basis of the percentage of the project cost as desired by the Hon'ble Tribunal. Further, in the event of restoration, if any, based on the directions of the Hon'ble Tribunal, the entire expenditure shall be met by the project authority.

(viii). The counsel for the applicants in all the cases are at liberty to serve the document if any, with them to the committee members regarding the alleged construction if any, made by the corporation after the stop memo has been served on them and the committee can consider those aspects also, while filing the further report to be submitted regarding the violations committed and to assess the environmental compensation:

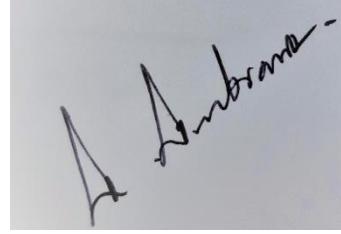
The e-mail communication received from the residents of the project area stating that the construction activity is in progress even after the issuance of stop order issued by the Tamilnadu State Coastal Zone Management Authority has been forwarded vide e-mail communication dated 06.01.2021 to the Tamilnadu State Coastal Zone Management Authority and the Commissioner, Greater Chennai Corporation with the request to look into the matter.

9. Conclusion & Recommendations:

By considering all the above facts, project authority may revisit the present proposal and come up with alternate plan of action as suggested above for the implementation by following all the statutory requirements. Hon'ble Tribunal may pass appropriate Order(s) / direction(s) as deemed fit on priority considering the safety aspects of the residents on the excavated area during the ensuing rainfall.



Dr. Vijaya Ravichandran,
Scientist – G,
Coastal & Environmental Engineering
Group, National Institute of Ocean
Technology, Chennai – 600 100.



Dr. S. Subramanian,
Scientist – D
(Sr. Hydrogeologist),
Central Ground Water Board,
Chennai



Dr. M.T. Karuppiah,
Scientist- E & Nodal Officer for the Joint Committee,
Ministry of Environment, Forest & Climate Change,
Regional Office, Chennai.

Er. A. Muthaiya,
Superintending Engineer, WRD,
Palar Basin Circle, PWD, Chennai.

Er. P. Ashok Kumar,
Superintending Engineer (South),
Chennai Metropolitan Water Supply
and Sewerage Board.

Report of the Joint Committee constituted in the O.A. No. 233 of 2020(SZ), O.A. No. 243 of 2020(SZ), O.A. No. 251 of 2020 (SZ) & O.A. No. 252 of 2020(SZ) before the Hon'ble National Green Tribunal, (SZ), Chennai.

It is humbly submitted that couple of the members of the Joint Committee, Er. P. Ashok Kumar, Superintending Engineer (South), Chennai Metropolitan Water Supply and Sewerage Board and Er. A. Muthaiya, Superintending Engineer, WRD, Palar Basin Circle, PWD, Chennai has not agreed with the above Report and submitted their dissenting report. Accordingly, duly signed report received from the members comprising of 24 (twenty four) pages is herewith enclosed as **Annexure - V.**



Dated 02/04/2021

Dr. M.T. Karuppiah,
Scientist – E &
Nodal Officer for the Joint Committee,
MoEF&CC, Regional Office, Chennai.

Joint Committee meeting in connection with O.A. No. 233 of 2020(SZ), O.A. No. 243 of 2020(SZ), O.A. No. 251 of 2020 (SZ) & O.A. No. 252 of 2020(SZ) held on 28.12.2020 at 10.15 A.M. at Ministry of Environment, Forest & Climate Change, Regional Office, Chennai – 600 034.

Attendance Sheet

Sl. No.	Name & Designation Department/Organization	Mobile No. & E-mail address	Signature
1.	Er. A. Muthaiya Superintending Engineer, WRD, Palar Basin Circle, PWD, Chennai.		
2.	Dr. Vijaya Ravichandran, Scientist – G, Coastal & Environmental Engineering Group, National Institute of Ocean Technology, Chennai – 600 100.	9445656105 vijaya.niot@gov.in	
3.	Dr. S. Subramanian, Scientist – D (Sr. Hydrogeologist), Central Ground Water Board, Chennai – 600 090.	9600152202 s-subra98@yahoo.com	
4.	Er. P. Ashok Kumar, Superintending Engineer (South), Chennai Metropolitan Water Supply and Sewerage Board.	8144923000 cmwssbse60wts@gmail.com	
5.	Dr. M.T. Karuppiah, Scientist- E, Ministry of Environment, Forest & Climate Change, Regional Office, Chennai.	 9840390064, mtkaruppiah@gmail.com	
6.	S. SANTHAN, ADVOCATE NO. 154, LAW CHAMBERS, HIGH COURT, CHENNAI-104	9445923392 selvamsanthan@gmail.com	
7.	S.P. ARTHI, Advocate A-3 with Castle Centre Street Santhome, Ch: 28	98840 24279 arthi.lawyer@gmail.com	

Sl. No.	Name & Designation Department/Organization	Mobile No. & E-mail address	Signature
8.	Dr. V. SURESH ADVOCATE 255, ANJAPPA NAIKENS CHENNAI 60001	9444231497 rights@ gmail.com	
9.	NS TANVI Advocate, 255, Angappa Naicken St. Chennai - 01.	9660747397 tanvin.s@gmail.com	
10.	R. SELVARUMAR Asst. Exec Engineer Storm water drain Dept Greater Chennai Corporation.	9444209661 Selvarumar@ gcr.in com	
11.	D. Sullumal Zonal officer Zone 15 GCL	9445190015	
12.	C. Thirumavalikarayan, Executive Engineer GCL	9444100198	
13.	L. NANDAKUMAR, CHIEF ENGINEER / GENERAL GREATER CHENNAI CORPORATION.	9445026100 9445190500	
14.	K. RAJA SHRINIVAS COUNSEL FOR GCL.	9841563664	
15.	N. Ram Shankar Be Resident & Rain water harvesting enthusiast	9840811377	
16.	Bekhar Raghavan Director, Rain centre	96770-43869	

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Sl. No.	Name & Designation Department/Organization	Mobile No. & E-mail address	Signature
17.	S. GOPALAKRISHNAN Retd. Addl. Member Works Railway Board, N. Delhi Resident of Kapaleswarar Nagar	98405 19556	
18	Jishna Kurles Resident Representing Applicant Sajith (Member of Coalition)	9840989173	
19			
20			



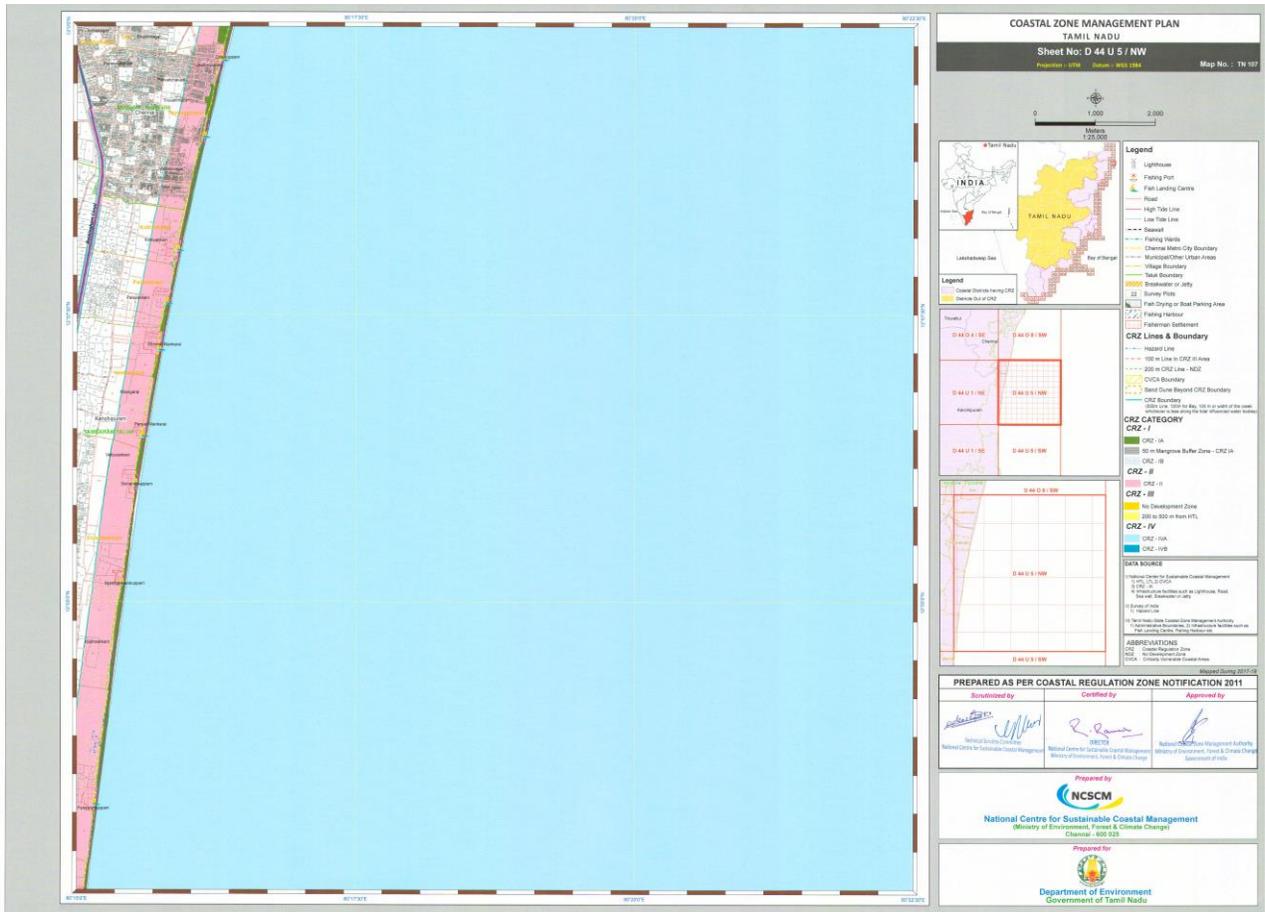
Site inspection of the Joint Committee Members along with project authority, Counsel of Applicants and residents of the respective area.



View of the outfall construction at Baywatch Boulevard, Kaveri Nagar, Kottivakkam



View of the discharge area at Baywatch Boulevard, Kaveri Nagar, Kottivakkam



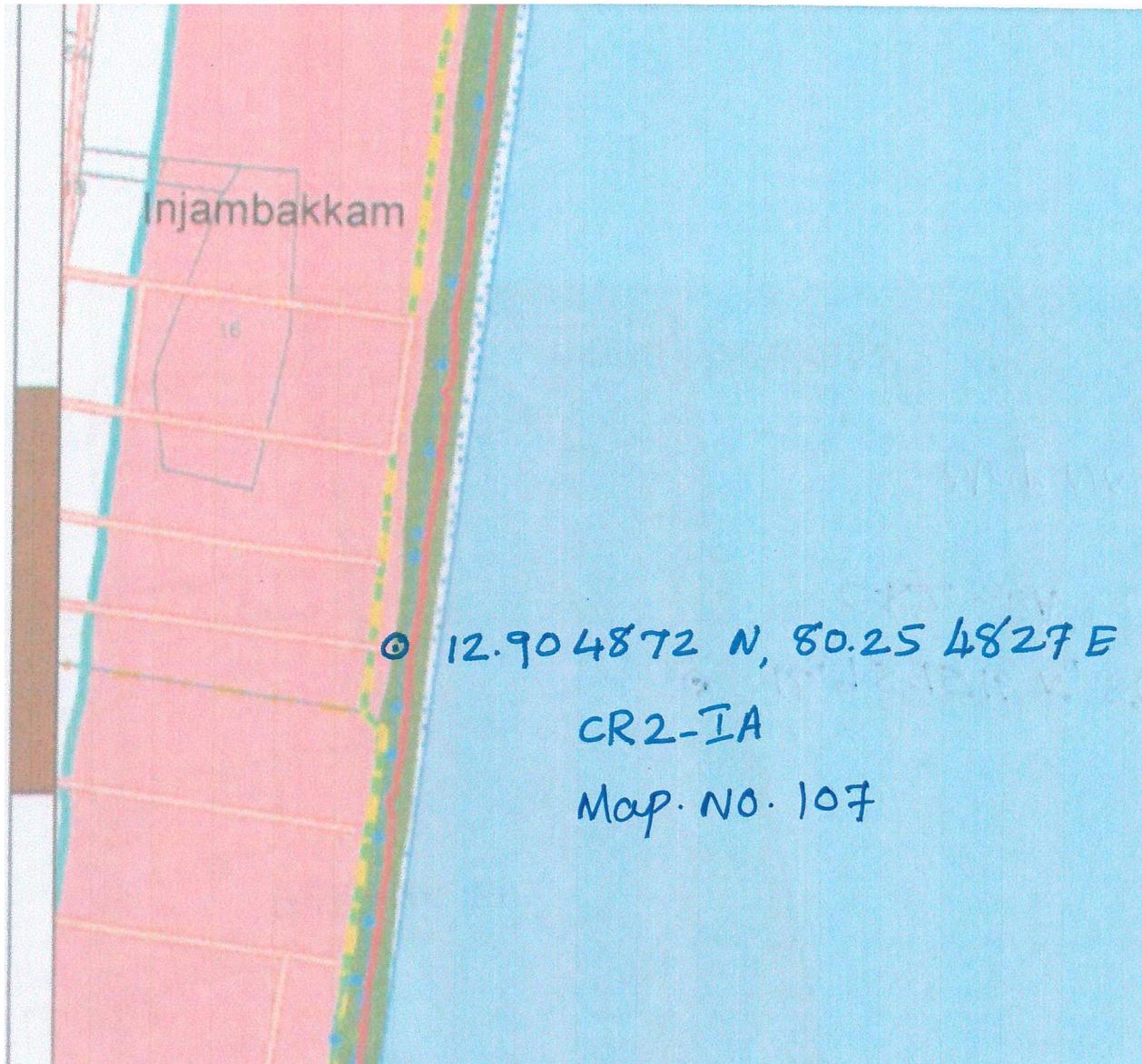
Approved CZMP with (Map No. 107)



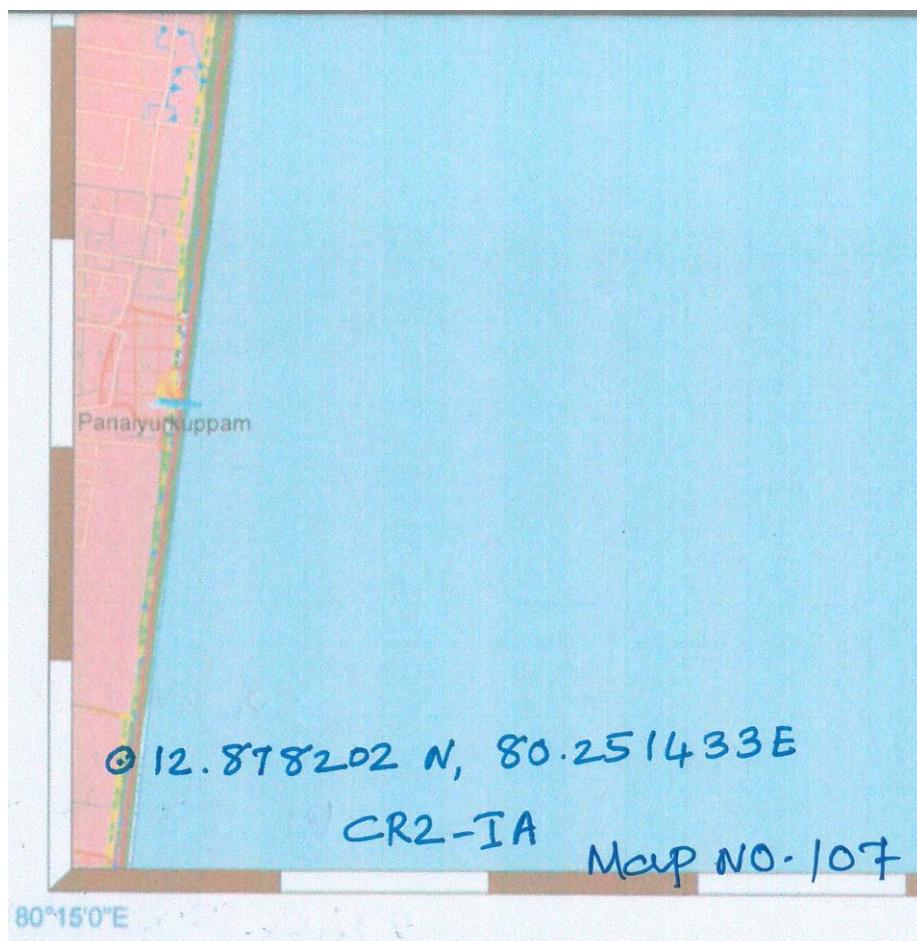
Superimposed view of the out-fall located at Baywatch Boulevard, Kaveri Nagar on the CZMP falling under CRZ-II & CRZ-IA



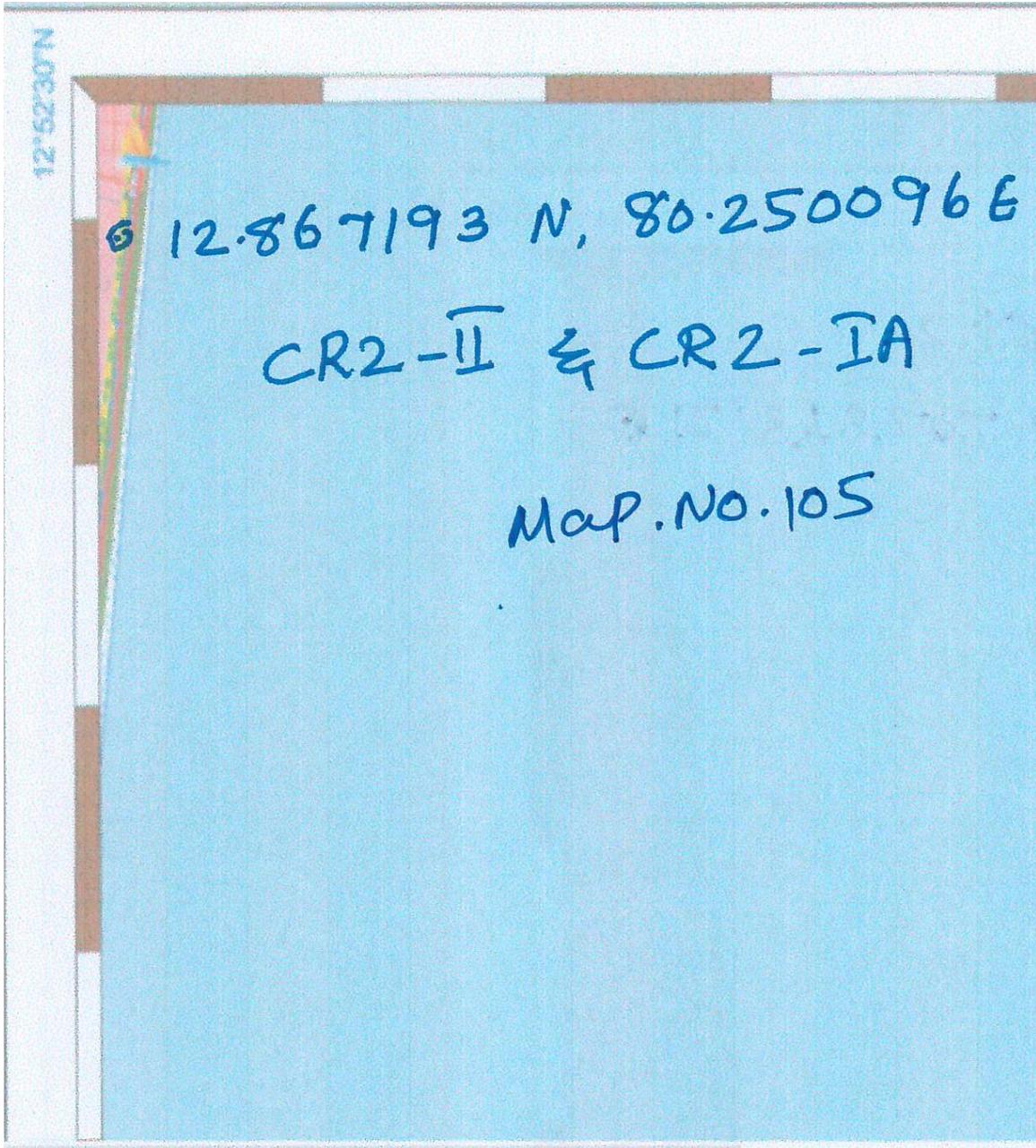
Superimposed view of the out-fall located at Karunanidhi Salai, Palavakkam on the CZMP falling under CRZ-IA



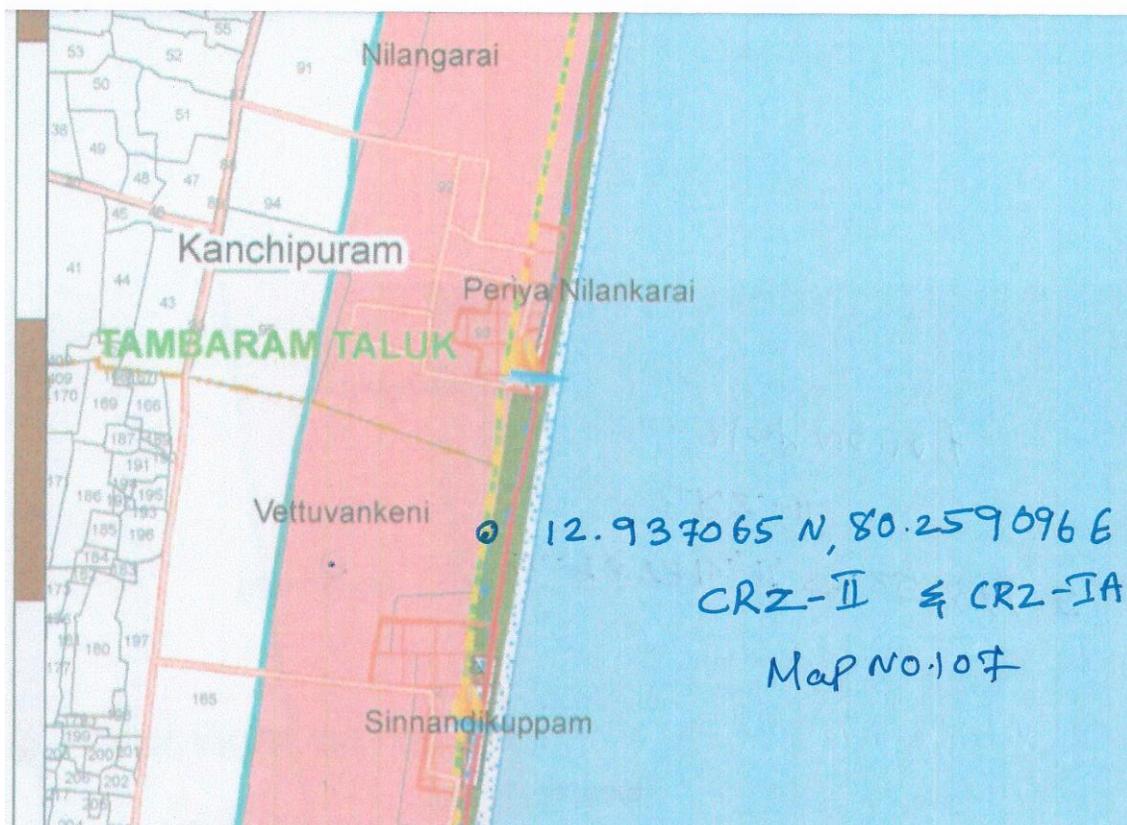
Superimposed view of the out-fall located at Rajiv Avenue, Injambakkam on the CZMP falling under CRZ-IA



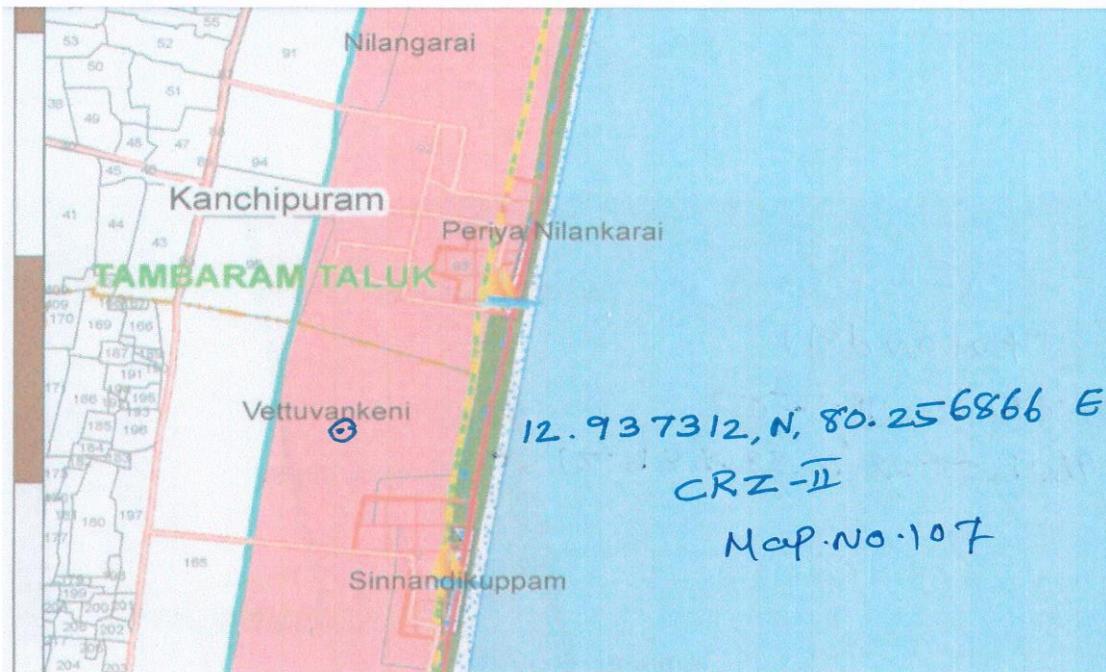
Superimposed view of the out-fall located at Matsya Narayana temple on the CZMP falling under CRZ-IA



Superimposed view of the out-fall located at 3rd Main Road Uthandi on the CZMP falling under CRZ-IA (Map No. 105)



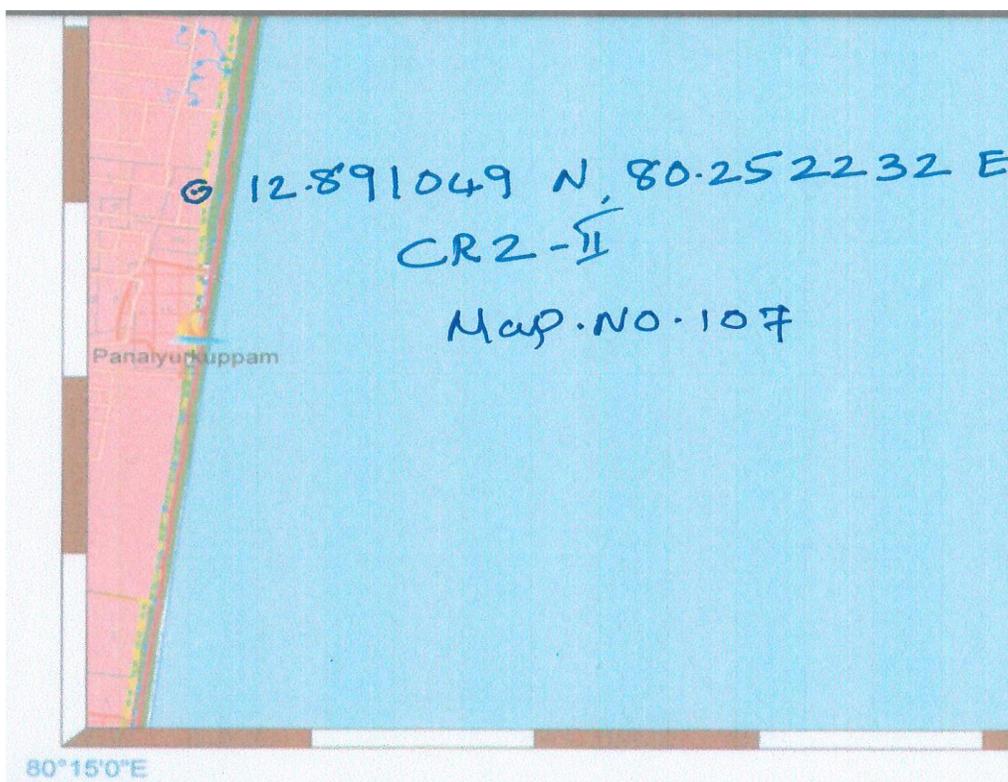
out-fall located at Pandiyan Salai, Vettuvankeni on the CZMP falling under CRZ-II & CRZ-IA



Out-fall located at Bay Watch Farm, 3rd Street on the CZMP falling under CRZ-II



Out-fall located near Saibaba Kovil, Injambakkam on the CZMP falling under CRZ-II



Out-fall located near Copper Beach Road, Panaiyur falling under CRZ-II



View of water stagnation on the vacant land at Palkalai Nagar, Palavakkam



View of eroded portion / shoreline changes due to discharge of storm water near Palkalai Nagar, Palavakkam



View of untreated sewage passing towards coast near Teachers Colony



View of untreated sewage passing on the Beach near Palavakkam area



View of solid waste nearby the course of discharge area at Palavakkam area



Storm Water Drain at Nainarkuppam area



Water from the Drain discharged to the sea by cutting the sand dune by the local people at Nainarkuppam area in order to avoid Inundation of rain water into the residential area



View of storm water drain without recharge pit (near Saibaba Temple)



View of storm water drain with recharge pit (near Bay Watch Farm) and observed no water stagnation in the adjoining vacant land



View of recharge pit clogged with unwanted waste material



View of drain at Jagajeevan Ram avenue, Injambakkam and also observed no water stagnation during the visit



View of desilted recharge pit after the siltation formed



View of water stagnation on the recharge pit during the visit even after a couple of days of rain



Improper alignments of drain under construction



View of underground electrical cables passing through the drain



View of rain water stagnated near by area of Dr. Seshadri Avenue, Injambakkam



View of water stagnation at Nainarkuppam area

DoE – O.A. No.233, 243, 251 and 252 of 2020 filed before the Hon’ble NGT (SZ) on the construction of Storm Water Drain Project by the Greater Chennai Corporation at Sholinganallur, Uthandi, Palavakkam Villages without necessary Clearance – Regarding

3 messages

tndoe <tndoe@nic.in>
To: commissioner@chennaicorporation.gov.in
Cc: roefccc1@gmail.com

Wed, Dec 23, 2020 at 5:42 PM

Sir,

Please find the attcahments.

Regards
DoE.

2 attachments

 **GCC chennai.pdf**
129K

 **251 of 2020.pdf**
124K

tndoe <tndoe@nic.in>
To: commissioner <commissioner@chennaicorporation.gov.in>
Cc: roefccc1 <roefccc1@gmail.com>

Wed, Dec 23, 2020 at 5:52 PM

[Quoted text hidden]

2 attachments

 **GCC chennai 1.pdf**
130K

 **251 of 2020.pdf**
124K

RO CHENNAI <roefccc1@gmail.com>
To: commissioner@chennaicorporation.gov.in

Mon, Dec 28, 2020 at 8:34 PM

[Quoted text hidden]

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**Regional Office(SEZ),
MoEF&CC, GoI,
#34, HEPC Campus
Cathedral Garden Road, Nungambakkam,
Chennai-600 034.
044-28222056/48613477**

2 attachments

 **GCC chennai 1.pdf**
130K

 251 of 2020.pdf
124K

DEPARTMENT OF ENVIRONMENT

From
Thiru K.V. Giridhar, I.F.S.,
Member Secretary, TNSCZMA &
Director of Environment,
Ground Floor, Panagal Building,
Saidapet, Chennai 600 015

To
The Commissioner,
Greater Chennai Corporation,
Ripon Building,
Chennai - 600 003.

R.C.No.P1 / 2190 / 2020-1 dated 23.12.2020

Sir,

Sub.: DoE - O.A. No.233, 243, 251 and 252 of 2020 filed before the Hon'ble NGT (SZ) on the construction of Storm Water Drain Project by the Greater Chennai Corporation at Sholinganallur, Uthandi, Palavakkam Villages without necessary Clearance - Regarding

Ref.: Hon'ble NGT (SZ) order dated 04.12.2020 in O.A.No.251 of 2020 and O.A. No.252 of 2020

...

A copy of the Hon'ble NGT (SZ)'s orders in the reference cited may kindly be seen.

2) In this connection, it is informed that the applicants have filed the Applications on the construction of Storm Water Drain along the stretch at Sholinganallur, Uthandi, Palavakkam Villages made by the Greater Chennai Corporation at without necessary Clearance under the CRZ Notification, 2011.

3) The Hon'ble NGT (SZ) vide para.10 of its order dated: 04/12/2020 has directed the Ministry of Environment, Forests and Climate Change, Govt. of India and the Coastal Zone Management Authority to take appropriate action against the authorities who are engaged in this project, if it is found that it is in violation of any environmental laws namely, the CRZ Notification, 2011 including stopping of the project till necessary clearance is obtained. A copy of the order is sent herewith.

.2.

4) Hence, as directed by the Hon'ble NGT (SZ) above, it is requested to stop the all the activities for construction of Storm Water Drain along the stretch at Sholinganallur, Uthandi, Palavakkam Villages, till further orders.

5) Further, it is informed that any construction / development activity in CRZ area without prior approval from the concerned Authorities will attract the penal provisions of the Environment (Protection) Act, 1986.

Yours faithfully,
For Member Secretary,
Tamil Nadu State Coastal Zone Management Authority
& Director of Environment

Encl.: As above

DEPARTMENT OF ENVIRONMENT

From
Thiru K.V. Giridhar, I.F.S.,
Member Secretary, TNSCZMA &
Director of Environment,
Ground Floor, Panagal Building,
Saidapet, Chennai 600 015

To
The Commissioner,
Greater Chennai Corporation,
Ripon Building,
Chennai - 600 003.

R.C.No.P1 / 2190 / 2020-1 dated 23.12.2020

Sir,

Sub.: DoE - O.A. No.233, 243, 251 and 252 of 2020 filed before the Hon'ble NGT (SZ) on the construction of Storm Water Drain Project by the Greater Chennai Corporation at Sholinganallur, Uthandi, Palavakkam Villages without necessary Clearance - Regarding

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Yours faithfully,
For Member Secretary,
Tamil Nadu State Coastal Zone Management Authority
& Director of Environment

Encl.: As above



TOP URGENT : KIND ATTN Dr. MT KARUPPIAH - WORK CONTINUING BY GCC ON THE SWD PROJECT FROM KOTTIVAKKAM TO UTHANDI on 28th Dec 2020 (Night) and 29th Dec 2020 (Day & Night)

2 messages

SUSHMA <sushma@aarohansearch.com>
To: roefccc1@gmail.com, ro.moefccc@gov.in
Cc: selvamsanthan@gmail.com

Wed, Dec 30, 2020 at 8:13 AM

Dear Dr. Karuppiah,

I had attended the joint committee meeting as required by the National Green Tribunal on 28th Dec. 2020 , on behalf of, and on the authorisation of the applicant of OA No. 233of 2020(SZ).

A copy of the email of the **STOP WORK NOTIFICATION** by the TNCZMA for the Storm Water Drain Project being executed by the GCC and funded by KfW from Kottivakkam to Uthandi as per the Coastal regulation Zone (CRZ) rules was handed over by you to Mr. Nandakumar , Chief Engineer , GCC , in the presence of Mr. Sugumar, Asst. Commissioner , Zone 15 and other GCC officials at this meeting on 28th Dec 2020.

Also present were the counsels and other members of the Joint Committee , Dr. Vijaya Ravichandran , National Institute of Ocean Technology, Dr. S Subramaniam, Central Ground Water Board on behalf of Tamilnadu State Coastal Zone Management Authority and Mr. P Ashok Kumar, Chennai Metropolitan Water Supply and Sewerage Board.

However I would like to bring to your notice that :

1 Concrete is being laid at a furious pace in the southern aquifer region at Jey Nagar and Copper beach at Pannaiyur ;Rajiv Avenue, Sparkling Sands, Driftwood, Shyamala Gardens and Jagjivan Ram Avenue at Injambakkam; and Baywatch Farms , Vettuvankani, Kannagi Street, Periyar Street, Nainarkuppam main road in Uthandi.

2 This laying of concrete and laying of fresh slabs for reinforced concrete has taken place right through the night of the 28th Dec 2020 and the whole day and night of the 29th Dec 2020 in the above places. The pace at which the work is being carried on is dangerous.

3 Mr. Sugumar, Asst. Commissioner , when called by the undersigned resident at 8.10 am on the 29th Dec. 2020 ,said that he would be following the notice 100% but ,

- a. He had not received any advice from the head of GCC
- b. He was going to close up all open drains in view of public safety.

The undersigned resident pointed out to Mr. Sugumar that the safety of residents could very easily be ensured by using road blocking equipment which has been used by the GCC from Oct 2020 when they started work despite the heavy monsoons. And if this closing up by GCC was done, GCC would be completing the project and would be occupied right till the 11th Jan 2020 with SWD construction.

As a resident , it pains all of us to see such destruction to the Southern Aquifer and the Coastal Ecosystem .

I bring this to your notice in the hope that **you can furnish us a copy of this stop work notice .Residents can use that notice with subcontractors at each of the above avenues to stop work and to protect Mother Earth from further harm.**

Look forward in anticipation to positive action from the joint committee in giving residents and the counsel , a copy of the **STOP WORK NOTIFICATION** . Hoping to hear from you soon .

I am sending this as an urgent email , but will also be sending it to all members of the Joint committee by registered post acknowledgement due.

The Joint Committee would also gain valuable insight if they hear the viewpoints of just 8 to 10 residents from the affected areas and I would be glad to arrange that meeting .

Sincerely ,

Sushma Erevelles

9840989173

RO CHENNAI <roefccc1@gmail.com>

Wed, Jan 6, 2021 at 8:47 AM

To: tndoe@tn.nic.in

Cc: commissioner@chennaicorporation.gov.in, Regional Office Chennai <roefccc1@gmail.com>

Respected Sir / Madam,

As directed by the Competent Authority, the email communication received from the representative of the Applicant in the O.A. No. 233 of 2020 is forwarded herewith for kind perusal and further necessary action. In the said e-mail communication the applicant claims that the construction work for the storm water drain is in progress despite the stop order issued by the Tamilnadu State Coastal Zone Management Authority to the Greater Chennai Corporation. The matter may kindly be looked into.

**Regional Office(SEZ),
MoEF&CC, GoI,
#34, HEPC Campus
Cathedral Garden Road, Nungambakkam,
Chennai-600 034.
044-28222056/48613477.**

----- Forwarded message -----

From: **SUSHMA** <sushma@aarohansearch.com>

Date: Wed, Dec 30, 2020 at 8:13 AM

Subject: TOP URGENT : KIND ATTN Dr. MT KARUPPIAH - WORK CONTINUING BY GCC ON THE SWD PROJECT FROM KOTTIVAKKAM TO UTHANDI on 28th Dec 2020 (Night) and 29th Dec 2020 (Day & Night)

To: <roefccc1@gmail.com>, <ro.moefccc@gov.in>

Cc: <selvamsanthan@gmail.com>

Dear Dr. Karuppiah,

I had attended the joint committee meeting as required by the National Green Tribunal on 28th Dec. 2020 , on behalf of, and on the authorisation of the applicant of OA No. 233of 2020(SZ).

A copy of the email of the **STOP WORK NOTIFICATION** by the TNCZMA for the Storm Water Drain Project being executed by the GCC and funded by KfW from Kottivakkam to Uthandi as per the Coastal regulation Zone (CRZ) rules was handed over by you to Mr. Nandakumar , Chief Engineer , GCC , in the presence of Mr. Sugumar, Asst. Commissioner , Zone 15 and other GCC officials at this meeting on 28th Dec 2020.

Also present were the counsels and other members of the Joint Committee , Dr. Vijaya Ravichandran , National Institute of Ocean Technology, Dr. S Subramaniam, Central Ground Water Board on behalf of Tamilnadu State Coastal Zone Management Authority and Mr. P Ashok Kumar, Chennai Metropolitan Water Supply and Sewerage Board.

However I would like to bring to your notice that :

1 Concrete is being laid at a furious pace in the southern aquifer region at Jey Nagar and Copper beach at Pannaiyur ;Rajiv Avenue, Sparkling Sands, Driftwood, Shyamala Gardens and Jagjivan Ram Avenue at Injambakkam; and Baywatch Farms , Vettuvankani, Kannagi Street, Periyar Street, Nainarkuppam main road in Uthandi.

2 This laying of concrete and laying of fresh slabs for reinforced concrete has taken place right through the night of the 28th Dec 2020 and the whole day and night of the 29th Dec 2020 in the above places. The pace at which the work is being carried on is dangerous.

3 Mr. Sugumar, Asst. Commissioner , when called by the undersigned resident at 8.10 am on the 29th Dec. 2020 ,said that he would be following the notice 100% but ,

- a. He had not received any advice from the head of GCC
- b. He was going to close up all open drains in view of public safety.

The undersigned resident pointed out to Mr. Sugumar that the safety of residents could very easily be ensured by using road blocking equipment which has been used by the GCC from Oct 2020 when they started work despite the heavy monsoons. And if this closing up by GCC was done, GCC would be completing the project and would be occupied right till the 11th Jan 2020 with SWD construction.

As a resident , it pains all of us to see such destruction to the Southern Aquifer and the Coastal Ecosystem .

I bring this to your notice in the hope that **you can furnish us a copy of this stop work notice .Residents can use that notice with subcontractors at each of the above avenues to stop work and to protect Mother Earth from further harm.**

Look forward in anticipation to positive action from the joint committee in giving residents and the counsel , a copy of the **STOP WORK NOTIFICATION** . Hoping to hear from you soon .

I am sending this as an urgent email , but will also be sending it to all members of the Joint committee by registered post acknowledgement due.

The Joint Committee would also gain valuable insight if they hear the viewpoints of just 8 to 10 residents from the affected areas and I would be glad to arrange that meeting .

Sincerely ,

Sushma Erevelles

9840989173

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

ORIGINAL APPLICATION No. 233 of 2020(SZ), O.A. No. 243 of 2020(SZ), O.A. No. 251 of 2020 (SZ) & O.A. No. 252 of 2020(SZ)

IN THE MATTER OF:

- | | |
|--|---------------|
| 1. Sajith | Applicant(s) |
| Versus | |
| The State of Tamilnadu & Ors. | Respondent(s) |
| 2. Juhu Beach Residents Association | Applicant(s) |
| Versus | |
| Ministry of Environment, Forest and Climate Change & Ors. | Respondent(s) |
| 3. Singaravellar Ocean Side Residents Welfare Association & Ors. | Applicant(s) |
| Versus | |
| The State of Tamilnadu & Ors. | Respondent(s) |
| 4. Sri Kapaleeswarar Nagar Residents Welfare Association & Ors. | Applicant(s) |
| Versus | |
| The State of Tamilnadu & Ors. | Respondent(s) |

1. Constitution of the Joint Committee:

In compliance with the directions of the Hon'ble NGT in the above said matters, as a nodal agency Regional Office of MoEF&CC at Chennai vide O.M. No. EP/12.7/NGT(SZ)/067/2020 dated 22.12.2020 constituted a Joint Committee comprising of the following members based on the Officers deputed / nominated from the Authorities concerned:

- (i). Er. A. Muthaiya, Superintending Engineer, WRD, Palar Basin Circle, PWD, Chennai.
- (ii). Dr. Vijaya Ravichandran, Scientist – G, Coastal & Environmental Engineering Group, National Institute of Ocean Technology, Chennai – 600 100.
- (iii). Dr. S. Subramanian, Scientist – D (Sr. Hydro geologist), Central Ground Water Board on behalf of TamilNadu State Coastal Zone Management Authority.
- (iv). Er. P. Ashok Kumar, Superintending Engineer (South), Chennai Metropolitan Water Supply and Sewerage Board.
- (v). Dr. M.T. Karuppiah, Scientist – E, Ministry of Environment, Forest and Climate Change, Regional Office, Chennai.

2. Terms of reference (TOR) to the Joint Committee:

The Terms of the Reference (ToR) to the Joint Committee referred therein the Orders dated 27.10.2020, 20.11.2020 and 04.12.2020 of Hon'ble NGT in the above matter inter-alia include the following:

- (i). The committee shall go in to the question as to whether the project requires any CRZ Clearance.
- (ii). whether the project will have any environmental impact on the aquifer and the coastal zone due to construction of concrete storm water drain in the aquifer region,
- (iii). What are the alternate methods by which the apprehension of the people affecting natural percolation and water recharge system in the aquifer area can be protected, if this project has to proceed with.
- (iv). Submission of factual as well as action taken report, if there is any violation found.

3. Meeting of the Joint Committee:

As directed by the Hon'ble NGT and also consented by all the members of the Committee an opportunity was given to the Applicants in the O.As. and also to the project authority M/s the Greater Chennai Corporation to submit their views before the Committee. During the Joint Committee meeting, members discussed the facts, issues and prayers in the above case and the Terms of the Reference (ToR) to the Joint Committee referred therein the Order dated 08/09/2020 of Hon'ble NGT.

4. Field Inspection Report and Observation of Superintending Engineer (South), CMWSSB and Superintending Engineer , PWD:

Based on the Field Inspection of Kovalam M3 Project Site and Terms of the Reference (ToR) of the Joint Committee, Superintending Engineer (South), CMWSSB and Superintending Engineer , PWD submitted their observation and Final Concluding Report below:

- (i) Kovalam M3 Project Area falls under Greater Chennai Corporation (GCC) Administration Area.
- (ii) Storm Water Drain (SWD) is an integral part of Road network for disposal of surface and subsurface water to designated locations.
- (iii) The area of 7.8 hectares covered under the Storm Water Drain (SWD) in M3 component is less than 1% i.e 0.70% of total area of 1137 hectares only.
- (iv) During the inspection, it was noticed many streets were inundated due to flooding and in order to prevent the damages to the road and for the safety of road users, it is necessary to construct Storm water drain in the M3 component.
- (v) In the Kovalam M3 Project area, roads have been built and improved in the last decades, Parks have been formed with concrete infrastructure, Street lights and other Underground utilities are also provided by Greater Chennai Corporation and other institutions.

- (vi) Greater Chennai Corporation (GCC) is constructing SWD as shoulders to the existing road boundaries as part of basic important infrastructure to avoid flooding on the roads and into the residential area.
- (vii) All the basic infrastructure development activities are carried out by different agencies of Government normally and routinely (without CRZ clearance) to ensure the ever growing demand of public and also due to densification of these area with residential and commercial buildings.
- (viii) NGT Joint Committee inspected the following Streets of Kovalam Basin M3 Component.

	Sl. No	Zone	Div	Pkg	Outfall	Location
(ix)	1	14	183	1	1	Baywatch Road
(x)	2	14	183	1	2	KarunanithiSalai
(xi)	3	14	185	2	5	MGR Salai
(xii)	4	15	192	3	6	Kapaleeshwarar Nagar Beach Main Road
	5	15	192	5	9	Teachers Colony Main Road
	6	15	192	5	9	Baywatch Main Road
	7	15	196	6	13	M.K Radha Avenue
	8	15	196	7	14	Jagajeevanram Street
	9	15	196	7	14	Dr. Sheshatri Avenue
	10	15	196	7	14	Ashok Street
	11	15	198	9	17	Sea Cliff Avenue
	12	15	198	11	20	Rajaji Street
	13	15	199	12	22	PE Avenue
	14	15	199	13	23	VGP 1st Main Road
	15	15	199	13	23	VGP 2nd Main Road
	16	15	199	14	26	Markant Desai Road

- (xiii) It was observed by the team during field inspection that, the above listed streets are severely affected due to flooding of storm water and also observed that public requested to provide storm water drain to avoid

stagnation on the road. Because of Storm water flooding, their routine life activities are affected like Electricity Power Failure, Tele Communications and Vehicular Movement.

- (xiv) No Construction activity is observed in the beach area (CRZ 1A and CRZ 1B) and also observed that all the construction of storm water works are carried out within CRZ II only.
- (xv) All outfalls of proposed storm water drain networks in M3 watershed works would ended up in the roads that were already laid decades ago and already the applicant himself has admitted that water flowing over roads into sea due to natural slope. Now Greater Chennai Corporation is aligning it through Storm Water Drain.
- (xvi) In the Construction of Storm Water Drain in the M3 Component of Kovalam Basin, exhaustive Rain Water Harvesting activities are being carried out by providing Eco Storage Block, Sunken Wells and Rain Water Harvesting Structure as summarized below. Because of this extensive implementation of Rain Water Harvesting Structures, Sustained Recharge of Groundwater is ensured in this Coastal Sandy Aquifer Region. Thereby, Positive Environmental Impact could be witnessed.
 - Storage ECO Blocks in Open area and Parks will be provided in 20 Locations with total capacity of 22,450 cubic meter (22.45 Million Liters).
 - Total Number of Sunken Wells: 168.
 - Total Number of Catch Pit with Rain Water Harvesting Structures: 1932.
 - Rain Water Harvesting Structural Pit is constructed inside the Storm Water Drain with diameter of 0.60m at 10m interval for the entire SWD stretch of 52.47 Km.
- (xvii) With regard to the turtle activities, the hatching activities by the turtle would only during summer period, i.e., only after monsoon period and also hatching activities are well away from storm water drain. Hence, the constructed storm water drain would not affect the Turtle activities in any aspect.

Hence, it is concluded that, the proposed construction of Storm Water Drain in M3 Component of Kovalam Basin does not require CRZ Clearance. Also, it is concluded that M3 Component will not have any environmental impact on the aquifer and coastal zone.

No Construction Activities was carried out in CRZ IA and CRZ IB area. Construction of Storm Water Drain of Kovalam M3 Project Area falls under Greater Chennai Corporation (GCC) Administration Area. Storm Water Drain is being constructed on the shoulder of the existing road as part of the road infrastructure. So, there is no violation found during the site inspection along with NGT Joint Committee on 07 Jan 2021.

The development of the structures is terminating within the shoreline and nothing beyond that. If anything is going beyond that, it attracts the CRZ clearances. It has to be noted that all storm drain works are confined within the development area and also within the existing road limit. No activities are taken up beyond this limit towards the sea which needs the prior CRZ clearance.

With this, We recommend to continue the construction activities of Kovalam M3 Component without any further delay in order to ensure the safety of Public and other infrastructure facilities due to forthcoming climate change effects and disaster mitigation measures.

Based on the Field Inspection of Kovalam M3 Project Site and Terms of the Reference (ToR) of the Joint Committee, Superintending Engineer (South), CMWSSB and Superintending Engineer, PWD submitted their observation and Final Concluding Report Summarized in the Tabular format below:

Sl. No.	Terms of Reference to the Joint Committee	Site Observations/Action proposed /Taken
(i).	The committee shall go into the question as to	1. Kovalam M3 Project Area falls under Greater Chennai Corporation (GCC) Administration

	<p>whether the project requires any CRZ Clearance.</p>	<p>Area.</p> <ol style="list-style-type: none"> 2. Storm Water Drain (SWD) is an integral part of Road network for disposal of surface and subsurface water to designated locations. 3. In the Kovalam M3 Project area, roads have been built and improved in the last decades, Parks have formed and improved, Street lights and other Underground utilities are also provided by Greater Chennai Corporation and other institutions. 4. It is necessary to safeguard the roads from flooding, damages caused to the property during the flooding. 5. Construction of Storm Water Drain proposed by the Greater Chennai Corporation does not falls in CRZ-1A and CRZ-1B. 6. It is concluded that, the construction of Storm Water Drain in M3 Component of Kovalam Basin is part and parcel of the road laying work which plays a crucial role to safeguard the road users and also to protect the road and other infrastructures like EB pillar box, street light and other available utilities from possible damages during monsoon. Under such circumstances, the construction of Storm Water Drain does not requires CRZ Clearance.
(ii)	<p>Whether the project will have any environmental impact on the aquifer and the coastal zone due to construction of</p>	<ol style="list-style-type: none"> 1. The area of 7.8 hectares covered under the Storm Water Drain (SWD) in M3 component is less than 1% i.e 0.70% of total area of 1137 hectares only. 2. In the Construction of Storm Water Drain in the M3 Component of Kovalam Basin, exhaustive

	<p>concrete storm water drain in the aquifer region.</p>	<p>Rain Water Harvesting activities are being carried out by providing Eco Storage Block, Sunken Wells and Rain Water Harvesting Structure. Because of this extensive implementation of Rain Water Harvesting Structures, Sustained Recharge of Groundwater is ensured in this Coastal Sandy Aquifer Region. Thereby, Positive Environmental Impact could be witnessed.</p> <p>3. With regard to the turtle activities, the hatching activities by the turtle would only during summer period, i.e., only after monsoon period and also hatching activities are well away from storm water drain. Hence, the constructed storm water drain would not affect the Turtle activities in any aspect.</p> <p>4. So it is concluded that M3 Component will not have any environmental impact on the aquifer and coastal zone.</p>
(iii)	<p>What are the alternate methods by which the apprehension of the people affecting natural percolation and water recharge system in the aquifer area can be protected, if this project has to proceed with?</p>	<p>In the Construction of Storm Water Drain in the M3 Component of Kovalam Basin, exhaustive Rain Water Harvesting activities are being carried out by providing Eco Storage Block, Sunken Wells and Rain Water Harvesting Structures and it is summarized items are listed below.</p> <p>Storage ECO Blocks in Open area and Parks will be provided in 20 Locations with total capacity of 22,450 cubic meter (22.45 Million Liters).</p> <ul style="list-style-type: none"> ➤ Total Number of Sunken Wells: 168. ➤ Total Number of Catch Pit with Rain Water Harvesting Structures: 1932. ➤ Rain Water Harvesting Structural Pit is constructed inside the Storm Water Drain with

		diameter of 0.60m at 10m interval for the entire SWD stretch of 52.47 Km by constructing Sunken Wells, Rain Water Harvesting Structures, natural percolation of rain water and water recharge system in aquifer area can be protected.
(iv)	Submission off actual as well as Action taken report, if there is any violation found.	<ol style="list-style-type: none"> 1. No Construction Activities was carried out in CRZ IA and CRZ IB area. 2. Construction of Storm Water Drain of Kovalam M3 Project Area falls under Greater Chennai Corporation (GCC) Administration Area. 3. Storm Water Drain is being constructed on the shoulder of the existing road as part of the road infrastructure. 4. So, there is no violation found during the site inspection along with NGT Joint Committee on 07 Jan 2021.

Er. P. Ashok Kumar
 Superintending Engineer(South),
 Chennai Metropolitan Water
 Supply and Sewerage Board.

Er. A. Muthaiya,
 Superintending Engineer, WRD
 Palar Basin Circle, PWD,
 Chennai.



Pkg 01, Outfall 01, Zone 14, Div 183, Baywatch Road



Jan 7, 2021 11:00:27 AM
 6° N
 New Waterlans Drive
 Kottivakkam
 Chennai
 Tamil Nadu
 Altitude:-81.0m
 Speed:0.9km/h
 Index number: 128



Jan 7, 2021 11:01:50 AM
 22° N
 New Waterlans Drive
 Kottivakkam
 Chennai
 Tamil Nadu
 Altitude:-86.7m
 Speed:1.1km/h
 Index number: 131



Pkg 01, Outfall 02, Zone 14, Div 183, KarunanithiSalai



Pkg 02, Outfall 05, Zone 14, Div 185, MGRSalai



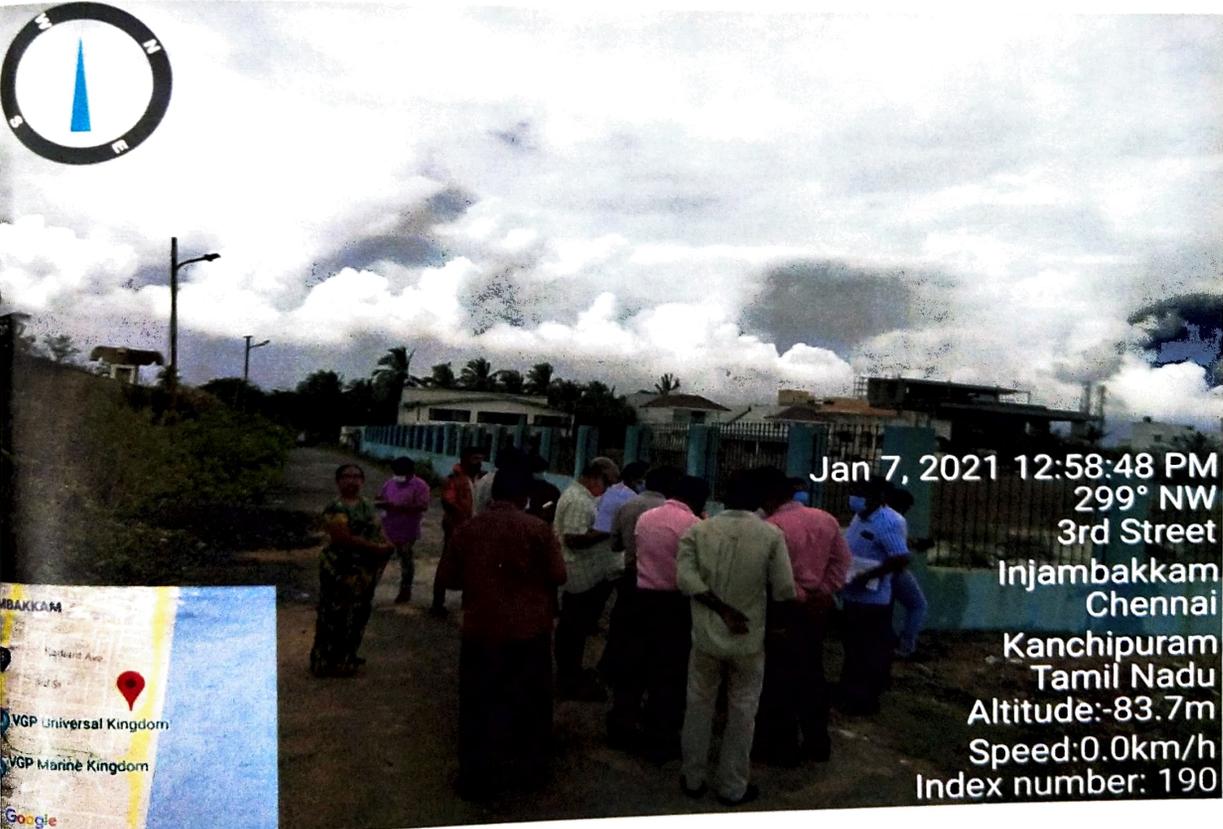
**Pkg 03, Outfall 06, Zone 15, Div 192, Kapaleeshwarar
Nagar Beach Main Road**



**Pkg 05, Outfall 09, Zone 15, Div 192, Teachers Colony
Main Road & Baywatch Main Road**



Jan 7, 2021 12:58:22 PM
 358° N
 3rd Street
 Injambakkam
 Chennai
 Kanchipuram
 Tamil Nadu
 Altitude:-81.1m
 Speed:2.7km/h
 Index number: 186



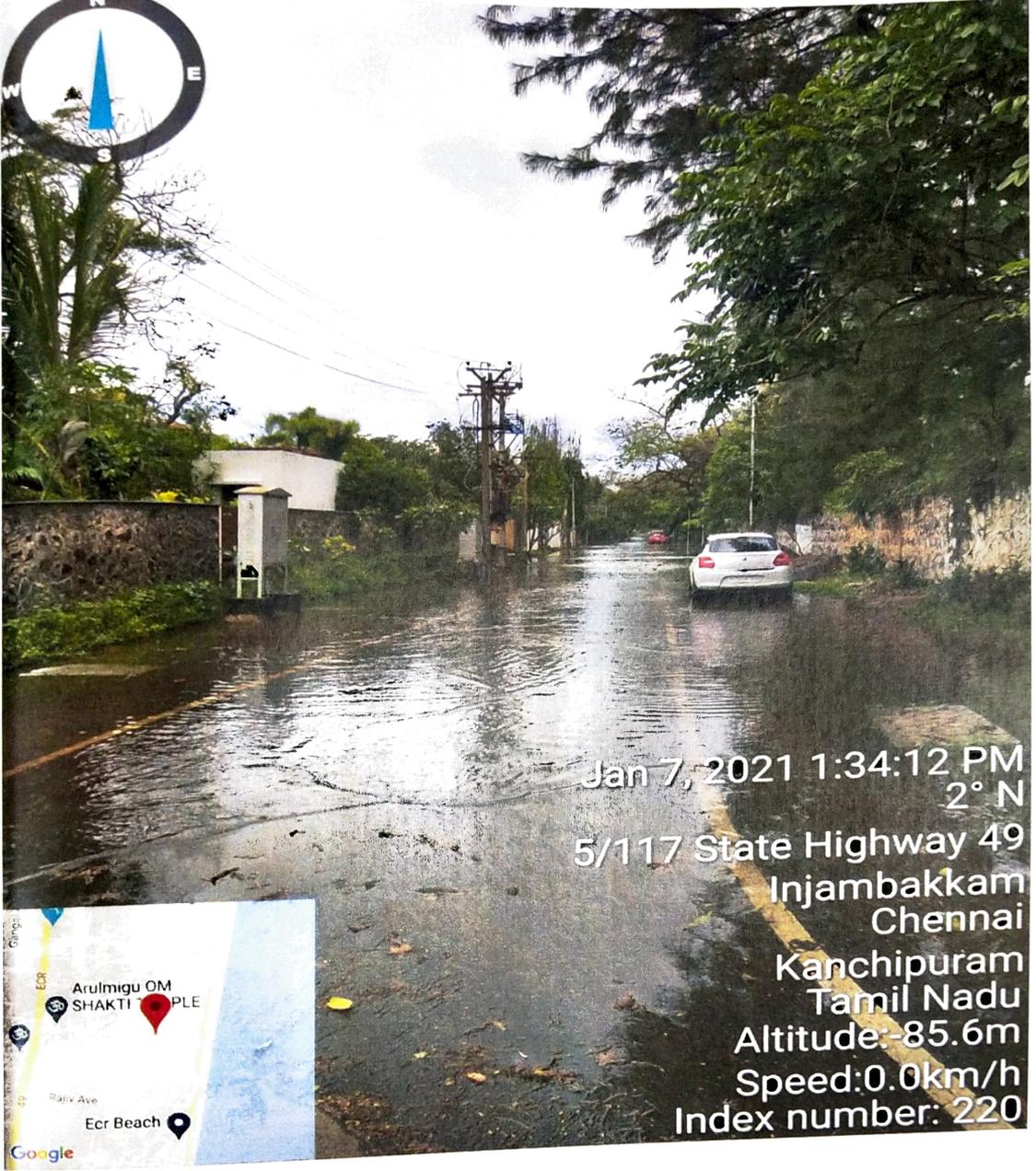
Jan 7, 2021 12:58:48 PM
 299° NW
 3rd Street
 Injambakkam
 Chennai
 Kanchipuram
 Tamil Nadu
 Altitude:-83.7m
 Speed:0.0km/h
 Index number: 190



Pkg 06, Outfall 13, Zone 15, Div196, M.K Radha Avenue



Pkg 07, Outfall 14, Zone 15, Div196, Jagajeevanram Street



Jan 7, 2021 1:34:12 PM
 2° N
 5/117 State Highway 49
 Injambakkam
 Chennai
 Kanchipuram
 Tamil Nadu
 Altitude:-85.6m
 Speed:0.0km/h
 Index number: 220



Pkg 07, Outfall 14, Zone 15, Div196, Ashok Street



Pkg 09, Outfall 17, Zone 15, Div 198, Sea Cliff Avenue



Pkg11, Outfall 20a, Zone 15, Div 198, Rajaji Street



Pkg12, Outfall 22, Zone 15, Div 199, PE Avenue



Jan 7, 2021 3:08:49 PM
 286° W
 1st Main Road
 Uthandi
 Chennai
 Kanchipuram
 Tamil Nadu
 Altitude:-87.7m
 Speed:0.0km/h
 Index number: 291

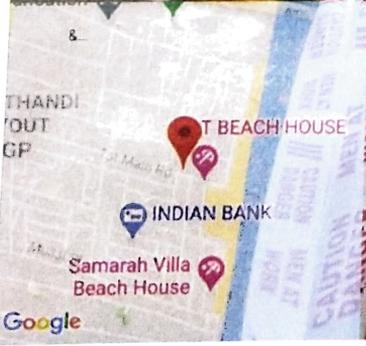


Jan 7, 2021 3:24:21 PM
 273° W
 317 2nd Main Road
 Uthandi
 Chennai
 Kanchipuram
 Tamil Nadu
 Altitude:-89.1m
 Speed:0.0km/h
 Index number: 298

Pkg13, Outfall 23, Zone 15, Div 199, VGP 1st Main Road



Jan 7, 2021 3:06:35 PM
120° SE
1st Main Road
Uthandi
Chennai
Kanchipuram
Tamil Nadu
Altitude:-81.7m
Speed:2.7km/h
Index number: 277



Pkg13, Outfall 23, Zone 15, Div 199, VGP 1st Main Road



Jan 7, 2021 3:36:20 PM
 23° NE
 68 Seshadri Street
 Uthandi
 Chennai
 Kanchipuram
 Tamil Nadu
 Altitude:-84.9m
 Speed:7.6km/h
 Index number: 302



Jan 7, 2021 3:36:57 PM
 83° E
 68 Seshadri Street
 Uthandi
 Chennai
 Kanchipuram
 Tamil Nadu
 Altitude:-84.8m
 Speed:1.9km/h
 Index number: 310



Pkg14, Outfall 26, Zone 15, Div 199, Markant Desai Road



Pkg14, Outfall 26, Zone 15, Div 199, Markant Desai Road

P. Ashok Kumar
26-2-21

Er. P.AshokKumar
Superintending Engineer(South),
Chennai Metropolitan Water
Supply and Sewerage Board.

A. Muthaiya
20/2/21

Er. A. Muthaiya,
Superintending Engineer, WRD
Palar Basin Circle, PWD,
Chennai.