

IN THE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE

Original Application No.233 of 2020 (SZ)

Between

Sajith,
S/o. Saththar
No.12, School, 4th Street,
KudumiyandiThappo,
Panaiyur, Sholinganallur,
Chennai-600 119

----- Applicant

And

1. The State of Tamil Nadu,
Rep. by its Secretary, MAWS,
Secretariat, Chennai
2. The Commissioner,
Greater Chennai Corporation,
Ripon Buildings, Chennai 600 003
3. The Chief Engineer (General)
Greater Chennai Corporation,
Ripon Buildings, Chennai 600 003
4. The Superintending Engineer,
Storm Water Drain Department,
Greater Chennai Corporation,
Ripon Buildings, Chennai 600 003

----- Respondents

Counter statement filed by the 4th Respondent.

1. I B. Sivakumar, S/o. P.Balakrishnan Hindu, aged 56 Years, having office at Greater Chennai Corporation, Ripon Buildings, Chennai-600 003, do hereby solemnly affirm and sincerely state as follows.

2. I am the Superintending Engineer / in charge, Storm Water Drain Department, Greater Chennai Corporation, and I am well acquainted with the facts of the case from the records and as such I am filing this counter affidavit on behalf of the respondents 2 and 3.


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3. I respectfully submit that, the land area between the Bay of Bengal and the 'B' Canal which is about 1000 meters distance from the seashore is considered as a aquifer recharge as per CMDA, where the water table will normally be very high and in some places water table is 2 to 3 feet below the ground level. In the year 2011, the Panchayat areas starting from Kottivakkam to Uthandi has been added to Greater Chennai Corporation. This area due to rapid urbanization have grown with multifold developmental activities and further it has become one of the most fastest growing residential colonies in South Chennai. When this area was undeveloped, the rain water was spreading everywhere even in the vacant plots and rainwater got absorbed over a period of time. It is not absorbed instantly into the sand. During the monsoon period, the ground water table is 1 to 2 feet below the ground level and it takes longer days for the rain water to percolate and rain water stagnates, which leads to mosquito breeding. This type of rain water stagnation has been witnessed in the Marina Beach area during every monsoon and rain water stagnates for weeks which has been published in News papers and is a clear example of stagnation of rain water in sandy area.

4. I respectfully submit that as per the CPHEEO Guidelines, in an undeveloped sandy area, during rainfall, only 10 to 25% of rain water will flow on the road. When the area has been developed as residential colonies and commercial area, with building and paved surfaces, 70 to 80% of rain water will be flowing on the road, as the infiltration of rain water will be less as minimum space only is available for infiltration, resulting in stagnation of rain water.

Further now due to rapid urbanization there is so much of water stagnation at many of the roads on the eastern side of ECR starting from Kottivakkam to Uthandi. At about 74 locations, machineries such as JCB, and pumping motors were placed by Greater Chennai Corporation during the 2015 floods and during every monsoon periods, for bailing out of rain water and also to cut open and form kutcha drains at many places for

disposal of rain water. The details of the roads and details of the motors and JCBs stationed at the roads are as follows:-

Sl. no	Dn No	Name of the Road	Stagnation depth (Mtr)	Power of motor used	No. of motors used	No. of days motor used	No. of JCB used for same days as motors
183 - Kottivakkam							
1	183	Jaganathan Street(Near by NellainNadar school)	0.45	10 HP	1	12	1
2	183	Bay Watch Road	1.80	35HP	1	10	1
3	183	Cauvery Nagar	0.60	10HP	1	10	1
4	183	Kuppam Beach	0.60	10HP	3	10	-
5	183	AGS Colony	0.90	10HP	1	10	-
6	183	ECR Main road(Near Bata showroom)	1.20	25HP	1	10	1
7	183	ECR Main road(OPP to Fish Market)	0.90	10HP	1	10	-
8	183	New Colony	0.60	5HP	1	10	-
185 - Palavakkam							
9	185	Palgalainagar	0.90	5HP	4	10	2
10	185	VGP Layout 1 st spot	1.20	10HP	3	10	1
11	185	VGP Layout 2 nd spot	1.20	35HP	1	10	1
12	185	Muthumariamankoil street(Kuppam)	0.90	5HP	4	10	1
13	185	Poonga Street	0.90	5HP	2	10	-
14	185	Ambethkar street	0.90	5HP	2	10	-
15	185	MGR Street /Tagore street Pushpa Avenue	0.90	-	-	-	1
16	185	Sivagami Street	0.60	5HP	1	10	-
17	185	ECR Road near corporation Dn office	0.60	5HP	1	5	-
18	185	ECR Road near Palgalainagar Arch	0.60	5HP	1	5	-
19	185	ECR Road near Ooty Tea stall	0.60	5HP	1	5	-
192 - Neelangarai							
20	192	Sunrise Avenue	0.45	20 HP	1	10	-

21	192	Kabaleeswararnagar 3rd main road Jn. Of 4th street (south)	0.30	5 HP	1	3	-
22	192	Kabaleeswararnagar 4th main road	0.20	-	-	-	1
23	192	Kabaleeswararnagar 5th cross street	0.60	20 HP 5 HP	1 1	3 10	-
24	192	Work estate pillaiykoil street	0.30	5 HP	1	2	-
25	192	ECR, Near Vasan Eye Care	0.40	5 HP	1	3	-
26	192	Chennai neelangaraikuppam Sunrise avenue Jn	0.20	5 HP	1	2	-
27	192	ECR, Near Fisherman Dept. Office	0.10	5 HP	1	1	-
28	192	ECR, Near Buhari Hotel	0.50	5 HP	1	6	-
29	192	ECR Blue beach main road junction	0.20	5 HP	1	3	-
30	192	ECR Narayana school	0.30	5 HP	1	3	-
196 – Injambakkam							
31	196	ChinnandikuppamPall a street	0.30	5 HP	1	1	-
32	196	Gowriammankoil street	0.30	5 HP	1	3	-
		Injampakkamkuppam					
33	196	VGP layout ECR road	0.30	5 HP	1	2	-
34	196	Dr. Nanjundaraosalai	0.45	5 HP	1	3	-
35	196	Bharathi Avenue main road	0.30	5 HP	1	3	-
36	196	Teachers colony main road	0.20	5 HP	1	1	-
37	196	Rajiv Avenue	0.50	-	-	-	2
38	196	Buble beach avenue	0.30	-	-	-	2
39	196	Teachers colony	0.30	5 HP	1	1	-
40	196	Olive beach	0.30	5 HP	1	3	-

41	196	Sprindle street	0.40	5 HP	1	3	-
42	196	MK Radha Avenue	0.30	5 HP	1	1	-
43	196	Shethathiri avenue	0.10	5 HP	1	2	-
44	196	Jagageevan avenue	0.20	5 HP	1	3	-
45	196	Saibabakoil street	0.30	5 HP	1	1	-
46	196	Harichandrasalai street	0.20	-	-	-	1
47	196	Bay watch form main road	0.10	5 HP	1	1	1
48	196	Swasthik avenue	0.20	5 HP	1	1	1
198 -Akkarai							
49	198	Copper beach ECR main road	0.20	5 HP	1	1	-
50	198	Sea cliff 4th drive	2.00	40 HP	1	30	10
51	198	Panaiyurkuppam main road	0.90	5 HP	1	20	3
52	198	Panaiyurkuppamroun dana	0.30	5 HP	1	2	1
53	198	Panaiyurkuppam 11th street	0.30	5 HP	1	2	-
54	198	Spring garden	0.60	5 HP	1	30	2
55	198	Modern layout 3rd street	0.30	-	-	-	1
56	198	Modern layout 7th street	0.30	-	-	-	1
57	198	Modern layout 10th street	0.20	-	-	-	1
58	198	Modern layout 13th street	0.30	-	-	-	1
59	198	Modern layout 6th street	0.30	-	-	-	1
60	198	Sparkling sand avenue	0.30	-	-	-	1
61	198	TVS Avenue	0.20	-	-	-	1
62	198	Sunrise avenue	0.10	-	-	-	1


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63	198	LJ Avenue	0.40	5 HP	1	3	-	
64	198	J Nagar	0.30	5 HP	1	3	-	
65	198	Drift wood avenue	0.20	5 HP	1	3	-	
66	198	Syamala garden. ECR main road	0.30	-	-	-	1	
199 -Uthandi								
67	199	NeelaathiraiSalai	0.60	5 HP	1	15	4	
68	199	Dr. Sivaramansalai	0.30	5 HP	1	3	2	
69	199	MG Rathinam street	0.30	5 HP	1	10	-	
70	199	VVVS Salai	0.50	5 HP	1	3	-	
71	199	VGP layout II	0.30	-	-	-	2	
72	199	PT Rajansalai	0.30	-	-	-	2	
73	199	Nainarkuppam main road	0.30	-	-	3	1	
74	199	Rajaji street	0.20	5 HP	1	-	-	

5. I respectfully submit that, from the above it can be seen that about 71Nos of pumping motors has been engaged for around 10 days for bailing out of rain water involving heavy expenditure to Greater Chennai Corporation. This expenditure being incurred during every monsoon period to Greater Chennai Corporation will be avoided, after construction of Integrated Storm Water Drain work in this M3 component of Kovalam Basin and moreover the damages to the infrastructures such as roads, Buildings will also be avoided. This kind of temporary arrangement involves lot of expenditure in a city of our scale and hence it becomes the responsibility of Greater Chennai Corporation to create infrastructure facilities like roads, Storm Water Drains, Parks, Play fields, Street lights, improvement to water bodies, rain water harvesting structure etc., and Greater Chennai Corporation is accordingly carrying out these activities very vigorously in the extended areas of Greater Chennai Corporation as these areas have not got much infrastructure improvements under the erstwhile municipalities/ panchayat.


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6. I respectfully submit that the global warming and climate change has taken a toll on the weather pattern in India and all over the world and also resulting in heavy spell of rain with high intensity of rain fall in a very short span of time, like the one which was experienced in 2015 where 320mm of rainfall was received in 24 hours period which created water stagnation in Chennai city. It is a clear example that around 518mm of rain fall has battered the Avalanchi in the State of Tamilnadu which created a havoc in the neighborhood. The rainfall that happened in the Avalanchi area is explained by the experts as 'cloud burst'. Due to global, the clouds which carry water get burst in a place thus causing huge rainfall in one place. The same incident has happened in Vellore last year.

7. I respectfully submit that, there are occasions where there were heavy rain and cyclone, during the summer itself, in the past, during south west monsoon period resulting in flooding and rain water stagnation which created hardship to the public.

8. I respectfully submit that, the Greater Chennai Corporation has done very comprehensive flood mitigation plans and brought in so many multi-lateral agencies who have readily accepted the proposals of GCC and funding these projects for construction of ISWD network.

9. I respectfully submit that, 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 and based on the IRC guidelines, action is taken for construction of Integrated Storm Water Drain network in Kovalam Basin (M1, M2 and M3 Component).

10. I respectfully submit that, as per the manual of storm water drainage system, Volume-I issued by Central Public Health and Environmental Engineering Organisation (CPHEEO) wing of Ministry of Housing and Urban Affairs it has been stated that the coastal areas present a unique challenge to the design of storm water drainage systems, owing to tides, high groundwater tables and relatively flat terrain. During high tides,


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low lying areas along the coast are prone to flooding/inundation and disposal of storm water becomes a problem. During severe storms/cyclones, the discharge of storm water through drains is often not effective and results in water logging and flooding. Backflow of sea water further exasperates the problems. Accordingly as per the section 6.3.1 of special design consideration, storm drainage outfalls in coastal areas has to be carried out.

11. I respectfully submit that, as per the CPHEEO guidelines of Government of India, the storm water drain network has to be provided in the developed areas for draining of rain water and has to be constructed as an integrated network, for which the area is divided into micro water sheds, which forms a basin. The area Panaiyur is covered under South Coast Water Shed (M3component) in the ISWD network of Kovalam Basin.

12. I respectfully submit that, the storm water drain has to be designed for the maximum rainfall which is the order of the day. Previously some years back, the highest rainfall intensity for the city is taken as 32mm per hour for design of storm water drain. But as per the World Bank guidelines and previous experience, the intensity of rainfall is taken as 70mm / hour and considering 2 year return period and adding climate change effect. This is also approved by the technical wing of MOHUA (Ministry of Housing and Urban Affairs) namely CPHEEO (Central Public Health and Environmental Engineering Organization).

13. I respectfully submit that, considering the above and as per the above guidelines, M/s. Kocks Consultants has prepared the DPR for construction of ISWD in M3 component of Kovalam Basin. Accordingly the tenders were called and work order issued for the construction of ISWD in M3 component of Kovalam Basin.

14. I respectfully submit that, the Greater Chennai Corporation has taken up the proposal of construction of ISWD in the expanded areas which has been added in the year 2011. During 2012, Detailed Project Report


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has been prepared thorough M/s. Tetra Tech, an international hydrological consultant for the Construction of Integrated Storm Water Drain (ISWD) in the expanded areas of the Greater Chennai Corporation, in Adyar, Cooum, Kovalam and Kosasthalaiyar Basins at a cost of Rs.4034 Crores. Based on that, the Hon'ble Chief Minister of Tamil Nadu, during the year 2014, has announced in the floor of Assembly, under Rule 110, that Integrated Storm Water Drain Project will be implemented in the expanded areas of the Greater Chennai Corporation, at cost of Rs.4034 Crores. Accordingly, in the first phase, construction of Integrated Storm Water Drain in Adyar and Cooum basin has been taken up under Tamil Nadu Sustainable Urban Development Project (TNSUDP) with the financial assistance of World Bank and it is submitted that construction of ISWD has been completed to the length of 406 km. Rain Water stagnation in these two basin areas have been considerably eliminated, due to the implementation of this ISWD project.

15. I respectfully submit that in the second phase, it is proposed to take up the construction of Integrated Storm Water Drain in Kovalam Basin, area comprising of Pallikarantai marsh land (M1component), South Buckingham Canal (M2component) and South Coast (M3component) water sheds, for a length of 360 km with the financial assistance of KfW, German Development Bank through the Government of India and Ministry of Economic Affairs. In this ISWD project provision has been made for construction of rainwater harvesting systems, such as storage block (eco block) imported from Germany, silt catchpit with RWH structures for harvesting of rain water.

16. I respectfully submit, the providing above rain water harvesting structures are taken as a bench mark by all the externally aided funding agencies who are funding the major ISWD projects in Chennai and is as follows.


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- i. World Bank has funded for Adyar & Cooum Basin ISWD Project
- ii. KfW the German Development Bank has signed loan agreement for Kovalam Basin (South Chennai) ISWD Project
- iii. Asian Development Bank (ADB) is funding for the Kosasthalaiyar Basin (North Chennai) ISWD Project

17. I respectfully submit that, KfW Bank has appointed M/s.Kocks Consultants for preparation of detailed project report (DPR) for construction of Integrated Storm Water Drain in the M3 component area of Kovalam Basin and M/s.Kocks consultants has carried out field survey and tests in the South Coast area comprising the rain fall details, water absorbing amount, quantum of runoff water, water stagnation points and the duration of stagnation, very accurately and based on those studies has revised the design for the proposed construction of storm water drains and has submitted the revised DPR for ISWD project. In this project area it is proposed to provide Eco Storage Block imported from Germany at 20 locations in the vacant lands and play grounds for storage of rain water. It is also proposed to provide Retention ponds in parks, 171 Nos of RWH Wells are to be provided along the road margins and in vacant land and 22450 Nos of silt catchpit with RWH structures are to be constructed for recharge of ground water. Through all these provisions, priority has been given for the rain water harvesting.

18. I respectfully submit that, for the construction of the underground sewerage system, Chennai Metropolitan Water Supply and Sewerage Board is the competent authority and has also taken necessary action for providing underground drainage project in the Kovalam Basin area. The sewerage lines will be laid at above 6m below the ground level and will not affect the construction of storm water drain.

19. I respectfully submit that, the storm water drain will be constructed in the project areas as per the design submitted by M/s. Kocks Consultants. The storm water drains has been designed, considering the factors such as high intensity rain fall, climate change effects, the storm


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surge and tidal effects and the permeability of the soil etc., using Hydraulic Modeling softwares.

20. I respectfully submit that, the project has been approved by KAW, German Development Bank, only after careful study and examination of the area and the suitability as per site condition, to their entire satisfaction. Hence, the necessity of the project of construction of storm water drain in the south coast area including the Panaiyur cannot be disputed and as per the scientific method the proposal of ISWD project has been prepared to prevent any flood havoc and that may occur during extreme weather and heavy rainfall that happens everywhere in the world. This project is proposed for the benefit of the Public.

21. I respectfully submit that, the total project area of M3 component is 1137 hectares. Constructed residential buildings area is 980 hectares which is 86.20% of the total land area. Road area is 149 hectares which is 13.10% of the total area. Construction of storm water drain portion will be only 7.8 hectares which is 0.70% of total area. Due to construction of this ISWD, in the M3 component area, the damages to the road infrastructure in 13.10% area are avoided due to prevention of rain water stagnation. Moreover deploying of machineries is also avoided and further people living in the 86.20% area of M3 component area in the Kovalam Basin will be benefited from the project.

22. I respectfully submit that, in the aftermath of 2015 mega floods, the A.G. Audit, has suggested to Government of Tamil Nadu for construction of storm water drain for prevention of rain water stagnation as per CPHEEO standards and has suggested Greater Chennai Corporation to implement all the ISWD schemes as part of flood mitigation measures for avoiding rain water stagnation in the interest of general public.

23. I respectfully submit that, a case has been filed by the VGP Golden Seaview Residents Welfare Association in the Hon'ble High Court vide Case No. WP.No.12451/2020 for restraining Greater Chennai


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Corporation from construction of storm water drain work in their area. The Hon'ble High Court has dismissed the Writ Petition and directing the petition to make representation before the concerned authorities. Greater Chennai Corporation explained to the Association the need of this project, the benefits of this project and the important of the project and is implemented for prevention of rain water stagnation, for the benefit of the public in their area.

24. I respectfully submit that, Sri Kapaleeswarar Nagar Residential Welfare Association has filed a Case vide WP.No.11235/2020 in the Hon'ble High Court. During the detailed deliberation in the Hon'ble High Court, Sri Kapaleeswarar Nagar Residential Welfare Association has withdrawn the case. Hence it is submitted that ISWD Project in M3 component of Kovalam Basin is proposed for benefit of large public in Kovalam Basin area.

Hence considering the above explanation filed in this counter statement, the respondents herein pray that this Hon'ble Court, National Green Tribunal, Southern Zone, may be pleased to dismiss this Original Application and to pass such further or other orders as this Tribunal may deem fit and proper in the circumstances of the case and thus render justice.

It is prayed that the Hon'ble National Green Tribunal may be pleased to pass orders for construction Integrated Storm Water Drain in M3 component area of Kovalam Basin for prevention of rain water stagnation in the interest of large public and it is submitted that about 10 lakhs people will be benefited from this project.

Dated at Chennai this the 30TH day of November, 2020

Counsel for the 2, 3 and 4th
Respondent


Respondent.

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Verification

It is verified that what is stated in paragraphs 1 to 24 are true and correct to the best of my knowledge and belief

Dated at Chennai this the 30TH Day of November, 2020


Respondent

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Storm Water Drain Department
Greater Chennai Corporation

IN THE NATIONAL GREEN
TRIBUNAL SOUTHERN ZONE
Original Application No.233 of
2020 (SZ)

Sajith ----- Petitioner

-Vs-

The Commissioner,
Greater Chennai Corporation,
and 2 others ----- Respondents

COUNTER AFFIDAVIT OF THE
4TH RESPONDENT

Mr.

Counsel for Respondents