GOVERNMENT OF TAMILNADU

WATER RESOURCES DEPARTMENT

Report of the Joint Committee in Compliance the Hon'ble Nation Green Tribunal (SZ) order Dated 29.01.2020 in the matter of O.A.No. 207 of 2017 (SZ) Filed By Thiru. A.Ayubkhan and 2 Others against the Construction of Road Over Bridge along Ponneri Lake in Konnerikuppam Village, Kancheepuram District

Lower Palar Basin Division,
Kancheepuram.

INDEX

Chapter 1	Preamble	1
Chapter 2	Gist of the Case No. 207 of 2017 [SZ] & Order of Hon'ble Green Tribunal	2
Chapter 3	Constituent of Joint Committee & site inspection	4
Chapter 4	Objectives	7
Chapter 5	Chronology of events and approvals	10
Chapter 6	Brief Introduction of Konnerikuppam Tank / Lake (Ponneri Lake)	13
Chapter 7	Weather climate	15
Chapter 8	Description of the Flyover proposal by Highways Department	19
Chapter 9	Joint committee inspection	24
Chapter 10	Findings of the Joint Committee	25
Chapter 11	Recommendation and Conclusion of Joint Committee	30
	Annexure - I – NOC from Archeological Survey of India	33
	Annexure-II – NOC from Public Works Department, Water Resources Department	34
	Annexure -III – Extract of Wetland (Conservation and Management), Rules 2017	42
	Annexure – IV – Water Quality Results	46

Chapter 1 : Preamble

The Highways Department and Railway Department together intended to ease out the traffic congestion, time delay and avert the environmental degradation due to the stagnant traffic, across the level crossing in the Ponneri Karai Road which is the only connecting Ring Road between NH – 4 and Kancheepuram Town. The construction of over bridge is part of the sustainable development which is required for improving the economy of the state and need of the people as well. Due to the site specific constrains like presence of Heritage and Archaeological sites and the techno – anthropological constrains, the alignment committee of the Highways Department have chosen an alternate alignment which is passing through the South Eastern corner of the Konnerikuppam Tank. Aggrieved by the alignment passing through the Konerikuppam Tank in Survey No. 52 & 67/2. Thiru. A. Ayubkhan and others file a petition vide 207 of 2017 in the Hon'ble NGT to stop the work due to their alleged damages to the Water bodies and Environmental due to the said Highways flyover Project. This report is prepared by the Joint Committee constituted as per the order of the Hon'ble NGT in the said case. The present stage of construction 98% is completed.

Chapter 2 : Gist of the Case No. 207 of 2017 [SZ] & Order of Hon'ble Green Tribunal

Mr.A.Ayubhkan and 2 Others have filed a petition vide 207 of 2017 in the Hon'ble National Green Tribunal (NGT) against the Construction of Road Over Bridge along Ponneri lake in Konnerikuppam Village, Kancheepuram District.

Going through a details of the project and its benefit to the public, the Hon'ble NGT was kind enough to spell out in its order dated 29.01.2020 in sl.no 27 that "It cannot be said that such Road Over Bridge is not necessary for the development purpose. It is intended to be constructed for the purpose of catering to the need of the people and also to avoid the possibility of road rail accident at Level Crossing and make the transportation easy. The Construction of over bridge are part of the sustainable development which is required for improving the economy of the state and need of the people as well.

Hence, the Hon'ble NGT directed in its order dated 29.01.2021 at sl.no.31 that

> *"to ascertain the impact of the construction of the Road Over Bridge along the water body by the joint committee comprising of District Collector, Kancheepuram, Central Pollution Control Board (CPCB), Regional Office of Ministry of Environment, Forest and Climate Change (MoEF&CC), Chennai, National Environmental Engineering Resource Institute (NEERI), Wet Land Authority, Indian Institute of Technology, Chennai and Senior Officials of the Water Resource Department and to inspect the area in question and ascertain the nature of construction, extent of construction in the water body, total built up area and whether it requires any clearance from the authorities and if so whether such clearance have been obtained from the authorities and its impact on the water body and whether it is likely to affect the flow or holding capacity of water in the lake and its*

impact on ecology and biodiversity of the lake and if there are any further safeguards to be taken to resolve any deficiency in protecting the lake and its buffer zone, then what are all the steps required for this purpose and submit a detailed report showing its observation, impact, suggestions and recommendation for remedying the deficiency in construction of the bridge".

Chapter 3: Constituent of Joint Committee & site inspection

As directed by Hon'ble NGT, a Joint Committee constitution by the District Collector compressing of following Members. Water Resource Department being a Nodal Agency invited the nominated members from all the concerned departments and conducted a meeting under the Chairmanship of the District Collector, Kancheepuram in the chamber of the Collector on 02.03.2020 @ 12.00P.M. The following members of the committee, officials of Highways Department and Water Resources Department have attended the meeting except the member from IITM, Chennai.

Table:1

Chairman	Thiru. P.Ponniah, IAS District Collector, Kancheepuram
Regional Directorate (S) Central Pollution Control Board	Thiru. K. Karunagaran Senior Technical Supervisor, Central Pollution Control Board-Bangalore-79
Regional Office of Ministry of Environment , Forest and Climate Change (South Zone)	Dr. K.G. Prijilal, Research Officer MOEF&CC, RO, Chennai
Wet Land Authority	Thiru. Naga Sathish , IFS District Forest Officer, Kancheepuram
Representative from IIT Chennai	**Not Nominated by IITM**
Water Resources Organisation	Thiru N.N. Thiyagharajan, B.E., Executive Engineer, W.R.D., Lower Palar Basin Division, Kancheepuram
	M.Baskaran, Assistant Executive Engineer, WRD Lower Palar Basin Division, Kancheepuram
Highways Department	Thiru K.Sridhar, Assistant Divisional Engineer (H) Projects Sub Division, Chengalpattu

	V.Shanmugapriyan, Assistant Engineer, (H) Projects , Acharapakkam Section. Chengalpattu Sub Division -II

An interim status reply submitted to the Hon'ble Green Tribunal by the District Collector of Kancheepuram on 02.03.2020. However, the Hon'ble NGT(SZ) not accepted the reply of the Joint committee due to the absence of the expert member from IIT Madras, and directed to substitute from Anna University in place of IIT madras.

Accordingly the second meeting was held on 06.08.2021 with the members as listed in the Table No.2 along with member Dr.S.Amulraj, Professor, School of Environment from Anna University under the chairmanship of District Collector, Kancheepuram along with all the Joint Committee members and officials from Water Resource Department and Highways Department, once again inspected the entire stretch of the Over-bridge and lake portion as to ascertain the field condition with the following objectives:

Table No.2

Chairman	Dr. M. Aarthi I.A.S., District Collector, Kancheepuram
Regional Directorate (S) Central Pollution Control Board	Thiru. K. Karunagaran Senior Technical Supervisor, Central Pollution Control Board
Regional Office of Ministry of Environment , Forest and Climate Change (South Zone)	Dr. K.G. Prijilal, Research Officer MOEF&CC, RO, Chennai.
NEERI	Dr.M.Tirunavoukkarasu, Senior Principal Scientist-NEERI
Wetland Authority	Thiru. K.Sathiyamoorthy, IFS, District Forest Officer / Wet Land Authority, Kancheepuram
Anna University	Dr.S.Amulraj, Professor, Centre for Environmental Study.

Water Resources Organisation	Thiru. M. Shanmugam, B.E., Executive Engineer, W.R.D., Lower Palar Basin Division, Kancheepuram

Chapter 4: Objectives:

- to ascertain the impact of the construction of the Road Over Bridge along the water body.
- to inspect the area in question and ascertain the nature of construction, extent of construction in the water body, total built up area
- to ascertain whether it requires any clearance from the authorities and if so whether such clearance have been obtained from the authorities.
- to ascertain likely to affect the flow or holding capacity of water in the lake and its impact on ecology and biodiversity of the lake.
- if any deficiency in protecting the lake and its buffer zone found, the steps recommended to resolve the issue as to safe guard the lake.

Joint committee 2nd Inspection

The joint committee along with the member Dr.S.Amulraj, Professor, Centre for Environmental Study from Anna University headed by the District Collector Kancheepuram have inspected the Pooneri lake on 06.08.2021.

Fig 1. Joint Committee inspection Headed by District Collector

The Executive Engineer and Divisional Engineer Highways department welcome the committee members and the Divisional Engineers highways explain about the necessity of Road Over Bridge(ROB), construction methodology and current stage of the ongoing ROB works in the Ponneri Lake. The Executive Engineer, Water resources has conveyed to the committee member the rehabilitation of Konnerikuppam tank (Ponneri lake) was taken in the TNIAMP scheme (Tamil Nadu Irrigated Agriculture Modernisation Project), The tank bund, The Surplus weir and the Supply channel were rehabilitated.

Fig 2. Before strengthening of bund

Fig 3. During strengthening of bund

Fig 4. Strengthening of bund after completion

Fig 5. Strengthening of weir after completion

The committee members thoroughly inspected the ROB site, surplus weir portion, Tank water spread and surplus course. The District Collector has emphasized the committee members to express their view in improving the water bodies. Members have verified the total surface area occupied by pillars, lake capacity, inlet and discharge. Joint Committee verified all sorts of approvals/NOCs obtained for construction of Road Over Bridge. The committee Members verified the documents of the chronology of events / approvals obtained for the construction of Road Over Bridge. The order of chronology is as detailed below

Chapter 5: Chronology of events and approvals

1. State Highways Department and the Southern Railway have jointly launched a scheme to connect Kancheepuram Town with National Highway through a circuitous route.
2. Road Over Bridge (ROB) proposal was approved under Railway works programme for 2011 – 2012. Administrative sanction has been approved for Rs.49.42 crores for this construction as per the G.O.(D) No.200/Highways & Minor Ports (HQ 2) Department dated 07.12.2011.
3. The alignment for the above bridge, passing through the existing road (M 066) has been approved by the Alignment Committee on 21.09.2011
4. The agreement was signed on 26.04.2017 and the foundation stone was laid on 08.05.2017.
5. As the proposed widening of the road make an entry into the ancient monumental temples Iravadeeswara & Pravadeeswarar and that too in the prohibited zone of 100 meters, the permission or approved alignment was cancelled on 21.11.2012 by the Archaeological Survey of India (ASI).
6. The Superintending Archaeologist, ASI, Chennai circle in Letter No.4/193/KPM/2012/M/4407 dated 27.09.2012 has stated that the construction of ROB near the ASI temples cannot be permitted as it will mar the view of the monuments as part of the construction. The

Superintending Archaeologist, ASI, Chennai has further requested to consider the Road Over Bridge on a different alignment.

7. This Road Over Bridge proposal was announced by the Hon"ble Chief Minister on the floor of Assembly under Rule 110 of Tamil Nadu Legislative Assembly Rules, during the budget session 2013 – 2014. This Road Over Bridge is very essential for public utility due to increased traffic congestion in the temple town.

8. The new alignment was approved on 02.05.2013 by the Alignment Committee comprising of team of Superintending Engineers, Highways Department.

9. The Competent Authority ASI (Tamil Nadu) has accorded the "Grant of Permission" for the construction of bridge in the regulated area (100m-300m) of Piravathaneswara Temple at Kancheepuram Taluk on 06.02.2015. *(Enclosed in Annexure-1)*

10. This alignment has been inspected by the Public Works Department (WRD) officials, and necessary concurrence has been obtained with some conditions as reflected in petition.

11. The Government after detailed examination have issued G.O. 84/Public Works Department dated 13.04.2017 permitting the construction of the Bridge in the Konnerikuppam Lake Area. *(Enclosed in Annexure-2)* The construction work is carried out, satisfying the conditions of the PWD without disturbing the capacity and ecosystem of the lake area.

12. The alignment of the Road Over Bridge is a fully elevated structure in the Konnerikuppam Tank (*Ponneri Lake*). water spread area, with 2 x 32 piers which occupy only 0.04% of the tank's water spread area at FTL/MWL.

13. As reduction in water storage capacity of the tank is very negligible (0.09%), there will be no threat to perseverance of ecology due to construction of the Road Over Bridge in the tank water spread area

14. The foundations of the piers are below the existing bed level of the tank.

15. The super structure such as Deck slabs and beams are constructed above the Maximum water level of the tank.

16. Only the piers of 1.80m diameter will occupy in the water spread area. Hence no obstruction in the flow of the water is observed.

17. The total area of 162.86sq.m is occupied by the bridge structure and the same is compensated by deepening and slitting of soil.

Chapter 6 : Brief Introduction of Konnerikuppam Tank / Lake (Ponneri Lake)

Konnerikuppam Tank is located in North of Kancheepuram Railway Station, Latitude 12°51'16.95"N and Longitude 79°42'16.84"E in Lower Palar Sub basin of Kancheepuram District. This tanks is a Non-System tank having 11 upper tanks draining in it with Free Catchment is 1.60Sq.Mile and Combined Catchment is 4.15Sq.Mile , surplus water goes to Olaiyur Tank.

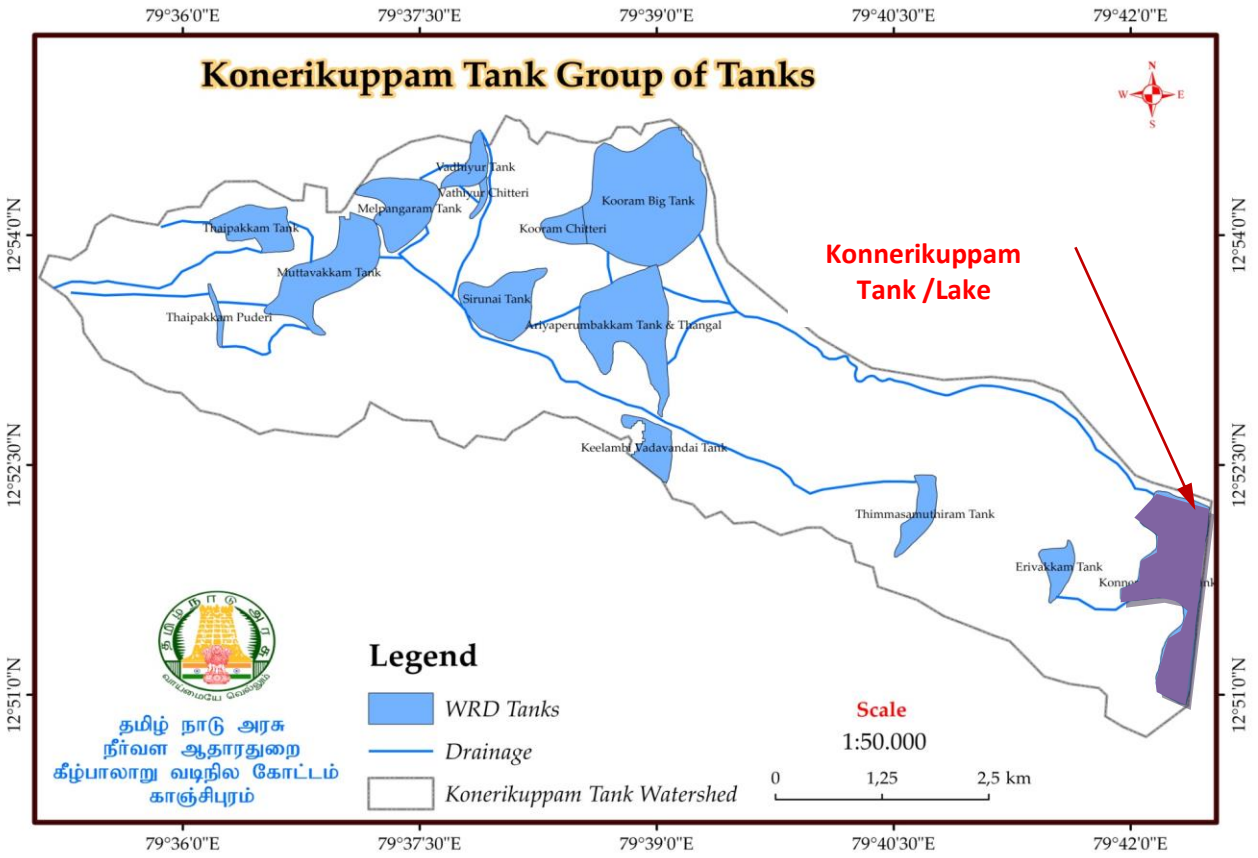


Fig 6. Group Map of Konnerikuppam Tank / Lake

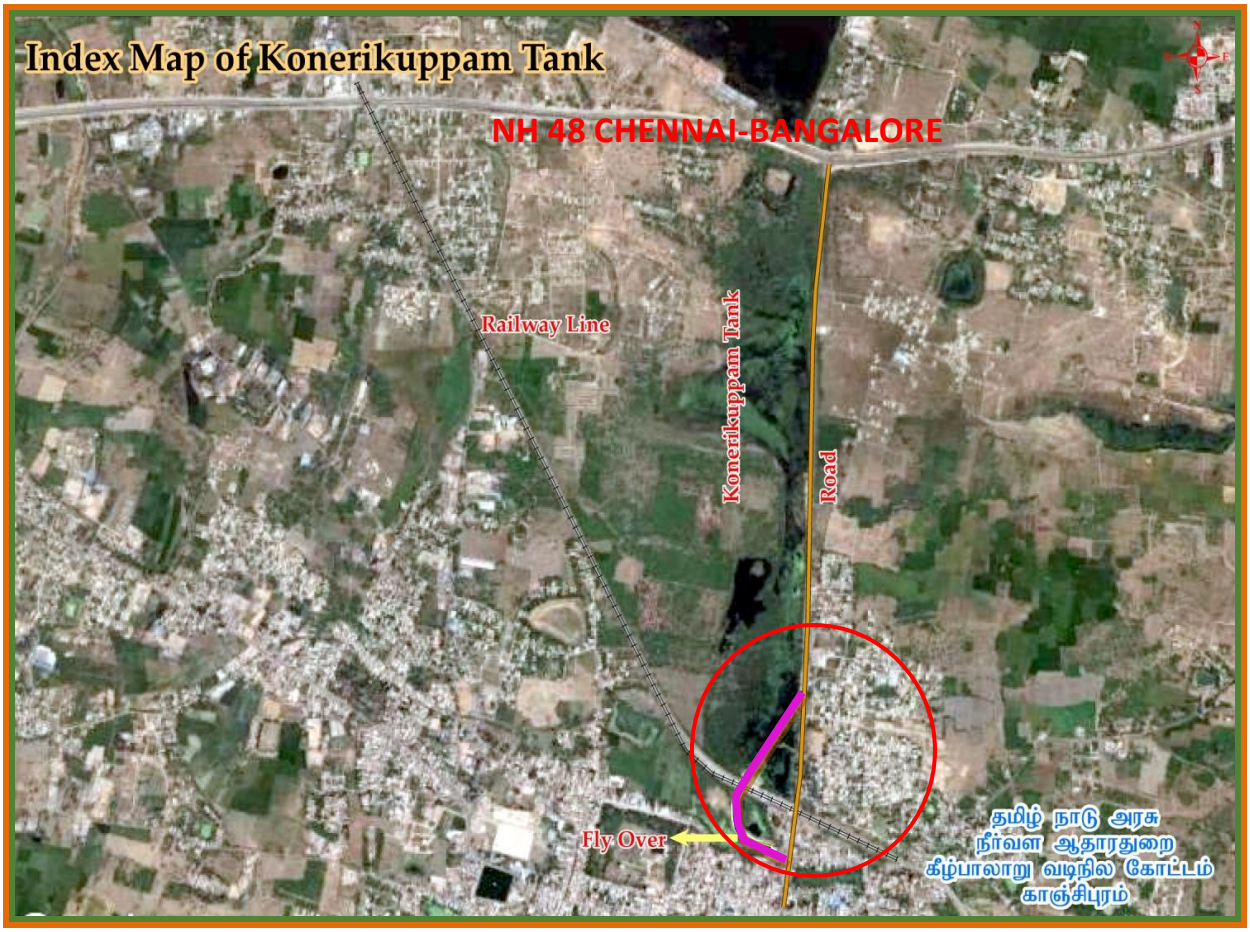


Fig 7. Index Map of Konnerikuppam Tank with Road over Bridge Location

Chapter 7: Weather climate

Rainfall and climate

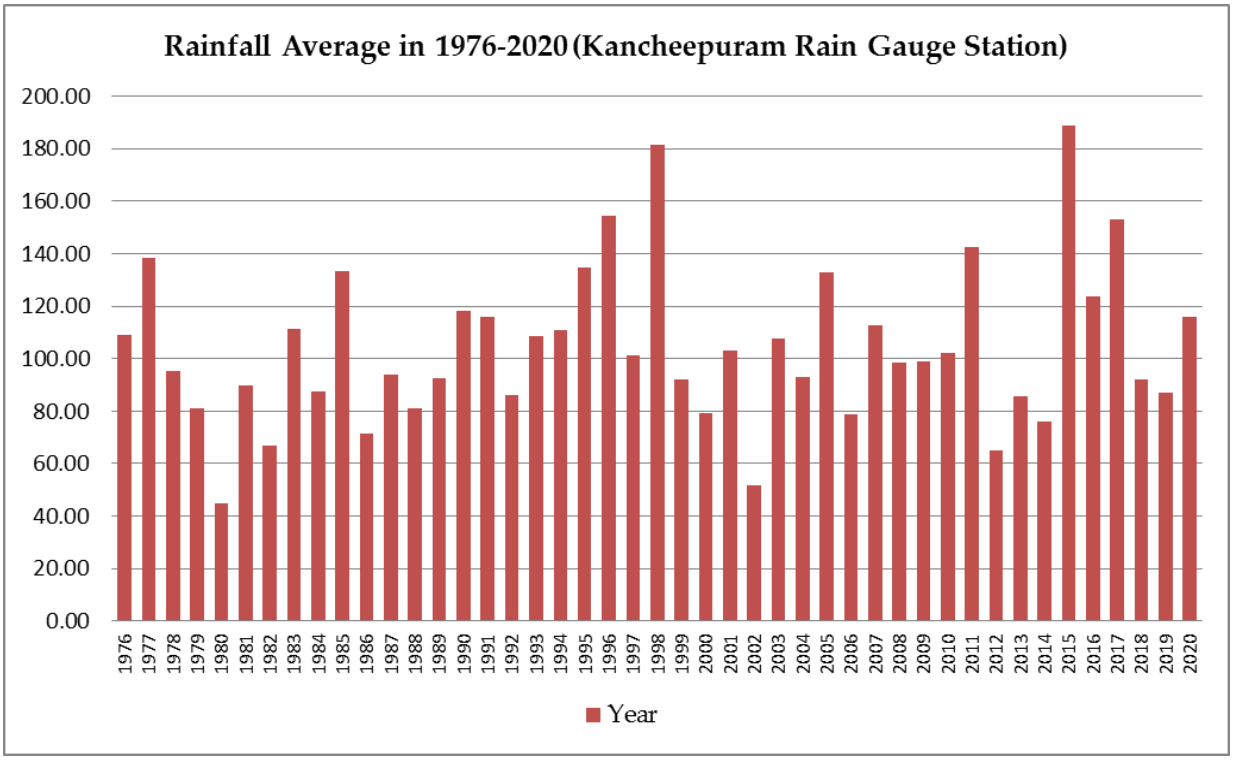
Kancheepuram is generally experiencing hot and humid climatic conditions. Receives the rain under the influence of both southeast and northeast monsoons. Most of the precipitation occurs in the form of cyclonic storm caused due to the depressions in Bay of Bengal chiefly during North East Monsoon period. The southwest monsoon rainfall is highly erratic and summer rains are negligible. The normal annual rainfall over the Kancheepuram varies from 44.85 cm to 188.69cm.

Rainfall data for the past 44 years (1976-2020)

The rainfall data given below shows that more than 50% of the total annual rainfall is received from North East Monsoon and the distribution of rainfall among the months is also not even. It is evident that Kancheepuram District entirely depends on monsoon rainfall especially North-East Monsoon.

The rainfall data (listed in the Histogram - 1.1) for the past 44 years depicts that sporadic variation and temporal variation in rainfall is getting worst compared to the long-time rainfall data. The highest rainfall recorded during 2015 is 1889 mm and the lowest average rainfall recorded during 1980 is 440 mm the lowest and highest rainfall varies to 32% lesser to 132% higher compared to average annual rainfall.

The variation range between drought year and extreme flood year is much wider in the range of 1600mm (164%) hence, the vagaries of monsoonal rainfall is the crux of water Resources Management.



Agro – Climatic conditions of Kancheepuram district.

Kancheepuram District falls under Tamil Nadu uplands and North eastern zone as per ICAR Classification, hot semi-arid eco-sub region as per Planning Commission Classification. This Agro-climatic Sub Region receives annual precipitation in the range of 600 – 1000mm. The terrain is of Plain in nature. The Normal Annual and Average Monthly rainfall are 1227.30mm and 102.30mm respectively (Table No 1.6). The number of rainy days is of 45 days. The elevations above mean sea level (MSL) excluding Hilly areas are in the range of 0.02m to 41.61m.

Name of the State : Tamil Nadu																										
Name of the District : Kancheepuram																										
Sl. No.	Agro Ecological Zone Type	Type of Terrain	District Area (Ha.)	Normal Annual Rainfall (mm)	Average Monthly rainfall (mm)	No. of Rainy Days (No.)	Maximum Rainfall Intensity (mm)			Average Weekly Temperature (^{0}C)									Potential Evapo-Transpiration				Elevation (Above MSL) excluding Hills		
							Up to 15 Min.	Beyond 15 but up to 30 Min	Beyond 30 but up to 60 Min	Period									Period						
										Summer (April - May)			Winter (October - March)			Rainy (June - September)			Summer	Winter	Rainy Season	Cumulative Total	Minimum	Maximum	Mean
										Minimum	Maximum	Mean	Minimum	Maximum	Mean	Minimum	Maximum	Mean							
1	Tamil Nadu uplands and North Eastern Zone hot semi and eco sub region (ICAR)	Plain Terrain	443210	1227.70	102.30	45	5	12	20	26.60 °C	38.30 °C	32.40 °C	20.90 °C	33.50 °C	27.20 °C	22.30 °C	31.60 °C	27.40 °C	5.105	4.132	3.895	13.132	0.02m	83.20m	41.61

Hydraulic Particulars Konnerikuppam Tank

Top of Bund Level (MSL)	(+) 86.390M
Maximum Water Level (MSL)	(+) 84.890M
Full Tank Level (MSL)	(+) 84.590M
Height of Bund	5.880M
Free Board	1.500M
Ayacut	371.60 Ha
Length of Bund	3660 M
Side Slope -Front Side	1.5:1 (Existing)
Side Slope -Rear Side	2:1
Capacity of Tank	2.77 Mm^3
Annual Storage of Tank	5.54 Mm^3
No.of Fillings	2
Depth of Storage	4.080 M
Water Spread Area @ FTL	0.52 Sq.Mile
Catchment	
a) Free Catchment	1.60 Sq.Mile
b) Intercepted Catchment	2.55 Sq.Mile
c) Combined Catchment	4.15 Sq.Mile
Total No. of Weirs (Calingulah)	**1 Nos.**
a)Weir No.1	Length
Total No. of Sluices	**4 Nos.**
a) Sill Level of Sluice No.1	(+) 80.650 M
b) Sill Level of Sluice No.2 (Deepest Sluice)	(+) 80.510 M
c) Sill Level of Sluice No.3	(+) 81.790 M
d) Sill Level of Sluice No.4	(+) 82.300 M
Catchment	774 Cusecs
Supply Channel	332 Cusecs

Chapter 8 : Description of the Flyover proposal by Highways Department

a) Necessity of Road Over Bridge (ROB) :

The Level Crossing No.29 is located at Km:72/10 of Chennai - Ponnerikarai Kancheepuram road, which is classified as a Major District Road and is situated in between Walajabad and New Kancheepuram Railway Stations at Railway Km:35/800-900 on Chengalpattu Kancheepuram - Arakkonam line. This road connects the National Highways [NH4] with Kancheepuram town through the State Highway [SH58]. The Vehicular traffic from Chennai and Bangalore ply on this road to reach Kancheepuram and vice versa.

Kancheepuram is a District headquarters and it is a famous pilgrimage centre where many temples are located. It is considered as one of the major tourist spot in Tamil Nadu and people from all parts of India and abroad visit this holy place on daily basis and they have to use the above road to reach their destination. Further the people living in this locality have to use this road to go to office, colleges, Schools, hospitals etc. This road serves as important connectivity to reach the Kancheepuram town and hence it is necessary to provide ROB at this location to avoid traffic congestion during closure of LC gate.

b) Approval of alignment committee

The alignment for the above Bridge, passing through the existing road has been approved by the Alignment Committee on 21.09.2011. During the Land Acquisition process, it was identified that in the approved alignment, two Centrally Protected National Monuments under the purview of Archeological Survey of India viz: Sri

Piravathaneswara temple (Town Survey No.1281/1) and Sri Iravatheswara Temple (Town Survey No.2165/2) exist.

The Superintending Archaeologist, ASI, Chennai circle in Lr.No.4/193/KPM/2012/M/4407 dated: 27.09.2012 has stated that the Construction of ROB near the ASI temples cannot be permitted as it will mar the view of the monuments as part of the construction falls in the Prohibited area of the monuments, which is not permissible under the Ancient Monuments and Archeological Sites and Remains Act, 1958 and Rules, 1959. The Superintending Archaeologist, ASI, Chennai has further requested to consider the ROB on a different alignment. Every area, beginning at the limit of the protected area or the protected monument, as the case may be and extending to a distance of 100 m in all directions shall be the “Prohibited Area” in respect of such protected area or protected monuments as per section 20A of the Ancient Monuments and Archaeological Sites and Remains (Amendment & Validation) Act, 2010 amending the said Act, 1958.

Due to this objection by the ASI, the Chief Engineer (H), Projects, Chennai in Lr.No.1862/W2/2012 dated: 21.11.2012 has cancelled the approved alignment and instructed to prepare a new alignment. Keeping in view of ASI’s objections, a fresh alignment without infringing into the “PROHIBITED AREA” of the two national monuments is identified..

The new alignment was approved on 02.05.2013 by the Alignment Committee comprising of team of Superintending engineers, Highways department. The Competent Authority ASI (Tamil Nadu), has accorded the “Grant of Permission” for the

construction of Bridge in the regulated area (100m – 300m) of Piravathaneswara Temple at Kancheepuram Taluk on 06.02.2015.

The Chief Engineer, Water Resources Department, Chennai Region, has recommended the NOC for the construction of ROB in the lake portion to the Government in Letter No. T1/11501/ 2013, Dated 4.8.20116 and Letter. No. DB/TS (3)/F-11501 (Ponnerikarai ROB)/2013, Dated 30.01.2017.

The Government, after detailed examination, have issued G.O.84/Public Works Department/ Dt. 13.04.2017 for permitting the construction of the Bridge in the Konnerikuppam Lake Area.

c) Nature and area occupied for construction:

The work is being executed to comply the conditions prescribed by the Public Works Department (WRD) without disturbing the capacity and ecosystem of the lake area. Total length of Road Over Bridge crossing the lake is 927 m The alignment of the Road Over Bridge is a fully elevated structure supported by the center pillars of Reinforced Cement Concrete structures (RCC) in the Konnerikuppam Tank (*Ponneri Lake*) water spread area. Each pillars will occupy 1.80m diameter, total **2 x 32 piers which occupy only 0.004% of** the tanks water spread area at FTL/MWL. As reduction in water storage capacity of the tank is very negligible (0.004%), there will be no threat to perseverance of ecology due to construction of the Road Over Bridge in the tank water spread area. The total area of 162.86 Sq.m is occupied by the bridge structure and the same is compensated by deepening and desilting of the Tank bed.

Further, no land transfer or alienation will be involved in this proposal and as much as public money would not be wasted. Hence, there is no violation of G.O. (Ms.) No.503, Revenue Department, dated 21.09.1999 and G.O. (Ms.) No.186, Revenue Department, dated 29.04.2003.

d) Stage of road over bridge construction:

At present**, 98% of the construction work is completed** and finishing works of the bridge like painting, fixing of road furniture and final Road Black Topping works are in progress. Now all the structural works of trestle portion and approach portion of the bridge has been completed in incorporating and complied with the conditions given by Public Works Department (WRD).

Fig 8. Deepening of tank by Highways department

Further the deepening / de-silting work has been carried out to increase the capacity of lake and the tank bunds also strengthened to ensure proper storage and suitable arrangements has been made at the exit portion of the Road Over Bridge in such a way that the flow in the surplus course of the tank is not affected. All the conditions stipulated and recommended by the Public Works Department (WRD) has been carried out and completed the bridge work in the lake portion

Fig 8. Road Over Bridge After Completion

Chapter 9 : Joint committee inspection

The joint committee headed by the District Collector Kancheepuram has inspected the Konnerikuppam Tank (*Ponneri Lake*). On 06.08.2021, the Executive Engineer and Divisional Engineer Highways department welcome the committee members and the Divisional Engineers highways explain about the necessity of Road Over Bridge(ROB), construction methodology and current stage of the ongoing ROB works in the Ponneri Lake.

The Executive Engineer, Water resources has conveyed to the committee member the rehabilitation of Konnerikuppam tank (Ponneri Lake) was taken in the TNIAMP scheme (Tamil Nadu Irrigated Agriculture Modernisation Project), The tank bund, The Surplus weir and the Supply channel were rehabilitated. The committee members thoroughly inspected the ROB site, surplus weir portion, Tank water spread and surplus course. The District Collector has emphasized the committee members to express their view in improving the water bodies. Members have verified the total surface area occupied by pillars, lake capacity, inlet and discharge. Joint Committee verified all sorts of approvals / NOCs obtained for construction of Over Bridge

Chapter 10 : Findings of the Joint Committee

The following observations were made by the expert members of the joint committee:

1. Studying the reports and document produced by the Highways Department as well as Archaeology Department. The committee member are convinced that the project is highly essential not only providing better connectivity between Nation Highway and Kancheepuram Town, also gives following benefits.

    a) The available literature reveals that the fuel consumption occurs at two stages at level crossing. One at the time of gate closing time till the gate opening and other at the time of queue dissipation. At the time of gate closing, only 50% of the vehicles are turning off their engine. But at the time of queue dissipation a large amount of fuel is consumed from all the vehicles at that intersection. Flyover construction by easing the traffic movements would reduce this economic loss drastically.

    b) Noise produced by the road vehicles at the rail-road crossings is a big threat to the people living in the surrounding area and also to the people waiting at the intersection during each gate closing. Ease of vehicle movement by adopting flyover this impact is very much reduced.

    c) Quite a large amount of poisonous gas is emitted from the idling vehicles at rail-road crossings. Different types of vehicles emit different amount of poisonous gases. It will badly affect the environment. It also changes the

ambient air quality of that region. Abatement of Air pollution would be ensured due to the flyover construction because of easing and free for the traffic and avoiding the emission from the vehicle during idling at the level crossing.

2. Due to topographical and anthropodical constrains the selected alignment by flying over, the Konerikuppam Tank is only technically and economical viable solution for the perennial problem of traffic congestion at the entry of the Heritage Town Kancheepuram.

3. The Water Resources Department have given clearance for the flyover by forming Pillars and Decks system rather than earth filled Embankment and approach ramps. This structural arranged of flyovers with a Piers supports deck bridge over the water spread area have resulted in the following benefits,

4. The net occupation area of the bridge is only 162.86 Sq.m compared to the plan area of flyover of 12366.80 Sq.m. The net occupation area of flyover pillars is 162.86 sq.m compared to the overall water spread area of 1346794 Sq.m. which is only about 0.04 %.

5. In case, if Water Resources Department is permitted for embankment, the area of occupation will be 12366.80 sq.m and there will be a sizable loss of storage. By providing Pier and Deck system thought out the flyover the Tank is not being splitted into two portion also the storage capacity loss is negligible.

6. Even for the storage loss due to the pillars / Piers the Water Resources Department has given direction to the Highways Department three times of the

volume of this occupation, (i.e.) 7686 m^3 earth need to be desilted and used for road formation in the approaches so that the capacity of the tank will be enhanced rather than being reduced due to the new construction.

7. It is observed that the Highways Department have complied with all the conditions laid by Water Resources Department and the construction debris is been removed and used for filling purpose. During the deepening and formation of approaches the invasive species like Seema Karuvel (Prosopis Juliflora) and Neyvelie Kaatamanaku (Ipomoea Carnea) is said to be removed but again the same invasive species are cropping up which need to be removed by Water Resources Department and Highways Department in coordination time to time.

8. There is no hindrance in the Surplus flow from the tank, necessary culvert crossing also provided by the Highways Department.

9. It is also recommended to take water samples from the project area to assess the impact of the construction due to the said project implementation. Accordingly, water samples (bore water) from downstream as well as from the constructed site (surface water) was collected and analyzed for important parameters. The results showed that pH, chlorides, nitrates and alkalinity values are all in permissible range as per standards. Values obtained for D.O is in lower range which is due the anaerobic condition developed in the sample bottle and actually should be done at onsite.

Table 3 : Analysis report of Water sample from Konnerikuppam Tank, Lower Palar Basin Sub-Division, Kancheepuram.

Water Parameters	Bore water	Water spread area
pH	6.862	7.543
TDS	168.1 ppm	882 ppm
Salinity	0	0.9 ppt
Conductance (Micro Siemens per centimeter)	136.6 us/cm	1760 us/cm
Dissolved oxygen (DO)	1.944 mg/l	2.3 mg/l
Chemical oxygen demand (COD)	70.4 mg/l	44 mg/l
Chlorides	7.5 mg/l	42 mg/l
Nitrates	1.94 mg/l	2.304 mg/l
Color	Light brown	Colorless
Alkalinity	52 mg/l	286 mg/l

10. It is also observed that the Forest Department under Social Forest Scheme have planted Karuvel trees (Babool) in the entire water spread area. The foot print occupations of the tree are much higher, which need to be removed by the Forest Department because its physical occupation reduces the storage capacity than the flyover.

11. The evapo-transpiration loses is also detrimental to the surface water potential of the Konerikuppam Tank .The opinion and objection of the petitioner calling this irrigation tank, this man made irrigation tank / traditional water body as wet

land is not sustainable as per the wet land Act rule 2017, This is an Irrigation Tank meant for the purpose of conservation of rain water for irrigating the land, recharging the aquifer and for the community utilities. So the question of conducting mandatory **Environmental Impact Assessment study does not arise as per the law inforth.** It is also observed that the surplus course, there are illegal garbage dumping done by Social miscreant which need to be checked and averted by Kancheepuram Municipality Officials and the Water Resources Department may going for fencing of this area to avoid such illegal dumping activity.

Chapter 11 : Recommendation and Conclusion of Joint Committee

Based on the site inspection, deliberation in the Collector Chamber and by perusing the document presented by Water Resources Department and Highways Department, following recommendation and conclusion are made by the joint committee and submitted for the kind perusal of Hon'ble National Green Tribunal (NGT) to render justice and to pass orders deem to be fit.

1. The statement of the petitioner, saying that there is a substantial loss of storage capacity due to the flyover construction is not scientifically correct. The nature of construction suggested by Water Resources Department and executed by Highways Department is the open span pier and deck system which fly over on the water spread at a much higher level than maximum water level of the Konerikuppam Tank. This method of construction is superior compared to embankment formation which will physically occupy more water spread area as well as reduce the storage capacity. The area and volume of occupation by the present method of construction is very meager. But now both Department has ensured compensation by multi fold deepening and desilting than the loss of storage capacity by the pillars.

2. All the construction debris were scientifically cleared and used for filling purpose for the road. Hence, there is no environmental degradation or pollution to the tank bed. The invasive species like Neyvelie Kaatamanaku (Ipomoea Carnea) and Seema Karuvel (Prosopis Juliflora) need to be cleared with uprooting to ensure the natural ecosystem of the water body. As this is the man made water body for irrigation purpose calling this as wet land is not sustainable and Environmental Impact Assessment study is not mandatory.

3. It is found that the water samples collected from the project area do not reflect any presence of adverse effects. Copy enclosed

4. The Kancheepuram Municipality should ensure that no illegal garbage dumping, letting of sewage is being done by the social miscreant which may be ensured by providing CCTV camera and fencing of the Surplus Course area.

5. The joint committee considering the above points and necessity of road over bridge to Kancheepuram town being one of the major tourist spot, people from all parts of India and abroad visit this holy place on daily basis and they have to use the above road to reach their destination. Further the people living in this locality have to use this road to go to office, colleges, Schools, hospitals etc. This road serves as important connectivity to reach the Kancheepuram town and hence it is necessary to provide ROB at this location to avoid traffic congestion during closure of LC gate and to save time in reaching destination.

6. Hence, the joint committee submits for the kind perusal of Hon'ble National Green Tribunal (NGT) to render justice and to pass orders deem to be fit.

Dr.M.Tirunavoukkarasu,
Senior Principal Scientist-
NEERI

District Forest officer
Kancheepuram

Dr.S.Amalraj, Professor,
School of Environment,
Anna University

K.Karunagaran
Senior Technical Supervisor,
CPCB

Dr.K.G.Prijilal,
Research Officer,
MoEF&CC

M.Shanmugam, B.E.,
Executive Engineer, W.R.D

District Collector,
Kancheepuram

ANNEXURE-I – NOC FROM

ARCHOLOGICAL SURVEY OF INDIA

Fax 080-23409597 (Bangalore)
Ph 044-25670397 (Chennai)
E-mail: compauthority.tn@gmail.com

GOVERNMENT OF INDIA
ARCHAEOLOGICAL SURVEY OF INDIA
COMPETENT AUTHORITY (TAMILNADU)

Fort St. George,
Chennai – 600 009.

No. 36/NMA/CA (TN)/2015/ –521

Date: 6/2/2015

FORM IV

Grant of permission for undertaking construction in the regulated area of protected monument or archaeological site and remains declared as of national importance under the Ancient Monuments and Archaeological Sites and Remains Act, 1958.

Whereas, ***The Divisional Engineer, O/o Divisional Engineer (H), Projects Division I, G.S.T Road, Chennai 600 044*** has applied for permission for *Construction of Road over Bridge* in the regulated area of ***Piravathaneswara Temple*** *at* ***Kanchipuram Tq: Kanchipuram Dist: Kanchipuram,*** *TamilNadu* State and has undertaken to observe the provision of the Ancient Monuments and Archaeological Sites and Remains Act, 1958 (24 of 1958) and rules made there under, I, The *Competent Authority (Tamilnadu) & Regional Director (South), Archaeological Survey of India, Fort Saint George, Chennai* do hereby grant this permission on the basis of the recommendation of the National Monuments Authority, in accordance with the said rules to the said ***The Divisional Engineer, O/o Divisional Engineer (H), Projects Division I, G.S.T Road, Chennai 600 044*** for *construction of Road over Bridge* in Kanchipuram Tq: Kanchipuram Dist: Kanchipuram in the regulated area of ***Piravathaneswara Temple*** *at* ***Kanchipuram Tq: Kanchipuram Dist: Kanchipuram,***

The permission is granted subject to the provision of the Act and the Rules and is further subject to the following conditions, namely:

1) The Permission is granted for construction of road over bridge with the total height of 11.725 mtrs including railing, parapet etc.
2) Prior permission must be obtained from the Competent Authority for any further construction or increase in height.
3) A certificate should be furnish to the Competent Authority, on completion of proposed construction to the effect that it has complied with all conditions of the permission.
4) Comply with the heritage by-laws of the protected monument concerned as and when the bye-laws are approved.
5) The recommendation of the Authority and grant of permission by the Competent Authority is subject to the applicant obtaining other required clearances/NOCs from relevant agencies
6) The copy of the approved building plan with the approved area marked in orange and certified by NMA is enclosed.

The permission is not transferable and it shall be valid for a period of three years commencing from the date of receipt of the permission.

6/2/15

Signature of the Competent Authority (Tamilnadu)
Competent Authority (Tamilnadu)
& Regional Director (South)
Archaeological Survey of India

5/2/15

To,

The Divisional Engineer (H),
Projects Division I, G.S.T Road,
Chennai 600 044

Copy to:

1) The Member Secretary, National Monuments Authority, #24, Tilak Marg, New Delhi for information with reference to your letter No: F.No. 2-8/346/2014-NOC/NMA dated: 17.11.2014.
2) The Superintending Archaeologist, Archaeological Survey of India, Chennai –Circle, Fort St. George, Chennai – 600 009.
3) The Conservation Assistant, ASI, Kanchipuram Sub Circle, Vaikunda Perumal Temple Complex, North Mada Street, Kanchipuam- 605302

ANNEXURE-II – NOC FROM PUBLIC WORKS DEPARTMENT, WATER RESOURCES DEPARTMENT

DO
Cont

Abstract

ater Resources Department – Approval for proposed alignment of onstruction of Road Over Bridge in lieu of existing LC 29 at Km 72/10 of ennai - Ponnerikkarai – Kancheepuram road inside the Konnerikuppam tank ter spread area - Accorded – Orders – Issued.

Public Works (T.2) Department

.O. (Ms) No.84 **Dated.13.04.2017**
துன்முகி, பங்குனி 31
திருவள்ளுவர் ஆண்டு 2048.

Read:

G.O. (D) No. 200, Highways and Minor Ports Department, Dated. 07.12.2011.
G.O. (2D) No. 24, Highways and Minor Ports Department, Dated. 29.10.2013.
From the Divisional Engineer (H), Projects Division, Chengalpattu, Letter No.306/2013/ LC 29/JDO, Dated. 17.07.2013.
From the Divisional Engineer (H), Projects Division, Chengalpattu, Letter No.90/LC29/JDO/2014-2015, Dated.17.5.2016.
From the Chief Engineer, Water Resources Department, Chennai Region, Letter No.T1/11501/ 2013, Dated 4.8.2016.
From the Chief Engineer, Water Resources Department, Chennai Region, Letter No. DB/T5(3)/F-11501 (Ponnerikarai ROB)/2013, Dated 30.1.2017.

- - - - -

RDER:

In the letter fifth read above, the Chief Engineer, Water Resources epartment, Chennai Region, Chennai, has stated that the Divisional Engineer), Projects Division, Chengalpattu, in his letter third read above, has stated at the Work of "Construction of Four Lane Road over Bridge at Km 72/10 of ennai – Ponnerikarai – Kancheepuram Road in lieu of existing L.C. No. 29 ar Kancheepuram Railway Station" was administratively sanctioned vide the overnment Order first and second read above and has requested permission om the Water Resources Department for the above mentioned Road Over

Bridge, since the alignment lies across the Konnerikuppam – Ponneri tank under the control of the Water Resources Department.

2. The Chief Engineer, Water Resources Department, Chennai Region has stated that the site was inspected by the Officials of Water Resources Department and the following observations were made :

a) The proposed Road Over Bridge alignment by the Highways Department falls within the water spread area of the Konnerikuppam tank, which is under the maintenance of the Water Resources Department. The Konnerikuppam Tank is a rainfed (Non-system) tank and it is maintained by this Department. The registered ayacut of this tank is 371.60 ha. This tank is located on the western side of the Kancheepuram – Chennai road and on the southern side of the Chennai – Bengaluru National Highway Road. The hydraulic particulars of the Konnerikuppam – Ponneri tank are given below:-

Full Tank Level (FTL)	:	(+) 99.200 m
Maximum Water Level (MWL)	:	(+) 99.900m
Top Bund Level (TBL)	:	(+)101.950m
Number of Sluices	:	4 Nos.
Number of Surplus Arrangement	:	1 No.
Capacity of tank	:	3.26 mm^3
Length of tank bund	:	3660 m
Ayacut under this tank	:	371.60 hect.

b) This tank is located on the western side of the Kancheepuram – Chennai road nearly 2 Km away from the Kancheepuram Bus Stand. The Kancheepuram New Railway Station is also located at the left end of the bund of the Konnerikuppam tank. The work of "Construction of ROB in lieu of existing LC 29 at Km 72/10 of Chennai - Ponnerikkarai - Kancheepuram Road, near Kancheepuram new Railway Station" was administratively sanctioned vide the Government Order first read above. This road connects the National Highway with the Kancheepuram town. This Road Over Bridge Project, on completion, will help to ease traffic congestion in the Raiway level crossing. The total length of the Road Over Bridge is stated by the Highways Department as 927.330m, out of which 715 m is proposed in the water spread area of the tank over 32 nos. of Pillars.

As stated above, the proposed Road Over Bridge is very essential for public utility in the present fast increasing thick traffic congestion in this temple town.

On analyzing this proposal, the Water Resources Department sought for concurrence of the Highways Department regarding compliance of certain conditions laid down by the Water Resources Department. The Divisional Engineer (H), Projects Division, Highways Department, Chengalpattu (vide Letter fourth read above) has furnished necessary Compliance Statement in respect of the conditions of the Water Resources Department.

3. The Chief Engineer, Water Resources Department, Chennai Region, further stated that a joint inspection was carried out with the Chief neer, Highways Department with the field engineers on 20.1.2017 in nerikarai (Konnerikuppam) lake area. During inspection, the Chief neer, Highways Department, appraised the facts and sought for the same ment as already recommended. Finally, the Chief Engineer, Chennai ion, has decided to recommend a report for the same alignment with some tional conditions. He has also furnished the following additional details in rt of his proposal :

The proposed alignment of the Road Over Bridge is a fully elevated structure in the Ponnerikarai (Konnerikuppam) tank water spread area, with 32 piers which occupy only 0.004% of the tank's water spread area at FTL/MWL. Further, no land transfer or alienation will be involved in this proposal and as much as public money would not be wasted. Hence, there is no violation of G.O. (Ms.) No. 503, Revenue Department, dated 21.9.1999 and G.O. (Ms.) No. 186, Revenue Department, dated 29.4.2003.

The proposed Road Over Bridge is to be constructed only by a Government Organisation (i.e.) Highways Department.

This Road Over Bridge proposal was announced by the Hon'ble Chief Minister on the floor of Assembly under Rule-110 of Tamil Nadu Legislative Assembly Rules, during the budget session 2013-2014.

This Road Over Bridge is very essential for public utility in the present fact of increased thick traffic congestion in the temple town.

v) Originally, the alignment was proposed along the tank bund, which fa in the prohibited area of the Archaeological Survey of India (ASI) a they objected to the above alignment in the PWD tank to safeguard t ancient things as per the Ancient Monument and Archaeological Sites a Remains Act 1958 and Rules 1959 and requested for a differe alignment away from the prohibited area of the ASI. The Competen Authority (Tamil Nadu), ASI, has granted permission for construction o the Road Over Bridge in the regulated area of the temple on 6.2.201 This permission is not transferable and it shall be valid for a period of years only from date of issue of permission.

vi) The present alignment is only feasible which is just 220m away fro existing LC. This alignment will fall in the regulated area of the AS (between 100-300m radius) and this alignment was approved by the Alignment Committee comprising of 4 Expert Engineers on 2.5.2013. Hence, alternate alignment was studied without infringing into the Public Works Department Konnerikuppam tank. But the alignment avoiding Konnerikuppam tank will lead to increase in the length of the Road Over Bridge and cost will increase by 3 to 4 times. This alignment will also not be beneficial for the people living in this Kancheepuram town and the level crossing gate may not be closed and the very purpose will not be served.

vii) The irrigation structures of the tank ie. Sluices, surplus weir, supply channel, tank bund and ayacut will not be affected/disturbed at any cost which is ensured by the Highways Department.

viii) Since, the Highways Department is also one of the Government Departments, this is not an illegal encroachment and there is no possibility for any type of encroachment in future.

ix) As reduction in water storage capacity of the tank is very negligible (0.09%), there will be no threat to the perseverance of ecology due to construction of the Road Over Bridge in the tank water spread area. However, the storage capacity is proposed to be increased by 0.27% by desilting the tank foreshore area.

x) The Tamil Nadu Protection of Tanks and Eviction of Encroachment Act 2007 (Tamil Nadu Act 8 of 2007) Part-II Section -2 (12) states that "The

Government may in the Public Interest, alienate any part of the Tank Poramboke land, which is under the control of the Public Works Department without interfering with shortage of capacity and water quality.

This Road Over Bridge serves the public purpose by easing traffic congestion. The reduction in the storage capacity of the tank (0.09%) is very negligible, even though 3 times of loss of water quantity due to pier erection and pile cap shall be increased by removing the earth from the tank bed and utilizing for strengthening of bund. Also, the water quality of the tank will not be affected due to the above construction since, this Road Over Bridge is an elevated structure and only the piers are placed in the tank water spread area. Land alienation is not required, because the area occupied by the piers of Road Over Bridge is very less (0.004%). The irrigation supply of water from the tank will not be affected. Therefore, considering the general large public interest, the proposal for construction of Road Over Bridge alignment in the Konnerikuppam tank water spread area cannot be considered as encroachment in the water bodies.

Besides, the reduction in storage capacity as per calculation sheet is very meagre. As per the VAO's Statement, only 8% of tank's ayacut is now under cultivation (i.e. 29.728 hec against 371.60 hec) and a major portion has been urbanized. The net water storage capacity of 97.700 Mcft, against the original storage capacity 97.790 Mcft, is more than enough for irrigating 8% of the tank's present ayacut area. Now the tank serves for domestic purpose and as well as to recharge the ground water in the surrounding area. The reduction in the storage capacity shall be compensated by deepening & desilting the tank bed to an equal quantity and shall be used for strengthening the tank bund as directed by the field engineers.

4. The Chief Engineer, Water Resources Department, Chennai Region, therefore recommended for according approval for the proposed alignment Construction of Road Over Bridge in lieu of existing LC 29 at Km 72/10 of ennai - Ponnerikkarai - Kancheepuram Road near Kancheepuram New way Station, inside the Konnerikuppam tank water spread area, based on site condition and recommendation of the Superintending Engineer, Water ources Department, Palar Basin Circle, Chennai – 5 and the concurrence er of the Highways Department, subject to the certain conditions.

5. The Government, after detailed examination, have decided to accept the proposal of the Chief Engineer, Water Resources Department, Chennai Region. Accordingly, approval is accorded for the proposed alignment of construction of Road Over Bridge in lieu of existing LC 29 at Km 72/10 of Chennai - Ponnerikkarai - Kancheepuram Road (near Kancheepuram New Railway Station) inside the Konnerikuppam tank water spread area, subject to the following conditions:

CONDITIONS:

I. The bottom level of the Bed Block at the side abutments at entry and exit points of the proposed Road Over Bridge as well as over the Piers located in the Water spread area of Konnerikuppam Tank should be kept at a minimum level of (+)100.500 m, i.e., 0.60m above the MWL of Konnerikuppam tank.

II. The Road Over Bridge portion crossing Railway track between Pier No.P.22 to P23 (i.e CH 469.875 m to CH 541.875m) should be constructed as per the technical guidelines given by the Railway Department.

III. The foundation of the entire bridge pile cap should be placed below the tank water spread area bed level i.e. 0.60 m below the existing tank bed level.

IV. The Pile caps, foundation grade beam and other foundation structural components should be (0.60m) below the existing natural bed level of the tank's water spread area.

V. Two balancing culverts should be constructed of adequate size at the Ramp portion of the Road Over Bridge ends which lie between CH 33.357 to CH 131.680 and CH 843.692 to CH 908.629 to ensure free flow of water within the tank.

VI. 3 times the quantity of earth (3 x 2562 Cum = 7686 Cum i.e. as per calculation sheet enclosed) removed from the tank bed for providing pile cap, should be taken and the tank bund from LS 0 m to 650 m should be strengthened by the Highways Department as directed by the field engineers of Water Resources Department. The area for deepening by

removing the earth in the foreshore area of the tank for strengthening the tank bund should be done as directed by the field engineers of Water Resources Department.

During execution and completion of the Road Over Bridge Project, the construction waste in the water spread area should be cleared to ensure free flow of water in the tank.

During construction of Road Over Bridge, the irrigation structures of the tank (i.e) sluices, surplus weir and tank bund should not be disturbed in anyway and the hydraulic standards of the existing tank's channel, bunds, etc, should be maintained.

Since, the alignment of the exit portion of the Road Over Bridge lies across the surplus course of tank, suitable arrangements should be made at the exit portion of the Road Over Bridge in such a way that the flow in the surplus course of the tank is not affected at any cost and such arrangements should be got approved from the Executive Engineer, Water Resources Department, Lower Palar Basin Division, Kancheepuram, before commencement of the Work.

The entry and exit points of the Road Over Bridge which connect with the tank bund portion should be properly strengthened with retaining wall up to MWL (+) 99.900m with revetment with Cement Concrete block from MWL to TBL to avoid any breach for which an estimate will be prepared by the Water Resources Department after getting concurrence from the Highways Department and this will be carried out by the Water Resources Department for which the cost will be borne by the Highways Department.

Caution Deposit amount of Rs.10,00,000/- (Rupees Ten lakh only) should be deposited in favour of the Executive Engineer, Water Resources Department, Lower Palar Basin Division, Kancheepuram, before commencement of the Work. This deposit amount will be refunded only after completion of construction of the ROB, if all the conditions laid upon are fully satisfied.

Proper clearance should be ensured for movement of machinery while carrying out the works in the tank.

XIII. The structures to be executed inside the tank (piers) should not be a hindrance to the movement of machinery and for carrying out the work in the tank.

XIV. Inspection by the Water Resources Department Officials at the site at any time during execution of the above work, should never be objected.

(BY ORDER OF THE GOVERNOR)

S.K. PRABAKAR
PRINCIPAL SECRETARY TO GOVERNMENT

To
The Engineer-in-Chief, Water Resources Department and
Chief Engineer (General), Public Works Department, Chennai -5
The Chief Engineer, Water Resources Department, Chennai Region, Chennai-5
The District Collector, Kancheepuram.
The Principal Accountant General (A&E/Audit I/E&RSA), Chennai-18
Copy to
The Principal Secretary to Hon'ble Chief Minister, Chennai -9
The Highways and Minor Ports Department, Chennai-9
The Revenue Department, Chennai -9
The Divisional Engineer (H), Projects Division, Chengalpattu.
Sf/Sc

//Forwarded by Order//

Section Officer

17.4.2017

ANNEXURE -III – EXTRACT OF WETLAND (CONSERVATION AND MANAGEMENT) RULES 2017

2020

Guidelines for implementing
Wetlands (Conservation and Management) Rules, 2017

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
GOVERNMENT OF INDIA

Contents

I.	Guidelines Purpose and Scope	2
II.	Wetlands to be regulated	2
III.	Wetlands Authorities	5
IV.	Preparing a list of wetlands	8
V.	Delineating wetlands	9
VI.	Delineating zone of influence	10
VII.	Wetlands wise use and ecological character	11
VIII.	Prohibited activities in a notified wetland	13
IX.	Developing a list of activities, to be regulated in a notified wetland:	13
X.	Developing a list of activities permitted in a notified wetland	15
XI.	Registration of wetlands	15
XII.	Account of pre-existing rights and privileges in a notified wetland	15
XIII.	Notifying wetlands	16
XIV.	Integrated Management Plan	17
XV.	Violations and penal provisions	20
XVI.	Portal for information sharing	21
Annexes		
Annex 1:	Format for compiling list of wetlands	22
Annex 2:	Format for preparing Brief Document	23
Annex 3:	Format for draft notification of wetlands under Wetlands (Conservation and Management) Rules, 2017	31
Annex 4:	Steps and format for developing Integrated Management Plan	35
Annex 5:	Format for reporting status of notified wetlands	51

I. Guidelines Purpose and Scope

1. The Ministry of Environment, Forest and Climate Change (MoEF&CC) has notified **Wetlands (Conservation and Management) Rules, 2017** (hereinafter **Wetlands Rules**) under the provisions of the Environment (Protection) Act, 1986 as regulatory framework for conservation and management of wetlands in India. These guidelines have been drafted to support the State Governments / Union Territory (UT) Administrations in the implementation of the Rules by providing guidance on:

   a) Preparing a list of wetlands in the State / UT
   b) Identifying wetlands for notification under Wetlands (Conservation and Management) Rules, 2017
   c) Delineating wetlands, wetlands complexes and zone of influence
   d) Preparation of Brief Document
   e) Determining 'wise use' and ecological character
   f) Developing a list of activities to be regulated and permitted
   g) Developing an Integrated Management Plan
   h) Constitution and operational matters of the Wetlands Authorities
   i) Overlapping provisions.

2. These guidelines were drafted by a committee constituted by the MoEF&CC vide OM dated August 10, 2018. The committee comprised Mr U.A.Vora (former CCF Wildlife, Government of Gujarat), Dr Arvind Kumar (President, India Water Foundation), Dr B.C. Jha (Former Director (Wetlands), Central Inland Fisheries Research Institute), Dr P. S. N. Rao (Director, School of Planning and Architecture), Dr Afroz Ahmad (Member, Environment and Rehabilitation, Narmada Control Authority) and Dr Ritesh Kumar (Director, Wetlands International South Asia). The committee met on five occasions at MoEF&CC, New Delhi for the said purpose, and submitted final version of the guidelines to the Ministry on December 5, 2018. The draft guidelines were subsequently sent for comments to all State Governments / UT Administrations, and have been finalized after due consideration of the comments received. The Committee immensely benefitted from the discussions held with Ms Manju Pandey (Joint Secretary). The Committee also acknowledges the support received from Ms Rita Khanna (Scientist 'F'), Dr M. Ramesh (Scientist 'E'), Mr Chandan Singh (Scientist 'D'), Dr Anu Chetal (Research Assistant) and Ms Pallavi Mukherjee (Research Assistant) during the guidelines preparation process.

II. Wetlands to be regulated

3. The provisions of Wetlands Rules apply to:

   a) Wetlands designated by the Government of India to the List of Wetlands of International Importance under the provisions of the Convention on Wetlands (Ramsar Convention). [Ref. Rule 3 (a) of Wetlands Rule]
   b) Wetlands notified under the rules by the Central Government, State Government and UT Administration. [Ref. Rule 3 (b) of Wetlands Rule]

4. All wetlands, irrespective of their location, size, ownership, biodiversity, or ecosystem services values, can be notified under the Wetlands Rules, except:

   a) River channels;
   b) Paddy fields;
   c) Human-made waterbodies specifically constructed for drinking water purposes;
   d) Human-made waterbodies specifically constructed for aquaculture purposes;
   e) Human-made waterbodies specifically constructed for salt production purposes;
   f) Human-made waterbodies specifically constructed for recreation purposes;
   g) Human-made waterbodies specifically constructed for irrigation purposes;
   h) Wetlands falling within areas covered under the Indian Forest Act, 1927; Forest (Conservation) Act, 1980; State Forest Acts and amendments thereof;
   i) Wetlands falling within areas covered under the Wildlife (Protection) Act, 1972 and amendments thereof;
   j) Wetlands falling within areas covered under the Coastal Regulation Zone Notification, 2011 and amendments thereof.

   [Ref. Rule 2 (g) and Rule 3 of Wetlands Rules]

5. Human-made wetlands are defined as wetlands that are planned, designed and operated to meet a specific purpose (such as providing water for irrigation, producing fish through culture operations, producing salt, recreation, preventing salinity intrusion, flood control etc.). Only those human-made wetlands that have been built for purposes, mentioned at paras 4c) – 4g) above, are excluded from notification under these Rules.

6. Natural wetlands, partly or wholly used for purposes as mentioned at 4c) – 4g), attract the provisions of the Wetlands Rules.

7. Wetlands designated as Ramsar Sites may be notified under the Rules as per the process mentioned in paragraphs 57-65, even when partly or wholly overlapping with areas covered under the Indian Forest Act, 1927; Forest (Conservation) Act, 1980; State Forest Acts and amendments thereof; Wildlife (Protection) Act, 1972 and amendments thereof; Coastal Regulation Zone Notification, 2011 and amendments thereof. Regulations for parts of wetlands overlapping with 4h-4j (supra) will, however, be as per the corresponding regulatory framework. Ramsar site areas, not covered under any of the overlapping laws and rules, will attract the provisions of the Wetlands Rules (Refer illustration 1 below).

ANNEXURE – IV – WATER QUALITY RESULTS

राष्ट्रीय पर्यावरण अभियांत्रिकी अनुसंधान संस्थान
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्)
चेन्नई क्षेत्र प्रयोगशाला, एमआईआर मद्रास कॉम्प्लेक्स, तरामणी पी.ओ.
चेन्नई - 600 113, भारत

NATIONAL ENVIRONMENTAL ENGINEERING RESEARCH INSTITUTE
(Council of Scientific & Industrial Research)
Chennai Zonal Laboratory, CSIR Madras Complex, Taramani P.O.
Chennai - 600 113, India

Analysis report of water sample from Konnerikuppam Tank, Lower Palar Basin Sub-Division, Kancheepuram.

Date: 17/08/2021

Water Parameters	Bore water	Water spread area
pH	6.862	7.543
TDS	68.1 ppm	882 ppm
Salinity	0	0.9 ppt
Conductance (Micro Siemens per centimeter)	136.6 us/cm	1760 us/cm
Dissolved oxygen (DO)	1.944 mg/l	2.3 mg/l
Chemical oxygen demand (COD)	70.4 mg/l	44 mg/l
Chlorides	7.5 mg/l	42 mg/l
Nitrates	1.94 mg/l	2.304 mg/l
Color	Light brown	Colorless
Alkalinity	52 mg/l	286 mg/l

(M. Thirunavoukkarasu)

डॉ. एम. तिरुनावक्करसु
Dr.M.Thirunavoukkarasu
प्रभारी वैज्ञानिक Scientist-In-Charge
सीएसआईआर - नीरी, चेन्नै ज़ोनल केंद्र
CSIR-NEERI, Chennai Zonal Centre
सीएमसी CMC, Taramani तरमणी
चेन्नै Chennai-600113

फोन/Phone: + 91 4422544660 फ़ैक्स/Fax: + 91 4422541964
E-mail: mt_arasu@neeri.res.in Mobile: +919489289912