

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

Application No.272 of 2024 (SZ)

K. Saravanan s/o kasinathan

Aged about 37 years

30, ururkuppam, Besant Nagar, Chennai – 90

- Applicant

Vs

1. Tamil Nadu Coastal Zone Management Authority

By its Member Secretary

1, Jennis Road, Panagal Building

Ground Floor, Saidapet, Chennai – 600 015

2. The National Highways Authority of India

Rep by its Project Director

Sri Balaji Towers, 54-28, Butt Road, near kathipara Junction

South Phase, SP Industrial Estate Area, Parangi malai

Guindy, Chennai, Tamil Nadu – 600 016

- Respondents

Status report filed by the 2nd Respondent

I, M.S. Chaithanya son of Mr. M. Thejendranath, Hindu, aged about 41 years, presently working as Project Director, Project Implementation Unit (PIU) – Chengalpattu, having office at No. 41/8A, 2/285, Second Floor, Velachery – Tambaram Main Road, Santhoshapuram, Medavakkam, Chengalpattu District, do hereby solemnly affirm and sincerely state as follows:

एम.एस.चैतन्या | M.S. Chaithanya
परियोजना निदेशक | Project Director
प.का.ई. चेंगलपट्टु | PIU Chengalpattu

1. I am serving as Project Director, Project Implementation Unit - Chengalpattu, National Highways Authority of India and I am conversant with the facts of the case from the records available in the office as such I am Competent to swear this status report on behalf of 2nd Respondent.

2. I submit that the existing ECR connecting Chennai & Puducherry was initially designated as State Highway (SH-59). The stretch was developed as 2 Lane with Paved Shoulder / 2 Lane by State Government of Tamil Nadu through its corporation M/s. TNRDC

3. I humbly submit that during execution of works by M/s SPL ECR Highway Pvt., Ltd., this petition is filed before NGT Southern Zone, Chennai Bench seeking to

a) direct the 2nd Respondent to remove all the soil and other materials dumped inside the Yedayanthitu estuary and restore the area to its original condition.

b) direct the 2nd Respondent to construct a bridge on stilts across the entire width of the estuary, and not fill in/create embankments in CRZ IB and IVB areas as per the approved CZMP

c) direct the 2nd Respondent to avoid the area marked as CRZ in aligning the bridge, and restore the area destroyed by clearing mangroves and land filling.



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d) direct the 1st Respondent to take action against the 2nd Respondent for violation of CRZ notification 2011,

4. I humbly submit that the following the directions of Hon'ble National Green Tribunal, Southern Zone, Chennai during hearing on 07.11.2024 to examine whether the bridge can be constructed on stilts across the entire width of the estuary without creating an embankment in the water spread area. 2nd Respondent has taken up hydraulic modelling to analyse water flow within the estuary during flooding events through DPR Consultant M/s. Aarvee Engineering Consultants Limited.

1. The Consultant conducted detailed hydrological analysis based on the field investigation and data collected from various sources.

The detailed report is submitted herewith for kind perusal.

2. Based on the detailed analysis, it is reported that "2D hydrodynamic flood modelling approach has been implemented during the hydraulic modelling exercise based on the readily available data. The 2D hydraulic modelling approach has also been adopted to represent the floodplain flow better in the model for scenario comparisons.

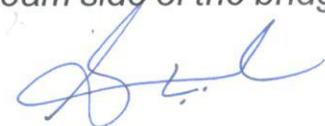


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परिचालना निदेशक | Project Director

The hydraulic performance and the flooding mechanism of the river have been carefully reviewed. The results from the 2D hydraulic modelling exercise have been analysed carefully across the whole domain. The 2D model implemented can be considered to be fit for the purpose of flood mapping under the given conditions and for scenario comparisons. The embankment alignment and cross drainage structures were implemented in the hydraulic models and therefore the assessment of effect of these structures is undertaken.

There is no significant increase in water levels due to the reduction in stream width at the proposed bridge location. The existing natural stream has a width of approximately 250 m, but it discharges into the Kallivelli Tank, which has a considerably wider cross-section of about 1 km. As a result, the upstream flow tends to accumulate before the bridge, with the tank extending approximately 3.5 km upstream from the bridge location. The proposed bridge, with a waterway width of 400 m, is adequately sized to safely convey the flow from the 250 m wide stream, without causing adverse upstream impacts.

Additionally, the bridge location experiences backwater effects from the sea. The distance from the downstream side of the bridge



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to the sea is approximately 6 km. The backwater influence from sea tide extends through a 200 m wide opening at the sea mouth.

The flow from this 200 m opening tends to accumulate at the bridge location due to the presence of the upstream pond (Kallivelli Tank), which acts as a storage area, with its width varying from 1 km to 500 m in the downstream direction.

This hydraulic interaction was analysed by applying the observed tide levels combined with storm surge conditions as the downstream boundary input.

The hydraulic analysis concludes that reducing the natural tank width from 1 km to 400 m at the bridge section does not result in any significant rise in upstream water levels or pose a flood risk due to the construction of the new bridge.

The Cost of Widening the Existing 2lane bridge to four lane by construction of proposed 2 Lane bridge parallel to existing bridge of length 396m is Rs 20.05 Cr, whereas construction cost of new 4 lane bridge of length 1200m is Rs 121.47 Cr. which is highly uneconomical as compared to widening.

Therefore, widening of existing 2 lane bridge of length 396m to four lane configuration which is sufficient to Cater Discharge at



bridge location without impacting estuary is recommended for implementation keeping in view the techno economic feasibility.

5. I humbly submit that, based on the detailed review of various features in the vicinity of bridge location, it is to submit that construction of structure in lieu of embankment across the entire width of the estuary causes following problems.

- a. The existing embankment prevents the land behind it from direct flooding. In the absence of the embankment, these areas may become inundated.
- b. The existing embankment are approaches to 2lane bridge in case of continuous structure for entire width, these approaches needs to be demolished resulting lack of connection on the highway and there is no alternate route available in the vicinity for diversion of traffic.
- c. Land acquisition at this location has been done based on geometrics finalized as per existing approaches to the Major Bridge. In case of continuous structure for full width, entire geometrics needs to be redone resulting acquisition of considerable extent of lands on both sides and shifting of



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Sri Balaji Towers, 54-28,
Butt Road, near kathipara
JunctionSouth Phase, SP
Industrial Estate Area,
Parang malai Guindy,
Chennai, Tamil Nadu – 600
016 - Respondents

**Status report filed by the
2nd Respondent**

M/s.S.R.Sumathy
Advocate
G3, Singapore Plaza
164, Linghi Chetty st
Chennai.600001