

Minutes of the 119th SEAC Meeting held on 09th August 2018

<p>119-F. 6474/2017</p>	<p>Proposed project of Forming Chennai Peripheral road connecting Poonjeri junction in Mahabalipuram to Ennore Port (via) Singaperumalkoil – Sriperumbudur – Thiruvallur – Tamaraipakkam – Periyapalayam – Pudukkottai and Kattupalli by M/s. Highways Department, Government of Tamil Nadu – Activity 7(f) – Infrastructure and Miscellaneous Projects + CRZ – Issue of EC - Regarding</p>
	<p>The Proponent, M/s. Highways Department, Government of Tamil Nadu applied for ToR for conducting EIA for the proposed project of Forming Chennai Peripheral road connecting Poonjeri junction in Mahabalipuram to Ennore Port (via) Singaperumalkoil – Sriperumbudur – Thiruvallur – Tamaraipakkam – Periyapalayam – Pudukkottai and Kattupalli on 24.11.2017.</p> <p>On scrutiny of the proposal, certain additional details were called vide this office letter dated: 04.12.2017. The proponent furnished the details on 03.01.2018.</p> <p>The proposal was placed in the 102nd SEAC meeting held on 01.02.2018. The proponent made a presentation about the project and the members of the SEAC interacted with the proponent regarding the project scope and appropriate environmental management measures needed. The salient features of the project are as follows:</p> <ol style="list-style-type: none"> 1. The peripheral road will start at Ennore Port and ends at Poonjeri Junction (km 56/800 of ECR) in Mahabalipuram. Proposed road will connect all radial roads of Chennai. Project road is formed by improving existing road and construction of missing links. Length of the proposed peripheral road will be around 133.380 km which is split into 5 sections. <p>Out of a total length of alignment of 133.38 km, length of the existing alignment is 35.4km and the length of new alignment is 97.98 km. Since the new alignment is of larger length (about 3 times the existing alignment</p>

MEMBER SECRETARY, SEAC

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Minutes of the 119th SEAC Meeting held on 09th August 2018

	<p>length), the SEAC treated this project as a new highway project requiring EIA study.</p> <ol style="list-style-type: none">2. The proponent informed that the project is expected to lead to cutting of about 4797 trees. Out of which 806 trees will be felled and remaining 3991 trees with girth size below 900mm will be transplanted.3. In addition, there have been issues related to resettlement and rehabilitation, highway passing through forest, highway passing through agricultural land, etc.4. The SEAC members suggested that the EIA study should be comprehensive covering all aspects of the possible impacts during the construction as well as operation of the road project. In order to gain firsthand information about the baseline environmental status of the alignment, the SEAC decided to have an inspection of the proposed alignment before issuing the ToR. <p>As per the order Lr. No. SEAC-TN/F.No.6474/2018 dated: 01.02.2018 of the Chairman, SEAC, a Technical Team comprising of the SEAC Members was constituted to inspect and study the field conditions in the proposed project of Forming Chennai Peripheral road.</p> <p>The technical team conducted the inspection on 06.02.2018 and submitted the report on 07.02.2018 to the Chairman, SEAC – TN.</p> <p>The technical team report was placed in the 103rd SEAC meeting held on 23.02.2018. The SEAC considered the report of the technical team.</p> <p>The following are the salient features as noted in the report.</p> <ol style="list-style-type: none">I. Various possible environmental impacts scenarios:<ol style="list-style-type: none">1. Impact on the nearest habitations importantly Social impact Assessment.<p>The road traverses the following villages includes Ambal Nagar, Athikulam, Bhakthavachalam Nagar, Chatram, Erikarai, Gangaianman Nagar, Kelanur, Kurampakkam, Nazrath, Nandiampakkam, Nallur,</p>
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Neythavoyal, Pancheti, Pattamandhri, Parasangapuram, Punnapakkam , Pollivakkam, Perumaleri, Pollivakkam, Puthur, Pungamedu, RamakrishnaNagar , Karanai, Keelapakkam, Renga Nagar, Thaneer Kulam, Thozhuvur, Thodukadu, Thinanaipakkam, Thiruvallur, Sriperumpudur, Singamperumalkoil, Sirukundram, Siruvakkam, Vadakampattu, Valliyur and Vengathur.

2. Forest Clearance- Impact on the ecology of the forests.

The following forest areas covered for 10.2 ha for a length of 1.96 Km :

1. Mannur - 0.28(Ha) - 200 m
2. Sengundram - 8.09 (Ha) -1.45 Km
3. Kondamangalam - 1.86 (Ha) -310 m

3. Clearances of existing buildings- Social impact Assessment:

The project affects nearly 948 buildings, out of which 598 were residential, 152 commercial, 94 were residence cum commercial assets, 7 of agriculture allied assets, 14 industrial use and 83 of them with loss of other assets such as compound wall and shed.

Out of the 948 affected building, 819 of the assets will be cleared due to the project. (Remaining 129 assets will remain with minor loss).

4. Stream crossings-Impact on the hydraulics and geology of the streams.

The major streams includes the Kosasthalaiyar River, Cooum River, Buckingham Canal and Poondi- Chembarapakkam Link canal . (15 other minor canals).

5. Influx of people to an area temporarily and permanently- Social impact Assessment.

1203 Project affected families were likely to be affected due to the project. Out of which 1027 families were likely to be displaced.

6. Agricultural land- Impact on agricultural product and social impact assessment.

Totally 800.59 ha. of agricultural land will be affected.

7. Impact of Construction/Demolition on noise. Similarly, the impact of

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CHAIRMAN, SEAC

Minutes of the 119th SEAC Meeting held on 09th August 2018

	<p>blasting or piling on Noise.</p> <p>8. Impact of development of supporting facilities or ancillary developments on environment.</p> <p>9. Land use changes which will have impact on the environment.</p> <p>10. Areas protected- Cultural, Wetlands.</p> <p>89 Common Property Resources (CPRs) / cultural properties are likely to be affected due to the project. 20 Temples, 4 Churches, 2 Schools, 2 burial grounds, 2 crematorium grounds, 2 Tombs, 25 pump houses, 5 water tanks, 3 OHTs, 11 Bus shelters, 12 Government buildings, well and a dispensary were likely to be relocated.</p> <p>11. CRZ- impact on the Coastal ecosystem.</p> <p>The project starts and end points are 2Km from Bay of Bengal. Part of the section falls between HTL of creek and 100 m setback from HTL of creek of Kosasthalaiyar river.</p> <p>12. Impact on major water bodies</p> <p>The major water bodies located along the project corridor includes Thanneerkulam Tank, Sriperumpudur Tank, Senkundram Tank , Sirukundram Tank and Manapathi tank.</p> <p>13. Trees along the alignment of the road.</p> <p>A total of nearly 4800 trees have been identified in the five sections of the proposed Peripheral road. These trees are of different species and different girth size. Some trees are in the Patta land and some others are on the Government Land.</p> <p>The SEAC directed the proponent to prepare EIA keeping in mind the above aspects of possible impacts.</p> <p>II. Specific recommendations to minimize the adverse impact on Ecology</p> <p>Specifically, the Technical Team recommends the following observations for the consideration of the proponent while preparing the Environmental Management Measures as part of the EIA report.</p> <p>1. The justifications for selecting the site for proposed cross bridge</p>
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(fly over) at the commencement point of the road project near Ennore Port Terminal shall be given in detail.

The commencement of road project falls within the CRZ zone and also crossing across Buckingham Canal, fragile mangroves and existing salt pans. The construction of the roads as per the present alignment at this site will cause damage to the mangroves because the piers will be constructed in the mangroves zone. Similar is the case with the Salt pans even though they are not functional at present. The proponent should consider alternative proposals in order to save the ecology (Mangroves & Salt Pans). The alternatives could be avoiding road laying across the mangroves and salt pans by choosing an alternate alignment for the road. For example, NCTP road at about 3 KM from the present chosen site can be connected to the new road at a convenient point. The proponent should seriously consider this option for implementation. The proponent is directed to critically analyse this option and evaluate the pros and cons of the implementation of this recommendation technically and present the details of such an evaluation in the EIA report.

2. In Section IV, a part of the road stretch from Oragadam to Singaperumalkoil (3.5 Km) passes through Vattambakkam RF (700 m) and Appur RF (2.8 Km). This stretch of the road is now being laid by TNRIDC. About 95% of the road work has been completed. After the full completion, the road stretch will be handed over to the Highways Department.

The Technical team observed that in this stretch of the road, the tree planting has not been done professionally in the medians and also at the sides, resulting in poor growth of saplings even after so many years.

MEMBER SECRETARY, SEAC


CHAIRMAN, SEAC

Minutes of the 119th SEAC Meeting held on 09th August 2018

	<p>The suggestions are as follows:</p> <ol style="list-style-type: none">a. Pits of size 1 m X 1 m must be dug; filled with red soil, silt and farmyard manure. Indigenous Saplings of minimum 2 m height should be planted and watered for a period of minimum 2 years. Tree guards should have a minimum height of 2 m.b. Species like Syzygium cumini (Naval), Mimosa elengi (Mahilam), Calophyllum inophyllum (Pinnai), Ficus bengalensis (Alam), Ficus retusa (Athi), Ficus religiosa (Arasa maram), Alstonia scholaris (Palai) can be planted along the sides of the road.c. Medians can be planted with Nerium (Arali). <ol style="list-style-type: none">3. Section V passes through Kondamangalam RF and Sengundram RF. An ecological survey should be done to cover all the fauna and flora of these forests, especially about the presence of endangered fauna, flora and presence of Schedule I animals.4. In the EIA study, the Restoration plan for the existing endangered vegetation, if any; likely to be affected during the construction of road project shall be prepared.5. The possibilities of constructing the haulroad in closer proximity to the source of raw material (crushed stones) should be explored for minimizing the environmental impacts caused during the transportation and handling of the same.6. Geology and drainage pattern of the area (Kosasthalaiyar river, Coovam river, Kannigaipair, Tamaraikulam, Thaneerkulam and Sriperumpudur tank) should be studied in detail with an objective of understanding the impact, if any, of the road project on the drainage patterns.
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CHAIRMAN, SEAC

7. The measures recommended for saving the trees: The proponent has furnished the following proposal related to the availability of trees and the method of saving the trees, etc along the proposed road.

Description	Girth Size				Mitigation Plan		Species
	a)Girth above 300 mm and upto 600 mm	b)Girth above 600 mm and upto 900 mm	c)Girth above 900 mm and upto 1800 mm	d) Girth above 1800 mm	No. Of trees which shall be transplanted and saved	No. Of trees which will be felled	
	1	2	3	4	(1+2)	(3+4)	
Section I	125	281	22	159	406	181	Neem, Eucallyptus Casuarina
Section II	180	293	17	1	473	18	Coconut, N Casuarina, Tamarind
Section III	897	816	181	380	1713	561	Mango, N Tamarind, Banyan, Eucallyptus
Section IV	Sriperumbudur on NH 4 to Singaperumalkoil on NH-45 (23.80 KM) alaid by TNRIDC (95% completed)- This road will be as such used i Peripheral road. No tree cutting is involved in this section.						
Section V	442	957	37	9	1399	46	Neem, Tamarind, Konrai, Coconut, Casuarina
Total	1644	2347	257	549	3991	806	-

Note: Compensatory planting at the rate of 1:10 ratio is proposed. For cutting of 806 trees, the project shall plant 8060 plants in & around the project corridor.

As recommended by the Technical Team, the SEAC directs the proponent to carry out the following measures for saving the trees available in the proposed alignment of the Peripheral road.

MEMBER SECRETARY, SEAC

CHAIRMAN, SEAC

Minutes of the 119th SEAC Meeting held on 09th August 2018

- a) All trees should be retained as such without felling as far as possible. If felling of trees of species like Neem, Tamarind and Banyan cannot be avoided then all the ecologically and aesthetically important trees like Neem, Tamarind and Banyan irrespective of their girth size ranging from 300mm to 1800 mm and above, should be transplanted.
- b) In the road stretch between 26/8 Km to 38/9 Km along the Singaperumalkoil Sriperumbudur Thiruvallur Redhills road, the Technical team observed that a large number of huge size trees (totally 561) align the road on both sides. As per the current proposal of the proponent, these trees either will be transplanted or felled. However the Technical team felt that ecologically it is a must that the trees in this stretch should be preserved as such. To realise, the proponent should consider alternatives like slightly shifting the alignment of the road to accommodate the trees.
- c) As proposed by the proponent 8000 trees of ecologically important species should be planted on the newly formed road sides.
- d) The proponent should not disturb the ecologically sensitive areas like mangroves.

The SEAC recommended to SEIAA for consideration of issue of ToR to the proponent M/s. Divisional Engineer (Highways), Highways Department, Construction and Maintenance, Chengalpattu, Tamil Nadu for the proposed project on forming Chennai Peripheral road.

The Recommendation of SEAC was placed in the 276th SEIAA meeting held on 05.03.2018 and the SEIAA issued ToR vide Letter No. SEIAA-TN/F.No.6474/SEAC-CII/6(b)/ToR-305/2017 dated 05.03.2018.

The proponent prepared the EIA report and submitted to SEIAA-TN 02.08.2018. The EIA report was placed in the 118th SEAC meeting held on 03.08.2018. The proponent made a presentation about the project proposal and environmental impact and environmental management measures. The SEAC members interacted with the proponent. The members of SEAC noted one of the critical deficiencies in terms of the number of trees that are proposed to be cut and transplanted. The members directed the proponent to reduce the cutting of trees considerably. Also, the proponent was directed to revise the EIA report in line

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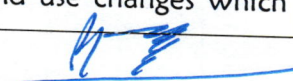

CHAIRMAN, SEAC

with the directions given in the ToR with quantification and relevant details.

The proponent submitted the revised report to SEIAA-TN on 09.08.2018 which was placed in the 119th SEAC meeting held on 09.08.2018. The SEAC members noted the following features related to the environmental impact assessment and management:

1. Length of new alignment proposed (Kilometers) – 97.47km; Width of the new alignment proposed (Meters) – 100m for 24.60 km and 60m for 72.871 km; Length of the existing alignment proposed to be strengthened / widened (Kilometers) – 35.400 km; Width of the existing alignment proposed (Meters) – 60m for 23.8 km, 30m for 9.6km and 15m for 2.0 km; Width of the existing alignment after widening proposed (Meters) – 60m; Total length of the alignment (Kilometers) – 132.871 km
2. Number of villages through which alignment passes – 79 villages; Length of new alignment proposed in agricultural land – 77km; Width of new alignment proposed in agricultural land – 100m for 18km & 60m for 59km; Length of new alignment proposed in forest area – 1.96km; Width of new alignment proposed in forest area- 60m.
3. The findings of the baseline environmental status on land (topography, geology, soil quality, land use pattern), meteorology (Temperature, Relative Humidity, rainfall, wind speed, wind rose), air (ambient air quality- SPM, PM₁₀, PM_{2.5}, SO₂, NO_x), water (surface water, groundwater), noise level, ecological environment (flora & fauna), socio economic conditions (demographic profile and households condition) have been presented.
4. The guidelines issued for EIA preparation by SEAC - Impact on the nearest habitations importantly social impact assessment, Forest Clearance- Impact on the ecology of the forests, Clearance of existing buildings- Social impact assessment, Stream crossings- Impact on the hydraulics and geology of the streams, Influx of people to an area temporarily and permanently- Social impact Assessment, Agricultural land- Impact on agricultural product and social impact assessment, Impact of Construction/Demolition on noise. Similarly, the impact of blasting or piling on Noise, Impact of development of supporting facilities or ancillary developments on environment, Land use changes which

MEMBER SECRETARY, SEAC


CHAIRMAN, SEAC

Minutes of the 119th SEAC Meeting held on 09th August 2018

will have impact on the environment, Areas protected – Cultural, Wetlands, CRZ-impact on the coastal ecosystem, Impact on major water bodies, trees along the alignment of the road – are part of the discussion in the report.

5. The public hearings conducted in Thiruvallur and Kancheepuram districts, several participants have expressed their concern regarding the alignment of the road being routed through agricultural land and habitations. They have suggested that alternate alignments be thought of to avoid agricultural land habitations being affected. Another main concern expressed is that road is laid at a higher level thereby passing water stagnation on both sides, which has got its own adverse implications.
6. In the public hearing people expressed about increased pollution especially air pollution due to the construction and operation of the project.
7. Initially the proponent proposed to retain 2168 trees out of 4797 trees in the 5 sections and to transplant the remaining 2629 trees. The SEAC had apprehensions about the transplantation since most of the trees to be transplanted were of larger in size. Hence SEAC directed the highways department to look into the ways of retaining most of the trees, as the trees were very old and especially in section 5 they were forming a thick canopy for about 10km. In response, the highways department has modified its proposal and in the revised proposal, as many as 3817 trees (80% of the existing trees) will be retained and only 980 trees will be transplanted. In addition to this, 20,000 trees (indigenous species) will be planted along either side of the road.
8. The road alignment passes through Mannur Forest -0.28 Ha, Sengundram Forest- 8.09 Ha, Kondamangalam Forest- 1.86 Ha, Total 10.23 Ha for a length of 1.96km forest land will be lost. As a compensation, 20.46 Ha of govt. land in Seyyur Taluk will be given to forest department for compensatory afforestation. The highways department will also meet the cost of afforestation development and maintenance for a minimum of 10 years.
9. Near section 5, of the proposed road, connecting Mahabalipuram and Singaperumal Koil, rocky hills with a maximum altitude of about 180m and covered by vegetation are seen. It is observed from the report that the project road will pass through flat land adjoining the hill.

MEMBER SECRETARY, SEAC


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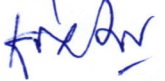

Based on the details presented in the EIA report and discussion with the project proponent, the SEAC decided to recommend the proposal of proposed project of Forming Chennai Peripheral road connecting Poonjeri junction in Mahabalipuram to Ennore Port (via) Singaperumalkoil – Sriperumbudur – Thiruvallur – Tamaraipakkam – Periyapalayam – Puduvoyal and Kattupalli by M/s. Highways Department, Government of Tamil Nadu to SEIAA-TN for the grant of Environmental Clearance subject to the following conditions in addition to the normal conditions:

1. Permission from the various statutory authorities such as CRZ, TNPCB, Forest Dept., Dept. of Geology & mines , Petroleum and Explosives Safety Organisation (PESO), labour, Agriculture, Archaeology Dept, etc should be obtained as applicable before the commencement of the project operation.
2. Environmental monitoring plan should be implemented scrupulously.
3. Road safety audit needs to be conducted with a view of improvising the safety and environmental aspects for the entire length of the road especially near the habitations.
4. Rehabilitation for the people for the loss of property and displacement needs to be implemented as per the recommendations of the Social Impact Assessment report.
5. Labour laws are to be followed during the construction period for the workmen deployed in the project, especially occupational safety and health aspects.
6. The Reserve Forests contain spontaneously grown trees of varying heights. Hence, necessary clearances shall be obtained from Central Empowered Committee before felling the spontaneously grown trees in the forest.
7. For the purpose of construction of proposed peripheral road, the road construction materials should be obtained only from the existing quarries with required environmental clearances.
8. It is understood from the report that 450 structures are identified and likely to be affected with more than 1/3rd or fully affected during the census survey. It is also identified 73 CPRs (Church, temples, Government School, Government

MEMBER SECRETARY, SEAC


CHAIRMAN, SEAC

Minutes of the 119th SEAC Meeting held on 09th August 2018

	<p>Building and a Police booth) are affected in the road stretch. The High ways department should have a re-look at their proposals and make efforts to eliminate or minimize adverse impact on such structures.</p> <p>9. In sections 1 & 2 of the proposed road connecting Ennore port and Thiruvallur, the provision of service road at the junctions is not considered near the existing village roads connecting the proposed highway. Provision for service roads needs to be provided in other areas also including in the said section.</p> <p>10. Solar lamps along the length of the proposed road shall be provided for the safety of the people.</p> <p>11. The proponent should implement all Environment Management Measures listed in the EIA report.</p> <p>12. The Project activity should not affect any water bodies such as streams, canals, lakes, ponds etc.</p> <p>13. Ecological sensitive habitats like mangroves, protected and endangered species (Flora and Fauna) should not be affected.</p> <p>14. The details of 3817 trees (DGPS co-ordinates of each tree, along with girth) should be documented and submitted along with an affidavit stating that 3817 trees will not be cut, before issue of EC.</p> <p>15. The funds under the Corporate Environment Responsibility (CER), which works out to Rs. 28.82 Crores (0.25% of the Project cost – 11528 Crores) shall be utilized to address the concerns of the people as expressed during the public hearings. The amount should be deposited with District Collectors of Thiruvallur (Rs. 18.82 Crores) & Kanchipuram (Rs. 10 Crores) to meet the above requirements.</p>		
S.No	Name	Designation	Signature
1	Dr. K. Thanasekaran	Member	
2	Dr.K.Valivittan	Member	
3	Dr.Indumathi M. Nambi	Member	

MEMBER SECRETARY, SEAC

CHAIRMAN, SEAC

Minutes of the 119th SEAC Meeting held on 09th August 2018

4	Dr. G. S. Vijayalakshmi	Member	
5	Dr. M. Jayaprakash	Member	
6	Shri V. Sivasubramanian	Member	
7	Shri V. Shanmugasundaram	Member	
8	Shri B. Sugirtharaj Koilpillai	Member	
9	Shri. P. Balamadeswaran	Co-opt Member	
10	Shri. M.S. Jayaram	Co-opt Member	

Member-Secretary, SEAC


Chairman, SEAC

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