Minutes of 195th Meeting of Expert Appraisal Committee for Projects related to Infrastructure Development, Industrial estate/parks/complexes/areas, Export Processing Zones, Special Economic Zones, Biotech Parks, Leather Complexes and National Highways projects held on 30th- 31stAugust, 2018at Indira Paryavaran Bhawan, Ministry of Environment, Forest and Climate Change, JorBagh Road, New Delhi.

1. **Opening remarks of the Chairman**
2. **Confirmation of the minutes of the193rdmeetingof EAC held on 26th July, 2018 in the Indira Paryavaran Bhawan, Ministry of Environment, Forest and Climate Change, Jor Bagh Road, New Delhi.**
3. **Consideration of Proposals**

<table>
<tr><td>3.1</td><td>Integrated Industrial Township at Pen, Raigad by M/s Karanja Infrastructure Pvt. Ltd now named as Orange Smart City Infrastructure Pvt. Ltd. at villages Boregaon, Shene, Virani, Belavade, Walak, Mugoshi, Govirle and Hamarpur, Tehsil Pen, District Raigad (Maharashtra) – Further consideration for Environmental Clearance.
[Proposal No. IA/MH/MIS/73042/2015] [F.No.21-130/2015-IA.III]</td></tr>
<tr><td>3.1.1</td><td>The proposal was considered in 185th meeting of EAC, held on 26th March, 2018. The Proponent did not submit the desired documents/information through e-mail, hence EAC did not consider the project proposal.</td></tr>
<tr><td>3.1.2</td><td>The project proponent made a presentation along with EIA Consultant M/s. Building Environment (India) Pvt. Ltd., Navi Mumbai and provided the following information to the Committee:
(i) The proposal is for the Development of Integrated Industrial Township at Pen, Raigad by Karanja Infrastructure Pvt. Ltd now named as Orange Smart City Infrastructure Pvt. Ltd. (OSCIPL). Although it is not part of government of India’s 100 Smart City Mission, but it has been planned along the lines of smart city guidelines of Govt. of India.
(ii) Location: The project site span over 14 villages including Boregaon, Shene, Ambeghar, Virani, Belawade Budruk, Balawali, Govirle, Kopar, Ambiwali, Hamrapur, Mungoshi, Walak, Belawade Khurd, and Padale, Tehsil Pen, District Raigad (Maharashtra).The site falls within two planning areas namely Raigad Regional Plan (approximately 900 acres) and Mumbai Metropolitan Region (MMR) Development Authority (– approximately 100 acres) limits. The project site spread across over 1042.51 acres of land, is closely clustered at four locations i.e. Site T1; T2; T3 & T4. The latitude and longitude of each land parcel is tabulated below:
<table>
<tr><td>Land Parcels</td><td>Geographical Coordinates</td></tr>
<tr><td>T1:</td><td>Latitude: 18^{0}42’14.11” N
Longitude: 73^{0}08’37.90” E</td></tr>
<tr><td>T2:</td><td>Latitude: 18^{0}46’23.80” N
Longitude: 73^{0}07’17.44” E</td></tr>
<tr><td>T3:</td><td>Latitude: 18^{0}46’53.73” N
Longitude: 73^{0}07’28.52” E</td></tr>
</table>
</td></tr>
</table>

T4:	Latitude: 18^{0}47’26.51” N Longitude: 73^{0}05’27.74” E

(iii) The land use details are as under:

Sr. No.	Land use	Area in Acres	%
1	Industrial	380	36.45
2	Commercial Area	87.83	8.42
3	Residential	136	13.05
4	Major Roads	126.14	12.10
5	Undevelopable/Green/Open	254.95	24.46
6	Amenities / Utilities	57.59	5.52
Total Area		**1042.51**	**100**

(iv) The details of the parcel –wise land-use is as under:

Land use	T1 (Acres)	T2 (Acres)	T3 (Acres)	T4 (Acres)	Total (Acres)	Percentage of each land use type in the project
Industrial	282.00	58.00	40.00	0.00	380.00	36.45%
Commercial Area	38.33	7.87	2.40	39.23	87.83	8.42%
Residential Area	58.00	8.00	8.00	62.00	136.00	13.05%
Major Roads	87.00	12.29	10.87	15.98	126.14	12.10%
Undevelopable/Green/Open	220.00	10.24	16.72	7.99	254.95	24.46%
Amenities/ Utilities	38.00	6.00	5.60	7.99	57.59	5.52%
Total Area (Acres)	723.33	102.40	83.59	133.19	1042.51	100%
Percentage of total area under each parcel	69%	10%	8%	13%	100%	

(v) **Land use at the site and around the site up to 10 km radius:**The land use at the project site is a mix of land with / without scrub, dense open vegetation, Stony /rocky/barren land. The land use around 10km radius of the project site predominantly consists of land use with / without scrub, followed by other agricultural & dense open vegetation among other land use classes.

(vi) **Whether the project is in Critically Polluted Area**: No.

(vii) **Total water requirement and its source:** The total fresh water demand is 20.54 MLD and Non-potable water demand is 18.06 MLD. The source of water is Hetwane Dam & Jite water treatment plant. The summary of water demand is as under:

Land Parcel	**Total Potable Water** (MLD)	**Total Non-Potable Water** (MLD)	**Total Water Demand** (MLD)
T1	11.34	10.89	22.23
T2	2.40	2.42	4.82
T3	1.92	1.75	3.67
T4	4.87	3.01	7.88
Total	**20.54**	**18.06**	**38.60**

(viii) The raw water will be treated in four WTPs details of which are as under:

Land Parcel	**No. of WTP's**	**Area of WTP** (sq mtr)
T1	1	10000
T2	1	2500
T3	1	2500
T4	1	2500
Total	**4**	**17500**

Construction Phase: Total water requirement is expected to be 80 - 320 KLD which will be met by tankers through which will be in the scope of the contractor. During the construction phase, soak pits and septic tanks will be provided for disposal of waste water. Temporary sanitary toilets /Packaged STP will be provided during peak labour force.

Operation Phase: Total water demand of the project is expected to be 38.60 MLD and the same will be met by the Hetawane Dam and Jite water treatment plant / Recycled Water. Wastewater generated (21.55 MLD) will be treated in STP. 18.06 MLD of treated wastewater will be recycled back into the system, 3.28 MLD for horticulture, flushing, etc). A CETP along with Multi –effect evaporator is also proposed within the Orange Smart City in T1 land parcel to cater to the industrial effluent emanating from the industries. The capacity of the CETP is proposed to be 2 MLD out of which treated effluent to the tune of 1.18 MLD will be used for green belt development / landscaping / horticultural purposes.

(ix) **Water bodies, diversion, if any:** The major water bodies within the 10 km radius of the project site are Hetavane Dam, Ambeghar Dam, Bhogeshwari River & Balganga River. No diversion of any water bodies is envisaged.

(x) **Tree cutting, types, numbers:** There are a total number of 1692 trees present at the site out of which 429 trees are planned to be cut. A number amounting to 858 trees will be planted in addition to the 750 trees which would be planted along the roadside.

(xi) **Rehabilitation involved, if any**: The land is in possession of the project proponent hence no Rehabilitation is involved.

(xii) **If the project involves diversion of forest land, extent of the forest land:** None

(xiii) **Waste water generation, treatment and disposal:**The summary of total sewage generation is tabulated below:

Land Parcel	**Total Water Demand** (MLD)	**Total Sewage Generation** (MLD)
T1	22.23	11.20
T2	4.82	2.54
T3	3.67	2.07
T4	7.88	5.75
Total	**38.60**	**21.56**

(xiv) **CETP:** A CETP of capacity 2 MLD is proposed within the T1 land parcel for treating the effluent emanating from the industries out of which 1.18 MLD of treated effluent will be used for green belt development / landscaping / horticultural purposes. . The sewage will be treated in four STPs (one STP for each parcel, i.e., T1,T2,T3 and T4)-total capacity of the STPs being 24.50 MLD.

(xv) **STP:**Out of the treated sewage amounting to 21.55 MLD, 18.06 MLD treated water will be recycled back for the rest 3.28 MLD Provisions have been made to supply this treated water to the nearby Grampanchayat for non-potable water use/ for use in green belt development. The treated water from the Steps will be used for the non – potable usage in residential, commercial and industrial areas of the project, hence reducing the fresh water intake from Hetawane dam and Jite WTP.

The details of the proposed STPs are tabulated below:

Land Parcel	**Underground Drains (In kms)**	**No. of STP's (Area of 3600 m^2 each)**
T1	4.9	1
T2	2.2	1
T3	2.65	1
T4	1.8	1
Total	**11.55**	**4**

(xvi) **Municipal Solid Waste generation treatment and disposal:**About 51.58 TPD solid waste will be generated in the project. The biodegradable waste (23.2 TPD) will be processed by composting and will be used as bio-fertilizer and the non-biodegradable waste generated (18 TPD) will be handed over to authorized local vendor and 10.38 TPD inert waste will be landfilled within the space provided for landfill site within the T1 land parcel. An area of 10 acres has been provided along with ancillary facilities

in T1 land parcel.The municipal solid waste generation details from the industrial areas, residential areas and commercial areas is tabulated below:

Municipal Solid waste generation from the industrial areas

Land Parcel	**Total Plot Area** (In Acres)	**Industrial Area** (In Acres)	**Estimated Working Population**	**Total Waste Generation** (Tonnes) (At 150 gms/capita/day)
T1	723.33	282	50045	7.51
T2	102.40	58	19473	2.92
T3	83.59	40	18003	2.70
T4	133.19	0	0	0.00
Total	**1042.51**	**380**	**87521**	**13.13**

Solid waste from the residential areas

Land Parcel	**Total Plot Area** (In Acres)	**Residential Area** (In Acres)	**Estimated Resident Population**	**Total Waste Generation** (Tonnes) (At 400 gms/capita/day)
T1	723.33	58	31161	12.46
T2	102.40	8	4298	1.72
T3	83.59	8	4298	1.72
T4	133.19	62	33310	13.32
Total	**1042.51**	**136**	**73068**	**29.23**

Solid waste generation from the commercial areas

Land Parcel	**Total Plot Area** (In Acres)	**Commercial Area** (In Acres)	**Estimated Working Population**	**Total Waste Generation** (Tonnes) (At 150 gms/capita/day)
T1	723.33	38.33	26831	4.02
T2	102.40	7.87	5509	0.83
T3	83.59	2.40	1680	0.25
T4	133.19	39.23	27461	4.12
Total	**1042.51**	**87.83**	**61481**	**9.22**

(xvii) **Rainwater Harvesting:** The rain water harvesting will be done through the detention ponds catering to 1 day run-off and it will be made mandatory for all the individual plot owners to implement rainwater harvesting at the plot level.

(xviii) **Storm Water Drainage Network:** In general, the drainage of the area is from South East (where high hills are seen) towards the North Western side.The conveyance facilities for the storm water are designed to avoid instances of water logging, preserve water and conserve soil.The proposed development at OSC ensures that no disturbances will be caused to the existing natural drainage system, hence for crossing over these drains is made by box culverts, pipe culverts and bridges depending upon flow and topography.Rainwater harvesting is proposed and

	judiciously planned in all parcels of OSC and will be done through the detention ponds catering to 1 day run-off and then it will be made mandatory for all the individual plot owners to implement rainwater harvesting at the plot level. (xix) **Power requirement and source**: The total power requirement during construction phase is 5MVAand will be met from MSEDCL and total power requirement during operation phase is 142.18 MVA and will be met from MSEDCL. (xx) **Eco-Sensitive Zone / National Park / Wild Life Sanctuary in 10 km radius area**: Karnala ESZ boundary is approximately 6.7 km from Northern point of T3 land parcel. (xxi) **Investment cost:** The cost of the project is Rs. 2032 crores (+ Rs 2000 crores land cost). (xxii) **ToR details**: ToR was granted vide letter No. 21-130/2015-IA.III dated 23rd November, 2015. (xxiii) **Public Hearing**: The Public Hearing was conducted on 11th July, 2017 at 11.00 am at Aagri Samaj Hall, Nagarpalika Road, Chichpada, Taluk Pen, and District Raigad. The major issues raised during the public hearing were related to the employment, benefits accrued from the project, disposal of sewage, hazardous waste etc. (xxiv) **Employment potential:** Approximately 1, 50,000 people will get direct and indirect employment. (xxv) **Benefits of the project:** (xxvi) **Employment:** The socio-economic benefits arising out of this project for the local populace will include creation of direct and indirect jobs and consequent rise in the income levels, associated commercial and social infrastructure development in the mofussil areas, improved quality. The skilled manpower required for operation of the industrial estate will be easily available from the proposed areas. Manpower training and skill up-gradation will be encouraged. (xxvii) **Infrastructure Development:** The proposed project will increase the Infrastructural facility for the area especially which will provide an opportunity for employment generation and development of service sectors. (xxviii) **Economic Development:** Proposed project will add benefit to the regional socio economic status due to development of ancillary facilities' besides main project. (xxix) **Multiplier Effect:** The project will have excellent multiplier effect and will become truly a win-win situation for all the stakeholders. Thus, the proposed project has substantial socio-economic and environmental benefits at the local, the State, the Regional and the National levels. (xxx) **Aesthetic Environment:** The proposed project will reduce the pollution load in the micro level environment. And the aesthetic beauty will get a chance to be much better than earlier. (xxxi) **Court cases if any**: No
3.1.2	The project was first considered in the 185th meeting held on 26.3.2018. Proponent did not submit the desired documents/information through e-mail, hence EAC did not consider the project.
3.1.3	After detailed deliberations during 187th meeting, the EAC noted the following: (i) Navi Mumbai International Airport (NMIA) is located approximately 21 km (aerial distance) from the northern edge of the T3 land parcel. The funnel zone of the NMIA

	has been superimposed on Google Earth and reflects that the project is 19.83 km away from the funnel zone of NMIA. (ii) Orange Smart City plans to source water from the CIDCO pipeline near Jite for the T3 land parcel and from the Konkan Irrigation Department which is owner of Hetavane Dam for the land parcels T1, T2 and T4. However, permission from competent authority is yet to be obtained. (iii) The Tarapur industrial cluster is located at an aerial distance of approximately 115km from the T3 land parcel. (iv) The proponent has desired that CRZ clearance is not required and hence, omitted 29 acres of land near coastal region, which comes under CRZ area. Now the area of proposed site stands 1,043 acres (1,072 - 29 acres). (v) The proponent has also submitted in EIA report about of types of industries to be housed within the proposed Industrial township. It is observed that there is no A or B category industries mentioned in the EIA report. However, as per ToR issued by this Ministry, there are A category industry, i.e., Manmade Fibre and Synthetic Organic Chemicals. "As per the rule position, any industrial estate below 500 ha having at least one B category industry falls under category B of entry 7(c) of the EIA Notification, 2006 as amended from time to time. In the instant case, the project lies at a distance of 6.7 km from ESZ of Karnala bird sanctuary, it was treated as A category project, hence appraised at central level by EAC. If the area is less than 500 ha but contains building and construction projects greater than 20,000 sq. m and are developmental area more than 50 ha, it will be treated as activity listed at Sl. No. 8(a) or 8(b) in the schedule, as the case may be." In view of above, the PP is required to revise the EIA/EMP with layout plan including A category industryfor proposed Industrial Township project as per prescribed ToR issued by the Ministry. Layout plan should cover area under each category of industries including utilities and other amenities.
3.1.4	In view of EAC's observations at para 3.2.3(v) above, the Committee deferred the proposal.
3.1.5	Consequently, revised EIA/EMP was presented before the EAC in its 195th meeting held on 30-31 August, 2018 in the Ministry. Following observations were made by the EAC: (i) The proponent has proposed to house Pharma units as Category A industries within the proposed industrial township. The pharma units are proposed to be located very near to residential area, i.e., at the distance of 200 m from residential areas. (ii) The air quality impact predictions have been done considering emissions from traffic and DG sets only. Proponent has not considered the emissions from the newly proposed pharma units, which are major source of pollution. (iii) During presentation proponent informed that Rs.10.16 crore (i.e., 0.5% of total project cost of 2032 crores) will be allocated towards CER. However, total project cost is mentioned as 4032 crores during presentation. The same figures about total project cost has been mentioned in CTE document issued by the Maharashtra Pollution Control Board. (iv) Green buffer in the form of Green belt to a width 15 m should be provided all along the periphery of the proposed Industrial Area. The individual units should keep 33%

	of allotted area as green belt. However, proponent has proposed only 24% of green belt and no green buffer along the periphery of the proposed industrial area. (v) Permission from competent authority for water utilisation for the project activities during construction and operation phase is not provided by the proponent.
3.1.6	The EAC, after detailed deliberations during 195th meeting held on 30-31 August, 2018, **recommended the project for grant of Environmental Clearance**, with the following **specific conditions** in addition to all standard conditions applicable for such projects and also submission of following documents to Ministry. **specific conditions** (i) This environmental clearance is for 1042.57 acres of land area only, excluding the 29 acres of land in CRZ area. Hence, no activity is permitted in the CRZ land area. (ii) The air quality impact predictions study to be carried out by considering the emissions from the proposed pharma units and suitable mitigation measures to be prepared and submitted to Ministry. (iii) Permission from competent authority for water utilisation for the project activities during construction and operation phase is to be submitted to Ministry. (iv) A buffer of 1 km shall be maintained between residential areas (within industrial township) and Pharma units to avoid exposure of population from pollutants. (v) Regular monitoring of surface water and ground water quality are to be carried out quarterly and report be submitted to concerned regional office, MoEF&CC and SPCB. (vi) No ground water to be used for construction and operation phases. (vii) Online real time air and water quality monitoring system to be established in consultation with the Central/State Pollution Control Board. (viii) An Emergency response Centre to be established to take care of accidents, chemical spills etc. including that during transportation of chemicals with the arrangement of antidotes and necessary equipment. (ix) Individual industrial units as necessary and CETP to be operated with ZLD system only. (x) Measures for risk mitigation as stipulated in EIA/EMP report (including addendum) should be implemented in letter and spirit (xi) Revised CER fund allocation along with activities mentioned in MoEF&CC's O.M. dated 1st May, 2018 for an amount of Rs. 4,032 crore and submit the details within 15 days to this Ministry as well as the regional office concerned. (xii) Green buffer in the form of Green belt to a width 15 m should be provided all along the periphery of the proposed Industrial Area. The individual units should keep 33% of allotted area as green belt. (xiii) The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.

	(xiv) The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc as per National Building Code including protection measures from lightening etc.
3.2	**Expansion of notified Multi-product SEZ by adding 1840 Ha notified SEZ with existing approved area of 6641.2784 ha to make it 8481.2784 ha at Mundra by M/s Adani Ports and Special Economic Zone (APSEZ) Ltd. - Further consideration for Expansion of Environmental and CRZ Clearance.** **[Proposal No. IA/GJ/MIS/75351/2018 dated08.08.2018] [F. No. 10-138/2008-IA.III]**
3.2.1	The proposal for amendment was first considered during 191st meeting of EAC. The details of the proposal, as per the documents submitted by the project proponent and also as informed during the above said EAC meeting along with EIA Consultant M/s Aditya Environmental Services Private Limited, Mumbai, are reported to be as under: (i) Expansion of notified Multi-product SEZ by adding 1840 ha notified SEZ with existing approved area of 6641.2784 ha to make it 8481.2784 ha at Mundra by APSEZ. The project is located in village: Mundra, Tehsil Mundra, District Kutch, Gujarat. (ii) The proposed project envisages addition of 1840 ha notified SEZ in existing approved area of 6641.2784 ha to make it 8481.2784 ha. (i.e. expansion proposal).1840 ha land proposed for the project is diverted for development of SEZ by MoCI vide their Notification dated 11.12.2015. (iii) Facilities like Processing Zones, Non-processing Zones, Warehousing Zones, Road Network (Trunk as well as Internal), Bridges or Culverts over natural drain, Rail Network, IT-Telecommunication Network, Electric Network, Water Supply, Conservation & Drainage Network, Effluent Collection Network and Utilities & Supporting Infrastructure will be developed within the proposed project area. (iv) **Whether the project is in a Critically Polluted Area:** No (v) **Details of Tor and EC issued under EIA Notification, 2006:** ToR was issued on31stMarch, 2009. **Public Hearing** was conducted on5th October, 2010 at Ganesh temple, Luni, Mundra, Kachchh, Gujarat. Major issues include Legal status of land and location of the project site, blockage of creeks/CRZ area, destruction of vegetation including mangroves, effects on fishermen livelihood, effects on agriculture/farmers/animal husbandry, possibility of environmental pollution, environmental monitoring, and employment generation. The Expert Appraisal Committee considered the proposal in its meetings dated 16th April, 2012 (111th meeting), 4th June, 2012 (113th meeting) and 9th July, 2012 (114th meeting) and recommended for the grant of EC & CRZ clearance to Multi-product SEZ spread over an area of 8481.2784 ha. However, the Ministry issued EC for 6481.2784 ha only after reducing 1840 ha, vide letter no. 10-138/2008-IA.III dated 15th July, 2018. (vi) **If the Project involves diversion of forest land:** Forest Clearance for the proposed project area, i.e., 1840 ha was obtained vide MoEF&CC's letter No. 8-2/1999-FC (pt.) dated 30th September, 2009.

(vii) **If the project falls within 10 km of eco-sensitive zone:** Not applicable as there is no eco-sensitive area within 10 km of the project site.

(viii) **Water requirement, source, status of clearance**: Water requirement for the proposed project will be to the tune of 95 MLD. Source of water will be desalination plant / Narmada water supplied through APSEZ's utility division. Requisite permissions for the desalination plant are already obtained by APSEZ. No groundwater will be extracted for the proposed project.

(ix) **Waste water quantity, treatment capacity detail**: Sewage and effluent generated will be treated in decentralized STPs (total capacity of 62 MLD) and decentralized CETPs (total capacity of 67 MLD) respectively. Permissions for mentioned capacities of STP and CETP are already obtained as part of the EC and CRZ clearance for the existing Multi-product SEZ project (6641.2784 ha).

(x) **Recycling / reuse of treated water and disposal**: Treated water will be utilized for development of greenbelt within the project site.

(xi) **Solid waste management**:Municipal wastes in the form of canteen wastes will be converted to manure. Other solid wastes such as papers, plastic, cardboard etc. will be segregated and send to authorised recyclers. Disposal of municipal solid waste will be carried out as per prevailing norms.

(xii) **Hazardous waste management**: Hazardous waste generated will be disposed through authorized vendors / registered recyclers under the preview of Hazardous and other wastes (management and transboundary movement) rules, 2016.

(xiii) **If the Project is in CRZ Area**

- Components in CRZ Area: Only activities permitted within the CRZ area (as per the CRZ notification 2011 and its subsequent amendments) will be carried out after obtaining due approvals. No other activities will be carried out within the CRZ areas.
- Recommendation of Coastal Zone Management Authority: CRZ recommendation for the entire area of 8481.2784 ha (including the sea water intake and outfall facility) is obtained from GCZMA vide their letter no. ENV-10-2010-1601-E dated 27.03.2012. Further, recommendation for addition of 1840 ha land into presently approved SEZ area of 6641.2784 ha (so that total is 8481.2784 ha) is also obtained from GCZMA vide their letter no. ENV-10-2010-1601-E dated 04.01.2017.
- Layout on CRZ Map of 1:4000 scale prepared by authorised agency: CRZ maps in the respective scale are submitted to GCZMA and MoEF&CC as per the requirements.

(xiv) **Cost of the Project:** Estimated cost of the project is INR 5105 Crores

(xv) **Employment potential**: 75,500

(xvi) **Benefits of the project**: Economic development, Employment opportunities, Infrastructure development in the region

(xvii) **Details regarding pending court cases**:

Sr. no	Case reference	Matter description	Present status	Remarks

	1	Supreme Court of India SLP (c) No.1526 of 2014	Appeal has been filed by the Company and 12 units against the Hon'ble Gujarat High Court order in relation to 12 units in Mundra SEZ. Public Interest Litigation was filed by Mr. Gajubha Bhimaji Jadeja and others before the Hon'ble Gujarat High Court alleging that 12 units in Mundra SEZ have continued their operational and construction activities though Mundra SEZ has not been granted the environmental clearance. The Hon'ble Gujarat High Court disposed of the petition in January, 2014 and directed MoEF&CC to consider grant of environmental clearance to Mundra SEZ within a period of 30 days and also ordered that in the meantime, no activities can be carried out by the 12 units in SEZ.	Pending	MoEF&CC granted the Environmental and CRZ clearance to Multiproduct SEZ on 15.07.2014.	
	2	Supreme Court of India SLP (c) No. 28788 of 2016	Appeal against the Hon'ble Gujarat High Court order in relation to ship recycling project. Public Interest Litigation was filed before the Hon'ble Gujarat High Court by Mr. Pravinsingh Bhurubha Chauhan alleging that though no clearance is granted to ship recycling project, work has been undertaken in this regard. It also alleged that the site for ship recycling project falls in area having sand dunes which is not allotted to APSEZ. The Regional Officer of MoEF&CC visited the site and filed an affidavit stating that: (a) No work has been undertaken for ship recycling project; (b) Ship recycling project is not part of area containing alleged sand dunes; (c) The area is sandy and is part of 1840 ha of forest land allotted to APSEZ. The Hon'ble Gujarat High Court dismissed the petition in February, 2015.	Pending	The Hon'ble Supreme Court in October, 2017 requested the Sunita Narain Committee to look into the matter once again and report at the earliest with regard to the levelling of sand dunes especially with regard to the Port facilities in Mundra District. The Committee has filed its report to the Hon'ble Supreme Court.	

3.2.2 The observations of the EAC during its 191st meeting are as under:

(i) The project proposal was for 8481.2784 ha area for which the proponent has the ownership. The project was considered and recommended by EAC in its 114th meeting for Environmental and CRZ Clearance for Multiproduct SEZ on 8481.2784 ha area on 09.07.2012. However, the Ministry of Commerce and Industries (MoCI) had denotified 1840 ha of land on account of issue related to contiguity. Hence, Environmental Clearance for 6641.2784 ha (8481.2784 – 1840) was issued on 15th July, 2014.

(ii) Ministry of Commerce and Industries (MoCI) again notified 1840 ha vide their notification dated 11.12.2015. Therefore, the proponent now wants to add 1840 ha area.

	(iii) The Proponent requested that the EAC had already recommended for EC on 09.07.2012 for the entire 8481.2784 ha area and that the MoCI has now revoked its denotification, the proponent has requested for EC for this notified area. (iv) The EIA and Public hearing were conducted for entire 8481.2784 area. (v) 1840 ha land proposed for the project is notified for development of SEZ by MoCI vide their Notification dated 11.12.2015. All the procedures including preparation of EIA report, Public Hearing, preparation of CRZ maps, obtaining CRZ recommendation were carried out as per the EIA notification 2006, CRZ notification 2011 and their subsequent amendments for the entire area, i.e., 8481.2784 ha. (vi) Facilities like Processing Zones, Non-processing Zones, Warehousing Zones, Road Network (Trunk as well as Internal), Bridges or Culverts over natural drain, Rail Network, IT-Telecommunication Network, Electric Network, Water Supply, Conservation & Drainage Network, Effluent Collection Network and Utilities & Supporting Infrastructure will be developed within the proposed project area. (vii) There is no change in the original project proposal. The present proposal does not require any additional resource consumption, addition of new project component and to expand the capacities of the approved project components. (viii) Conservation Action Plans for Kotdi I and II creeks, Baradimata creek, Bocha Island, Navinal and Bocha creeks are in place.
3.2.3	The EAC, after a detailed deliberation, during 191st meeting held on 25th June, 2018, **recommended for submission of Environmental Management Plan (EMP)** for further consideration. The EAC also recommended for exemption of the Public Hearing in view of the fact the PH has already been held for the entire project area. The Environmental Management Plan EMP may cover following issues: (i) Details of activities already completed and operational, under construction and yet to be taken up with a layout map for 6641.2784 ha area. (ii) Activities proposed under expansion (1840 ha) with layout plan. (iii) Green belt demarcation with layout maps in existing as well as proposed areas. (iv) Ambient air, water, Soil and noise quality monitoring data of exiting area as well as in proposed area. (v) Effluent emission data (flow and concentration) from operational units. (vi) Predicted values of air quality with respect to upcoming and proposed units in existing and proposed areas. (vii) Marine environment management plan with focus on mudflats and mangroves. (viii) Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 1st May, 2018 for various activities therein.
3.2.5	The project proponent presented following information before EAC during its 195th meeting on 30-31 August, 2018:

(i) 1840 ha land (present proposal) is notified & contiguous to the approved SEZ of 6641.2784 ha.

(ii) 1840 ha area is a forest land which is diverted for the purpose of SEZ. Forest clearance was obtained vide MoEF&CC letter dated 30.09.2009.

(iii) There are no settlements in the present land hence there is no requirement of R & R plan.

(iv) Necessary permissions for STP/CETP considering the development of entire area of 8481.2784 are already obtained (as part of EC dated 15.07.2014). Hence no new proposal for the water treatment facilities is required.

(v) Source and quantum of water & power requirement for the overall SEZ area of 8481.2784 will remain unchanged as per the original proposal. Hence, no additional resource consumption is required.

(vi) Landuse of existing SEZ and proposed expansion area:

Sl. no	Development Zone	6641.3 Ha	1840.0 Ha*	8481.3 Ha
		Area in Ha	Area in Ha	Area in Ha
		(%)	(%)	(%)
1	Port backup and Related Industrial Developments (Requiring waterfront)	645.7	202.4	848.1
		9.7%	11%	10%
2	Industrial Zone and Power Generation Warehousing & CFS Zone	3029	1227.3	4256.3
		45.6%	66.7%	50.2%
3	Open/Green Spaces	390	97.5	487.5
		5.9%	5.3%	5.7%
4	Social Infrastructure	325	0	325
		4.9%	0	3.8%
5	Facilities/ Amenities & Utilities Transportation	2251.5	312.8	2564.3
		33.9%	17%	30.2%

(vii) Provided a list of 41 industrial units presently running or under construction along with lay out plan of proposed 1840 ha for further addition to SEZ area. Also provided the details of water treatment facilities (STPs and CETPs) for various operational units.

(viii) Provided data for monitoring of air quality, groundwater (bore well) and soil during period between October, 2017 and March, 2018.

(ix) Predicted air quality scenario for PM_{10} and $PM_{2.5}$, SO_2 and NO_2 in respect of all approved and proposed development till year 2030.

(x) Provided details of study byNational Centre for Sustainable Coastal Management (NCSCM), Chennai showing an increase of 246 ha in the mangrove cover between 2011 and 2016. Also provided the details of various measures being undertaken for the conservation of mangrove and associated creeks.

(xi) Proponent also provided details of green belt along with map in the SEZ area.

3.2.6 The EAC, after a detailed deliberation during 195th meeting held on 30-31 August, 2018, has observed the following:

	(i) Details of industrial activities with area of land be provided. (ii) Details of storage facilities at port be provided. (iii) Annual average data of air quality based on 104 observations and 24 hours average data at existing monitoring stations be provided. (iv) The soil is highly contaminated due to presence of high quantities of the heavy metals and committee desired to know the source and reasons of this. (v) Extent of Mangrove cover compared between 2011 and 2016 revealed the increase of 246 ha. However, recent assessment using latest data has not been carried out to know the current status and increasing trend in the mangrove cover post 2016. (vi) Detailed planning of CER as per Ministry's O.M. dated 1st May, 2018 be provided.
3.2.7	In view of above, the EAC, after a detailed deliberation during 195th meeting held on 30-31 August, 2018, **deferred the proposal** for want of following information for further consideration: (i) Details of industrial activities with are of land indicated in layout plan to be provided. (ii) The comparative statement of industries proposed in earlier EC application of 1840 ha and in present application. (iii) Revised green-belt development plan be submitted. Green buffer in the form of Green belt to a width 15 m should be provided all along the periphery of the proposed Industrial Area. The individual units should keep 33% of allotted area as green belt. (iv) Details of storage facilities at port and also mention the amount of coal, liquid etc. to be stored be provided. (v) The annual average data as well as 24 hours average data for air quality monitoring at existing monitoring stations be provided. (vi) Detailed study to understand the causes and potential mitigation measures to reduce the contamination from soil due to heavy metals needs be carried out. (vii) Study the mangrove cover after SEZ became operational (using pre-SEZ baseline data) andprovide evidence of impact (positive or negative) on mangroves. (vii) Detailed activity wise plan of CER as per Ministry's O.M. dated 1st May, 2018 be provided.
3.3	**Development of Multiproduct SEZ and Free Trade Warehousing Zone (FTWZ) at Layja Mota, Kutch District, Gujarat by M/s Sea Land Ports Ltd – Further consideration for Environmental and CRZ Clearance.** **[Proposal No. IA/GJ/NCP/1702/2011] [F. No. 21- 68/2011-IA-III]**
3.3.1	The project proponent made a presentation before EAC in its 162nd meeting held on 29-30 August, 2016 and provided the following information to the Committee: (i) The project involves development of Multi Product SEZ/ Free Trade Warehousing Zone (FTWZ), DTA including Power Plants & Desalination Plant at Village Layja Mota, Taluka Mandvi, District Kutch (Gujarat). The geographical co-ordinates of the site are 22º 56' 11" North Latitude and 69º 14' 20" East Longitude. The SEZ/FTWZ & DTA (~3,473 acres) & the proposed utility corridor (~124 acres) encompass areas falling

	under Six (06) villages namely Layja Mota, Godhara, Ratadiya Mota, Undoth, Nana Layja and Bayat. (ii) Multiproduct SEZ/FTWZ is proposed to be developed in an area of ~3,473 acres. In addition, an area of ~124 acres is to be used for the dedicated Utility Corridor. The details of SEZ land allocation (in acres) for various industries are as follows: • Coal based 4,000 MW TPP and 60 MLD Desalination Plant - 1,298 acres • Gas Based 2,000 MW CCPP – 88 acres • Domestic Tariff Area (DTA) – 645 acres • Other industrial units with supporting infrastructure - 1,291.5 acres • Non-processing area with allied social infrastructure - 150.5 acres (iii) The dedicated utility corridor, about 8.95 km long (60 m wide) is planned from SEZ boundary to proposed Shipyard cum Jetties including LNG terminal at Nana Layja coast. (iv) The estimated fresh water demand comprises of all forms of water usage in processing (including thermal power plants), non-processing area and DTA. Water demand for different industries, common areas, utilities and NPA are estimated as 70.70 MLD. After considering reuse of treated wastewater and fire fighting water as one time demand, net fresh water requirement is 54.63 MLD. The fresh water will be met from proposed 60 MLD desalination plant within the SEZ. The total seawater requirement for the proposed 4000 MW Coal based TPP, 2000 MW gas based combined power plant and 60 MLD desalination plant is 1206.4 MLD. Permission from GMB on sea water withdrawal was obtained. (v) Industrial process wastewater, washings, cooling tower and boiler blow down, etc., in processing area, from all the units in the SEZ/DTA and the sewage will be generated. In order to achieve effective/efficient treatment in CETP, sewage generated in processing area is proposed to be mixed with industrial effluents at aeration tank in secondary treatment. Considering the heterogeneous effluent characteristics, SEZ regulation for wastewater treatment at DTA, to achieve most effective treatment of wastewater from all industrial zones, and to avoid long-term O&M issues as suggested by MoEF&CC, five CETPs are proposed. Among them, two CETPs are with zero discharge (i.e., one at DTA 2 and one at NW area for focus engineering goods) and other three CETPs (one for Pharmaceuticals and Chemicals, one for Non-Metallic Minerals, Textiles and Handicrafts, and one for Engineering goods, FTWZ, shipping and textiles industries) the treated wastewater are proposed to be discharged through marine outfall. From 4000 MW TPP premises, approximately 4.68 MLD of wastewater (effluent) and 0.384 MLD of sewage will be generated and ETP of 4.70 MLD and STP of 0.40 MLD capacity of treatment plant is proposed. The effluent treated water will be used for coal/ash handling plant, greenbelt application, etc. During rainy season, about 110 m^3/hr (2.64 MLD) of treated water from TPP, will be sent to marine outfall after meeting prescribed standards. From 2000 MW TPP premises, approximately ETP of 0.47 MLD of and STP of 0.09 MLD capacities is proposed. The treated effluent will be used for greenbelt application.

	(vi) **Components in CRZ area**: Entire SEZ/ FTWZ/DTA and utility corridor of about 7.8 km fall outside CRZ area. The project associated facilities/ components falling under CRZ area are: • Sea Water Intake pipeline, intake pump house, intake system - CRZ IV, IB • Marine Outfall pipeline and diffuser system – CRZ IV, IB • Utility corridor (UC) Consists of Coal conveyor; NG pipeline, Transmission tower, Road, Intake Pipeline; Outfall Pipeline - CRZ III, IB and 1A. (vii) The Gujarat Coastal Zone Management Authority (GCZMA) has recommended the project vide their letter dated 29th June, 2016 (viii) The CRZ mapping/HTL & LTL demarcation of the proposed project has been carried out by National Institute of Oceanography (NIO). The main SEZ/FTWZ/ DTA are located outside CRZ influential area. The associated facilities like intake/outfall system and the utility corridor fall in CRZ area and these are permissible as per CRZ Notification, 2011. (ix) The industries proposed in the SEZ shall have their independent Hazardous/Non-hazardous waste collection and segregation system. These segregated wastes shall be further compacted for volume reduction and out of this organic waste can be used for composting or vermi-composting. The other wastes like paper, plastic and metal scraps shall be sent to GPCB approved recycling units. The sludge generated from STP shall be composted and will be used as manure for greenbelt/green areas development. The industries shall have a temporary storage facility for 30 days detention which will be designed as per the requirement. However, STP and CETPs will have a temporary storage facility in their premises. Hazardous waste generated from the SEZ shall be sent to nearby TSDF approved by GPCB. It is proposed to have a Sanitary landfill site at SEZ along with Organic Waste Convertor (OWC) facility at NPA area. In addition, it may be required to send the municipal solid waste generated to Vermi Compost plant at Mandvi/biomass plant at Kothara. (x) The power required during operation phase of the SEZ/FTWZ including DTA but excluding Power plants and desalination plant is 360 MW. About 320 MW for Power plants and 12.5 MW for Desalination plant are required. The total power requirement of about 692.5 MW will be sourced from in-house power generation. (xi) Solar Power Harnessing has been proposed within the 4000 MW TPP and 2000 MW gas based power plant and SEZ and DTA built up areas particularly at available roof tops. The available technologies for generating solar power are mainly Solar Photo Voltaic (PV) Cells and Solar Thermal. Technology of Solar PV Cells is suitable for solar power generation with proper utilization of the roof top areas available on the roofs of buildings/structures within the industry premises. Based on the availability of rooftop area for solar power installation, 4 MW of solar power generation is considered in SEZ excluding power plants. (xii) RWH is proposed as a part storm water management. (xiii) Parking requirements will be provided; Logistic zones meant for truck parking are provided within processing area. This parking space will serve the trucks until custom clearance to enter the SEZ.

(xiv) Estimated project cost for development of SEZ including proposed power plants is around Rs. 38,741 Crores and Rs. 502 Crores for DTA.

(xv) **If the project involves Marine disposal**: Yes; A common marine outfall system is proposed for return cooling water discharge from 4000 MW coal based thermal power plant & 2000 MW Gas based thermal power plant, reject brine from 60 MLD Captive Desalination plant, CETPs treated discharge and discharge from Shipyard cum captive jetties including LNG terminal. The total marine outfall discharge quantity is around 921.4 MLD.

(xvi) Based on the mathematical model study, the discharge point is suggested at 10.3 m of water depth at Latitude 69°13'49.13"E N; Longitude 22°48'52.63"N, which is at ~2.3 km from the shore. Considering the discharge quantity, it is proposed to have four pipelines to carry the effluent to the outfall location. Each pipe is proposed to have a 25 m long diffuser aligned 90^0 to the coast. Each of the diffuser can have five risers with two ports of 0.3 m diameter on each riser. The centre to centre spacing between risers can be 5 m. The results of the same are:

- Excess salinity @100 m: 0.5 ppt; @500m: 0.25 ppt
- Excess temp.@100 m: 0.25^{o}C; @500m: 0.15^{o}C
- Excess salinity & temperature beyond 0.3 ppt and 0.15^{o}C or more will never reach shore or intake location.
- Temporal-Maxima: maximum excess salinity was 0.54 ppt & maximum excess temperature was 0.3°C.
- These variations are comparable with the seasonal variations of temperature and salinity of coastal waters.

(xvii) **Location of intake/outfall**: Seawater Intake system - 69°13’ 58.6”E, 22° 49’ 15.9”N (Planned between breakwaters) and Seawater Outfall system - 69° 13' 49.13"E, 22° 48' 52.63"N (at 10.3 m Water Depth).

(xviii) **Dredging details, disposal of dredge material:** Not applicable. Only 4 m trenching of seabed for construction of sub seabed intake & outfall pipelines.

(xix) **Details of water bodies, impact on drainage if any:** There are some natural drains of lower order passing through the project site. Storm water drainage networks for the Project are planned by diverting such drains. Outlets are proposed for the storm water towards natural sloping which can be used during monsoon. Outlets will be connected to existing natural drainage network.

(xx) Proposed project is not falling within 10 km of any Eco Sensitive Area as defined/declared by GoI and GOG. A Reserve Forest “Dhuva Reserve Forest” is located at a distance of 10.7 km from the project site. Minor part of the proposed utility corridor passes through Sand dune area which is a permissible activity. As per GCZMA recommendations, the corridor will be constructed at least 1 m above the height of sand dune.

(xxi) The project benefits are given below:

	• Increase in the infrastructure resources due to the project in the region by the way of additional/improved transport, communication, health facilities, drinking water facilities, sanitation and hygiene facilities, and other basic facilities will be created; • Due to proposed project, surrounding villages and region would get maximum benefits such as considerable number of direct and indirect employment, skill development activities to the employable youth in the region, better quality of educational and medical facilities to the local people, improvements to physical and social infrastructures also catering to the growing demand-supply gap of physical and social infrastructure etc, • Quality of life in the region is likely to improve due to the creation of jobs for the local people so that the dependency changes and there will be more than one earning member in the family, which will provide economic freedom and would facilitate a higher standard of living with better facilities • As a part of the Corporate Social Responsibility (CSR) initiatives, it is envisaged to create better and quality health care facilities, education facilities, etc. • Improvement in the trading, marketing as well as value addition of local products. • The proposed project shall further act as a catalyst to industrialization and urbanization of the region; Overall economic growth of Kutch District and Gujarat State. (xxii) **Employment potential**: The expected direct employment is about 45,000. (xxiii) The proposed project is categorised under Industrial Estates listed as Item 7(c) in the Schedule of the EIA Notification, 2006. The project area is more than 500 ha and houses category A and B industries. (xxiv) **Details of Forest land involved, if any**: No forest area is involved. (xxv) Terms of Reference was granted vide letter No.21-68//2011-IA-III dated 5th March, 2013, validity extended on 13th July, 2016. (xxvi) Public hearing was held on 12th December, 2014 at, Mota Layja Village, Mandvi taluka, Kutch district, Gujarat. (xxvii) Groundwater will not be used at any stage of project development.
3.3.2	The project was earlier considered by the EAC in its 162nd meeting held on 29-30 August, 2016, wherein the EAC noted the details as under: (i) The project envisages development of Multi-product SEZ/Free Trade and Warehousing Zone (FTWZ) & Domestic Tariff Area (DTA) with 4000 MW coal based TPP, 60 mld desalination plant, 2000 MW gas based Combined Cycle Power Plant, other industrial units and non-processing area with supporting/social infrastructure, utility corridor in a total area of 3473 acres at Layja Mota village in District Kutch (Gujarat). (ii) The dedicated utility corridor, about 8.5 km long, 60 m wide and covering an area of 124 acres, is planned from SEZ boundary to the proposed shipyard cum jetties site at Naya Layja coast. (iii) The utility corridor shall cater to coal conveyors, LNG pipeline, power evacuation tower, intake/outfall pipeline, waste water conveyance pipeline, road etc.

	(iv) The ToR for the project 'Development of Multi-product SEZ and Free Trade and Warehousing Zone' was granted by this Ministry on 5th March, 2013 valid for 2 years. Its validity period was later extended up to 4th March, 2017. (v) The Ministry has accorded EC to 'Supercritical Thermal Power Plant of 3960 (6x660) MW' at village Layja Mota, Mandvi Taluka in District Kutch (Gujarat) vide letter dated 26th June, 2015 in favour of M/s Nana Layja Power Company Ltd based on the recommendations of the sectoral EAC. One of the specific conditions reads as: "*The activities attracting CRZ clearance shall only be initiated after obtaining prior CRZ clearance from the competent authority. A copy of the same shall be submitted to the Ministry and its Regional Office*." (vi) As per the NIO report, the entire SEZ/FTWZ/DTA and utility corridor of about 7.8 km out of a total length of 8.5 km, fall outside CRZ area. The project associated facilities/ components falling under CRZ area are: • Sea Water Intake pipeline, intake pump house, intake system - CRZ IV, IB • Marine Outfall pipeline and diffuser system – CRZ IV, IB • Utility corridor (UC) Consists of Coal conveyor; NG pipeline, Transmission tower, Road, Intake Pipeline; Outfall Pipeline - CRZ III, IB and 1A. (vii) The Gujarat Coastal Zone Management Authority (GCZMA) has recommended the project vide their letter dated 29th June, 2016. (viii) Public hearing was conducted on 12th December, 2014. (ix) The project proponent has relied upon this Ministry's OM dated 24th December, 2010 on procedure for consideration of integrated and inter-linked projects, and a common EIA report has been submitted covering impact of each of the component in a comprehensive manner after obtaining ToR from each of the sectoral EACs. During deliberations, the observations of the EAC included the following: (i) In terms of the requirement contained in para 4(i) of the CRZ Notification, 2011, the sectoral EAC was required to consider the proposal for grant of EC to the STPP of 3960 MW, inclusive of the intake and outfall facilities proposed for that, only after having been recommended by the SCZMA, and the same to be mentioned in the EC accordingly. (ii) In terms of the Ministry's OM dated 24th December, 2010, public hearing was to be conducted based on the common EIA report so prepared, for each component as per the provisions of the EIA Notification, 2006. The project proponent was unable to clarify the same. (iii) In terms of the above said OM, the proposals for EC in respect of all the sectoral components of the project were to be submitted simultaneously. The same has not been done in the instant case, and the proposals are at different stages. (iv) The relevance of the said OM (project proponent has relied upon) for such projects also attracting the provisions of the CRZ Notification, 2011, needs to be looked into.

	(v) The concerns raised by the Conservation Action Trust regarding environmental impacts of the project, are serious, and need to be suitably addressed by the project proponent. (vi) The Committee appreciated the earnestness and diligence of the project proponent and the consultant, though it is a very complex proposal and would need clarity in the road map for granting clearance. The EAC, after deliberations, had desired that the Ministry may examine the proposal vis-a-vis the procedure detailed in the said OM, read with the relevant provisions of the CRZ Notification, 2011 to arrive at the appraisal mechanism to be followed in such cases. The project proponent was also asked to respond to the concerns of Conservation Action Trust through a para-wise response. The proposal was deferred.
3.3.3	The project was again considered by EAC in its 163rd meeting held on 9th September, 2016, wherein the EAC was informed about the appraisal mechanism of the instant mechanism involving SEZ (requiring EC under the EIA Notification, 2006) along with the intake and outfall facilities requiring CRZ clearance for the portion falling in CRZ area. The Committee was also informed that the proposal needs comprehensive examination from CRZ perspective. After the presentation made by project proponent, especially highlighting their response in reply to the earlier observations of the EAC, the Committee noted the following: (i) There are many legal entities that could be designated as project proponents, and are involved in developing the SEZ, Port, TPP, CCPP, and/or other identified industrial units. The different documents submitted reveal non-uniformity in this regard e.g. public notice issued by GPCB for conducting public hearing reflects M/s Sealand Ports Pvt Ltd as the project proponent, for CRZ mapping, the clients are named as M/s Sealand Ports Pvt Ltd, M/s Avash Logistic Park Pvt Ltd, M/s Nana Layja Power Company Ltd, whereas the ToR for the instant proposal has been issued in the name of M/s Sealand Ports Pvt Ltd, M/s Avash Logistic Park Pvt Ltd. This needs to be clarified appropriately. (ii) Since the proposal involves discharge of effluents also, the project proponent was required to apply to the GCZMA along with the 'No Objection Certificate' from the concerned SPCB. The same was not done. (iii) The public hearing was allowed to be conducted by Hon'ble High Court of Gujarat vide order dated 11th December, 2014. The project proponent should provide the final outcome of the same. (iv) The CRZ mapping in respect utility corridor, especially around the creek, is not correct and needs to be reviewed and authenticated by the authorised agency. (v) Since the proposal involves combined intake and outfall facilities for all the constituent units of SEZ, cumulative impact on the marine eco-system is of prime concern and needs in-depth deliberations. That necessitates ascertaining the pollution loads from the individual units along with the characteristics, and also a relook at the conditions stipulated in the EC by the sectoral EACs. (vi) In view of the fact that intake and outfall facilities remain an integral part of the Super Critical Thermal Power Plant, and accordingly, as required under the provisions of

	the CRZ Notification, 2011 read with section 8(v) of the EIA Notification, 2006, the EAC desired that the Ministry may examine if the EC for the TPP was to be granted after appraising the proposal from CRZ perspective also. (vii) The CRZ area around the utility corridor is having significant sand dunes, which needs to be visited for contouring and geo-morphological characteristics of the area. The Committee felt the necessity for an expert opinion in this regard through a site visit. (viii) A substantial part of the SEZ area and the complete area of 124 acres for the very crucial utility corridor, are yet to be acquired by the project proponent. In terms of this Ministry's OM dated 7th October, 2014, the project proponent were asked to submit copies of the State Government Notification for acquiring the Government land and the letters of intent or purchase agreements from the private land owners. The EAC, after deliberations, had desired that the Ministry may examine the instant proposal for the adequacy and applicability of proposed environmental safeguards for the constituent units of SEZ and for which standalone ECs have been issued or are in advanced stages without accounting for intake and outfall facilities. The Ministry may like to structure and schedule the sequence of presentations before the different EACs. The EAC sought detailed clarification and inputs in respect of its observations contained in above para above. *The proposal was, therefore, deferred.*
3.3.4	During deliberations in 177th meeting held on 16th October the EAC noted the following: (i) No clarity on land details for proposed SEZ/FTWZ area and utility corridor. (ii) Submission of details with CETP designs proposed different industries to be housed in SEZ/FTWA with effluent and treated effluent characteristics. (iii) Copy of Judgment of High court of Gujarat with writ petition (PIL) No 325 of 2014. (iv) Further, more clarity on cumulative impact of marine eco system and pollution loads on individual units along with characteristics. (v) Four pipes are slightly complicated to execute and also to maintain. What would be monitoring mechanism for outfall leaks? (vi) Submission complete documentation on marine intake/outfall. (vii) Details about court cases pending against the setting up of 4000 MW Thermal power plant & 60 MLD desalination plant and 2000 MW Gas based combined cycle power plant, where EC was already granted by MoEF&CC. After deliberations, the EAC deferred the proposal for further consideration on above points. Further to have correct assessment of the site specific issues with respect to CRZ clearance point of view, a sub-committee of the EAC shall inspect the project site, verify the relevant document/reports on above mentioned points and furnish its report to MoEF&CC, which would be placed before the EAC for further consideration of the proposal.
3.3.5	A team of Subcommittee of EAC visited project site from 25th December, 2017 to 27th December, 2017 and submitted the report.

3.3.6 The project was again considered by EAC in its 185th meeting held on 26th March, 2018. After the presentation made by project proponent, especially highlighting their response in reply to the earlier observations of the EAC, the Committee noted the following:

(i) SEZ Industrial area is reduced from 3473 acres to 3147.70 acres. Utility Corridor area is 133 acres. The final land use break up of Industrial area is as under:

S. No.	Particulars	Area in Acres
1	Thermal Power Plant	1298
2	Gas Power Plant	88
3	Other SEZ Units	1281.3
4	Non Processing Area	148.9
5	DTA	61.5
6	FTWZ	270
	Sub-Total	3147.7

(ii) Submitted details with CETP design proposed for difference industries to be housed in SEZ/FTWA with effluent and treated effluent characteristics. Following five CETPs are proposed in SEZ area.

CETP	Industrial Sectors to be serviced	Estimated Effluent Quantity (MLD)	Approx CETP Area (Acres)	Treated Water Disposal System
CETP 1	Pharmaceuticals and Chemicals	8.74	5.65	Marine discharge
CETP 2	Non-Metallic Minerals, Textiles and Handicrafts	2.42	1.6	
CETP 3	Plastic Industry (DTA)	1.39	1	Reuse and Recycle
CETP 4	Engineering Goods, Shipping, Textiles and FTWZ	8.18	5.3	Marine discharge
CETP 5	Engineering Goods	1.75	1	Reuse and Recycle

(iii) Submitted the copy of Judgement of Hon'ble High Court of Gujarat w.r.t. WP (PIL) No. 325 of 2014. As per Court Order, the collector kutch was directed to decide the allegation made by the petitioner within a period of three months. And the petition was disposed of by the Hon'ble High Court of Gujarat.

(iv) Submitted the following details about cumulative impact on Marine eco-system and marine discharge:

(a) Combined outfall quantity of ~921.4 MLD discharged into sea through outfall pipes:

- TPPs and Desalination discharge – 891.9 MLD.
- CETPs treated discharges – 19.4 MLD.
- Treated sewage from SEZ NPA and both the power plants – 7.04 MLD.
- Treated wastewater from shipyard cum captive jetties – 3.0 MLD.

	(b) Based on the mathematical model study, the discharge point is proposed at 10.3 m of water depth at Latitude 69°13'49.13"E N; Longitude 22°48'52.63"N, which is at ~2.3 km from the shore. (v) Submitted following details for monitoring mechanism for outfall leaks: (a) Four Pipelines with 1.6 m Dia Execution. • With available construction techniques, installation is easy. • Four pipelines will enable phased installation in line with progress of industries development. (b) Monitoring Mechanism and Measures: • Necessary preventive measures for spillage from pipelines, such as surface RCC channels along the pipelines of outfall and intake will be adopted. • Periodic maintenance and check of wastewater conveyance pipelines by the Operation & Maintenance team member. • Attempt to restore by replacing a part or putting together the torn or broken parts of the conveyance pipeline in case of any leakage detected. (vi) Submitted details of Court cases against 4000 MW TPP and 2000 MW CCPP, which are still subjudice.
3.3.7	During 185th meeting held on 26th March, 2018, EAC observed following: (i) The SEZ area is being utilised for agriculture purpose due to good ground water resources with water level 2.84 m to 7.19 m and it need to be protected from over exploitation or its contamination by the effluents such as pharma, polymer and basic & allied chemical industries due to potential to contaminate ground water. (ii) The intake/outfall of sea water for power plants (2000 MW gas based) and (4000 MW coal based) may be considered with appropriate location of intake point as well as outfall point with diffusers at adequate depth. Sea water intake for desalination plant as well as its reject along with discharge of cooling water bleed of power plants may be considered. It needs to be ensured that there should not be any discharge of chemical constituents and heavy metals. (iii) The industry categories that could be considered are plastic industry with Zero Liquid Discharge (ZLD), textile industry comprising spinning and weaving operations and apparel making with ZLD, Free Trade and warehousing zone activity, focus engineering goods, shipping ancillary, handicrafts, non-metallic and mineral products with ZLD and desalination plant with intake and outfall as mentioned above. (iv) The utility corridor will pass through stabilized sand dunes which is proposed to be utilized for conveyor belt for coal transportation, intake and outfall pipelines to sea as well as LNG pipeline, and road, all of which will pass above sand dunes. Hence, the sand dunes should not be disturbed with structures and corridor should be built on stilts with minimum structural intervention. A proper management plan for protection of sand dunes should be prepared, as entire foreshore area was proposed to be reclaimed and utilised for hinterland facilities of port/shipyard.

	(v) Considering the sea coast adjoining proposed project site is known for breeding ground of Olive Ridley and Green Sea Turtle and quality of sea water is pristine as well as used for fishing activity by locals, no effluent discharge be allowed from drugs and pharmaceuticals, polymer and basic and allied chemical industries including dyeing operation in textile industry. As such these chemical industries categories cannot be considered to ensure that no chemical constituents find a way even through a storm water drain during rainy season. (vi) It is to be ensured that ship building activity should not result in any deterioration of sea water quality and suitable measures to devised, as Olive Ridley and Green Sea Turtle are noticed in this area. (vii) The construction of shipyard and port requires reclamation and raising of ground level at beach front with dredged material. During construction, sea water turbidity will increase and hence it will temporarily affect the fishing activity, which should be compensated with CSR activity. (viii) The LNG jetty, shipping jetty and ship yard are proposed in beach portion with reclamation of adjoining sand dunes and it was reviewed by Infra 2 committees. The CRZ provisions should be met to minimise the impact of port facilities and utility corridor. (ix) 2% project cost should be earmarked for sea turtle and other marine biodiversity conservation of the region. Conservation work must be carried out by nationally and internationally reputed organization. It also involves monitoring of sea turtle nesting activity annually and monitor change in habitat is any. A third party audit of the funds and the conservation measures must be undertaken annually. (x) Illumination at all installations must be sea turtle friendly. (xi) Effluent discharge from Engineering Goods, Shipping, Textiles and FTWZ should not be mixed together for sending to CETP as proposed by the proponent.
3.3.8	The EAC deferred the proposal for want of response from proponent in respect of observations made by the committee as mentioned in above para**.** EAC also advised this Ministry to take legal opinion, as the project location is subjudice before the court of law.
3.3.9	Accordingly, the Ministry after getting legal opinion requested the proponent to provide information on following items: (i) Project Proponent, i.e., 'Sealand Ports Private Limited (SPPL) and Avash Logistic Park Private Limited (ALPL), A group Company of IL&FS' was impleaded as Respondent No. 8 in Appeal No. 73 of 2016 before the Hon'ble NGT (WZ), Pune. It is also observed by the said EAC that the above mentioned appeal has been linked with the Appeal no. 24 of 2015. (ii) The appellant has alleged that the project under challenge, i.e., Thermal Power Plant and Desalination Plant are part of Multi-product SEZ/FTWZ and DTA. Please intimate about your stand on this allegation.

3.3.10 In addition to providing justification for observations of EAC during its 185th meeting held on 26th March, 2018, the project proponent, vide their email dated 20th June, 2018, submitted the following information during 195th meeting held on 30-31 August, 2018:

(i) In Appeal No. 73/2016 subjudice before the Hon'ble National Green Tribunal, Western Zone, Pune, the Appellants, Conservation Action Trust for reasons best known to them have voluntarily removed original Respondent No.6 [Gujarat Integrated Maritime Complex Private Limited (GIMCO)], Respondent No. 7 [IL&FS Maritime Infrastructure Company Limited (IMICL)] & Respondent No. 8 [Sealand Ports Pvt. Ltd. (SPPL)] from party-array by making a specific plea to the Hon'ble Tribunal stating that the said entities are not necessary parties to the Appeal. The Hon'ble Tribunal vide order dated 19.12.2016 has permitted the removal of Respondent No. 6 to 8 from party-array. The Respondent No.5, Nana Layja Power Company Ltd. has filed a Miscellaneous Application No. 83/2017 ('MA') in the said Appeal seeking dismissal of the Appeal (73/2016) on account of this. Both the Appeals are currently subjudice, however till date, the NGT has not issued any adverse order/stay/injunction against the Respondent therein in respect Thermal Power Plant and/or Gas based Power Plant.

(ii) The Thermal Power Plant & the Desalination plant has been contemplated to be built in the area which falls under the purview of the Multi-product SEZ/FTWZ and DTA for which EC&CRZ clearance is yet to be granted.

(iii) Also the proponent has submitted details of CER activities in line with the MoEF&CC's O.M dated 1st May, 2018. The proponent has identified following under Corporate Environment Responsibility (CER) along with budgetary estimate for Development of Multiproduct SEZ and Free Trade Warehousing Zone (FTWZ) including Thermal Power Plants. Since this is a green field project, the fund allocation has been estimated to be about INR 98.5 Crore which is ~0.25% of Project Cost (INR 39,243 Crore Multiproduct SEZ and Free Trade Warehousing Zone (FTWZ) including Thermal Power Plants).

S. No.	Activities Identified for CER	Amount INR (in crore)
1.	Grass land Conservation and Development	4.5
2.	Turtle and Marine Bio Diversity Conservation	15.0
3.	Livelihood Development Interventions and Seed Capital Funding	13.5
4.	Natural Resources Management (water and land resource development)	7.8
5.	Infrastructure Development- Interventions in Social Infrastructure, Physical Infrastructure-Basis & Supplementing Funding on Government Schemes	30.0
6.	Education & Health Development	12.8
7.	Fishermen Community Development Programme (infrastructure, livelihoods, capacity building, socioeconomic development)	1.5
8.	ICE & Capacity Building	4.8
9.	Project development (Surveys, feasibility studies, DPRs)	2.5
10.	CER Programme Management Cost	5.1

11.	Monitoring and Evaluation	1.0
	Total	**98.5**

3.3.11

The EAC, after detailed deliberations during 195th meeting held on 30-31 August, 2018, **recommended the project for grant of Environmental Clearance**, with the following **specific conditions** in addition to all standard conditions applicable for such projects:

(i) No groundwater shall be used at any stage of project.
(ii) No Pharma and Chemical units/industries will be housed within the SEZ.
(iii) All CETPs/ETPs developed as ZLD system with reuse of treated wastewater. Also there shall be no discharge into the sea from ship building activities.
(iv) Marine outfall will be used only for discharge of cooling water and reject brine from desalination plant.
(v) Sand dunes will not be disturbed and flattened. As recommended by the GCZMA, trestle of the utility corridor shall be kept 1.0 m above the highest height of sand dunes.
(vi) In addition to CER activities of SEZ and Shipyard development, an amount Rs.35.70 Crore shall be earmarked for fishermen welfare activities to compensate the loss due to temporary closure of fishing activities.
(vii) Turtle friendly illumination policy shall be adopted. Accordingly, sea turtle friendly illumination be installed at the sea front portion of the project.
(viii) Separate CETP shall be developed for different sectors.
(ix) All recommendations of GCZMA shall be implemented in letter and spirit and report be submitted to the concerned Regional Office of the MoEF&CC.

3.4 **Development of 8 lane access controlled Chennai-Salem Greenfield Corridor of 277.3 km Tambaram to Harur Section of NH-179B, Harur to Salem Section of NH-179A by M/s National Highway Authority of India - Amendment to Terms of Reference.**

[IA/TN/MIS/74037/2018] [F. No.10-30/2018-IA.III]

3.4.1 The project proponent along with EIA Consultant M/s Feedback Infra Private limited, Gurugram made a presentation and provided following information to the Committee:

- The Ministry granted the Terms of Reference to the M/s National Highway Authority of India for 'Development of 8 lane access controlled Chennai-Salem Greenfield Corridor of 277.3 km Tambaram to Harur Section of NH-179B, Harur to Salem Section of NH-179A, Chengalpattu to Kancheepuram Section of NH-132B, Semmampadi to Chetpet Section of NH-179D and Polur to Tiruvannamalai Section of NH-38', vide letter no. 10-30/2018-IA.III dated 8th June, 2018. However, the proponent has observed certain changes to be made in the proposal and therefore requested the Ministry to amend the ToR by submitting online application (with revised proposal) on 24th August, 2018, vide their letter no. 1013/1/2k/Env./504 dated 21st August, 2018.

S. No.	Description	As per approved ToR	Amendment Required	Remarks
1	Name of Work	Development of 8 lane access controlled Chennai-Salem Greenfield Corridor of 277.3 km Tambaram to Harur Section of NH-179B, Harur to Salem Section of NH-179A, Chengalpattu to Kancheepuram Section NH-132B, Semmampadi to Chetpet Section of NH-179D and Polur to Tiruvannamalai Section of NH-38	Development of Chennai-Salem Greenfield Corridor of 277.3 km (Tambaram to Harur Section of NH-179B, Harur to Salem Section of NH-179A)	The following four spur roads were de-scoped: a) Chengalpattu to Kancheepuram Spur- 30.000 km; b) Semmampadi to Chetpet Spur – 4.700 km and c) Polur to Tiruvannamali Spur- 16.000 km
2	Change in Alignment	Total length of 277.30km	Total length of 277.30km;	To avoid diversion of Reserve Forest area and minimisation of resettlement impacts; alignment was slightly modified without change in length.
3	Change in Right of Way	RoW of 90m	Row 70m in Non-forest area and 50 m in forest area	To avoid the severity of impacts, the RoW was reduced
4	Change in forest length and area	Forest length of 13.290 km and Forest Area of 120 ha	Forest Length of 9.0 km (approximately) and Forest Area of 45 ha (approx.)	Diversion of Forest area substantially reduced by constraining RoW to 50m and minor shift in alignment at possible locations without compromising geometrics.

- The proposed project is a development of 8 lane Greenfield Corridor (Total Length of 277.300 km) for development of Tambaram to Harur Section of NH-179B, Harur to Salem Section of NH-179A and 3 nos. of Spurs namely; Chengalpattu to Kancheepuram Section of NH-132B, Semmampadi to Chetpet Section of NH-179D and Polur to Tiruvannamalai Section of NH-38.
- Proposed Greenfield Corridor starts near Chennai ring road in Vandalur and ends at NH-544 bypassing Salem. Proposed alignment passes through Kanchipuram, Tiruvannamalai, Krishnagiri, Dharampuri and Salem Districts of Tamil Nadu State.
- The land use pattern on 10km either side of the project road is predominantly agriculture followed by habitation and Forest Area.

<table>
<tr><td></td><td>

Tentative length of affected forest area along the proposed alignment is about 8.882 km with about 45 ha of affected forest area considering the RoW of 70m in non-forest area and 50m in forest area.
No wildlife sanctuary or national park is located within 10km radius of the proposed alignment. However, Arignar Zoological Park, Chennai is located about 1.5 Km from the proposed start point of the project.
Total land acquisition for the proposed alignment is about 2086 ha, of which about 1941 ha will be for road and about 145 ha for interchanges, rest area and truck lay byes etc.
There are about 28 settlements along the proposed alignment.
Water Requirement: Total 1,000 KLD water required during construction phase will be met through tanker from authorised vendors.
Waste water generation, treatment and disposal: Septic tank with soak pit or portable STP shall be provided in Labour camps for sewage management.
Municipal solid waste generated and disposal facility: Municipal Solid Waste likely to be generated from labour camp, which shall be transferred to nearest municipal waste dumping site.
Rehabilitation involved if any: The details of structure to be rehabilitated or resettled shall be provided in the EIA report.
Water bodies, diversion if any: The proposed stretch passes through 7 rivers and bridges shall be proposed at them.
Investment Cost: The total estimated project civil cost is approximately INR 7,210 Crores.
Employment potential: 1800 (during construction phase only)
Benefits of the project: Better connectivity of Chennai and Salem to Other parts of the state and neighbour states.
Court cases if any: Total 12 litigations (as on 14-08-2018) have been filed. Most litigations are related to land acquisition and compensation distribution and some litigations are to stop land acquisition process till Environment Clearance.

</td></tr>
<tr><td>3.4.2</td><td>During 195th meeting held on 30-31 August, 2018, EAC has observed that there are more than 12 litigations, challenging proposed project and land acquisition, have been received in the Ministry.</td></tr>
<tr><td>3.4.3</td><td>After detailed deliberation during 195th meeting on 30-31 August, 2018, EAC recommended to amend the ToR issued vide ToR letter no. 10-30/2018-IA.III dated 8th June, 2018), as mentioned below with following additional specific conditions:

(i) The correction in the typographical error in the earlier ToR letter mentioned above:

<table>
<tr><th>Page No.</th><th>Para No. of ToR letter</th><th>Typographical error</th><th>Correction</th></tr>
<tr><td>5</td><td>Para-4 of ToR Letter</td><td>Construction of 8-lane of Bangalore-Chennai Expressway Phase-I from Bangalore at Km 0.000 and ends at km 71.000 near Village N.G. Hulkur, Taluk Bangarpet, District Kolar (Karnataka) (Length of 73.050 including Spur Alignment of 2.05 km)</td><td>Development of Chennai-Salem Greenfield Corridor of 277.3 km (Tambaram to Harur Section of NH-179B, Harur to Salem Section of NH-179A)</td></tr>
</table>

(ii) Recommendations of the EAC for amendments in the earlier ToR letter:</td></tr>
</table>

S. No.	Description	As per approved ToR	Amendment recommended
1	Name of Work	Development of 8 lane access controlled Chennai-Salem Greenfield Corridor of 277.3 km Tambaram to Harur Section of NH-179B, Harur to Salem Section of NH-179A, Chengalpattu to Kancheepuram Section NH-132B, Semmampadi to Chetpet Section of NH-179D and Polur to Tiruvannamalai Section of NH-38	Development of Chennai-Salem Greenfield Corridor of 277.3 km (Tambaram to Harur Section of NH-179B, Harur to Salem Section of NH-179A)
2	Change in Alignment	Total length of 277.30km	Total length of 277.30km;
3	Change in Right of Way	RoW of 90m	Row 70m in Non-forest area and 50 m in forest area
4	Change in forest length and area	Forest length of 13.290 km and Forest Area of 120 ha	Forest Length of 9.0 km (approximately) and Forest Area of 45 ha (approx.)

(iii) Since the considerable portion of road is passing through the hilly terrain, a separate study on impact of proposed alignment on mountain ecosystem (hilly region), shall be carried out by a reputed government organisation, like NEERI, WII, GBPIHED, etc.

(iv) Considering the various representations against land acquisition submitted by local people and writ petitions filed in the court of law (as mentioned above), EAC recommends to carry out a comprehensive socio-economic assessment with emphasis on impact of ongoing land acquisition on the local people living around the proposed alignment from any reputed institution of the Government of India

(v) Details of the non-forest areas (geographical area, no. of trees etc.) being reduced due to changing RoW from 90m to 70m/50m.

(vi) Detailed land use for the revised RoW and its buffer in 10 km radius to be provided.

(vii) Traffic projection vis-à-vis revised RoW needs to be provided.

(viii) The ToR granted to this project are subject to outcome of ongoing legal proceedings in the Hon'ble High Court of Madras and other courts/tribunals, if any.

(ix) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project.

3.5 **Development of Satellite Town Ring Road (STRR) Phase-I newly declared National Highway NH-948A from Dobbaspete to Ramanagara (km 0.000 to km 82.200) 82.20 km in Ramanagara, Karnataka by M/s National Highways Authority of India - Reconsideration for Terms of Reference.**

[Proposal No. IA/TN/MIS/75227/2018 dated 06.06.2018] [F. No. 10-33/2018-IA.III]

3.5.1 The project proponent made a presentation along with EIA Consultant M/s Louis Berger Consulting Private Limited and provided the following information to the Committee:

	(i)	The Satellite Town Ring Road (STRR) of Bangalore (Newly declared NH-948A) is proposed 6 lane highway having a total length of 179.969 Km in the states Karnataka and Tamil Nadu. The Project will be taken in 3 Phases viz; (a) Phase-I (From Ch. 0+00 to Ch. 82+200) in the state of Karnataka. (b) Phase-II (From Ch. 82+200 to Ch. 140+000), in the states of Karnataka and Tamil Nadu. (c) Phase-III (From Ch. 140+000 to Ch. 179+969) in the state of Tamil Nadu.
	(ii)	This application is for the proposed Phase-I of STRR. The total length of the Phase I is 82.200 km. The project stretch falls in the state of Karnataka.
	(iii)	The Proposed Phase-I start at design Ch. 0+00 near Oblapura village at Neelmangala Taluk of Bangalore Rural district and ends at Ch. 82+200 at cross point of SH-3, Km 52.700 near Kailancha village at Ramanagara taluk in Ramanagara district.
	(iv)	It passes through two districts of Karnataka viz. Bangalore Rural (From Design Ch. 0+00 to 19+500) and Ramanagara (From Design Ch. 19+500 to 82+200). The proposed road starts at Ch.0.ooo (Km 121.225 of NH-207) and intersects at Ch.9+500 (NH4/48 – existing Km 50.550), Ch. 30+364 (NH-75/48 – existing Km 42.230), Ch. 44+500 (SH-85 Existing Km 47.112) and Ch.70+250 (NH-275 Existing Km. 318.130) and Ch. 82+200 (SH-3 existing Km 52.700). The proposed road near Ramanagara shall integrate with the proposed bypasses envisaged by NHAI on NH-275/948 for seamless traffic flow.
	(v)	There are 22 Major Settlements along the alignment, namely, Manne, Tattekere, Nijagal, Kempohalli, Maddenahalli, Lakkuru, Agalakuppa, Hosapalya, Banawadi, Goruru, Gudemaranahalli, Handpost, Gudemaranahalli, Byalakere, Magadi, Hanchikuppe, Atimgere, Gungarahalli, Melahalli, Basavanapura, RampuraDoddi, Ramanagara, Kunagal.
	(vi)	The proposed right of way for the Greenfield alignment is considered as 70m throughout the corridor.
	(vii)	The ending point of STRR Phase-I will further be integrated with STRR Phase-II.
	(viii)	The original STRR of the Government of Karnataka was taken and modified by NHAI under Bharatmala program, which was concurred by the State Government vide their letter no. PWD-518/CNH/2017 dated 27th October, 2017.
	(ix)	The proposed land acquisition for the alignment is approx. total 785.5 ha.
	(x)	The proposed road will have 2 major bridges, 5 minor bridges, 144 culverts, 3 ROB's, 27 vehicular underpasses, 4 interchanges 1 flyover.
	(xi)	Safety measures will be provided as per NHAI Safety Manual and IRC: SP 88, safety measures and MoRTH guidelines in this regard.
	(xii)	The detail of water body around the proposed project is as follows: River Arkavathy is crossing the project alignment at two locations (i.e. at Design Ch. 64+480 and Ch. 78+380), further the alignment is crossing few minor streams.

	(xiii)	As per initial assessment, it is anticipated that on an average about 150 to 200 trees are likely to be affected per km. The detailed assessment of actual trees to be affected (tree inventories) on the finalized alignment will be undertaken during detailed EIA Study and the preparation of Forest Clearance proposals as per FC (Act) 1980, and the subsequent amendments thereafter.
	(xiv)	Efforts will be made to minimize trees loss by restricting tree cutting with information width. Avenue plantation shall be carried out as per IRC SP: 21:2009 on available ROW apart from statutory requirements.
	(xv)	Material requirement are aggregate (27.19 Lakh Cum), Bitumen (0.44 Lakh Ton.), Earth (124.99 Lakh Cum.), Sand (9.30 Lakh Cum), Steel (0.57 Tonnes), Cement (2.30 Lakh Ton.).
	(xvi)	Fly ash will be used in the project depending upon their availability as per existing fly ash notification.
	(xvii)	**Proposal:** Consultancy Services for preparation of DPR for Development of Economic Corridors, Inner Corridors, Feeder Routes and Coastal Roads to Improve the Efficiency of Freight Movement in India - Lot 3/Andhra Pradesh, Karnataka, Goa & Kerala /Package 1. The corridor proposed with 70m right-of-way consists of divided 6 lane carriageway starts from Design Ch. 0+00 near Oblapura village at Nelamangala Taluk of Bangalore Rural district and ends at Design Ch. 82+200 at cross point of SH-3 (Existing Ch. 52+700) near to Kailancha village in Ramanagara district in the state of Karnataka. The proposed alignment is a newly declared National Highway-948A.
	(xviii)	**Land use of the site and around the site up to 10 km radius:** Proposed project is a Greenfield project. Agricultural (84%), Barren (14%), other revenue/forestland (2%) around the site up to 10Km. The major land use of STRR Phase-I includes cultivation (agricultural) land and rest includes barren land.
	(xix)	**Whether the project is in Critically Polluted area:** Not Applicable.
	(xx)	**If the project involves diversion of forest land, extend of the forest land:** No.
	(xxi)	**If the project falls within 10 km of eco- sensitive area, Name of eco- sensitive area and distance from the project site:** The proposed road location falls approximately 1.2km away from Ramadevarabetta Vulture Sanctuary and approximately 200m away from its ESZ notified by MoEFCC vide its notification no. S.O.2993(E) dated 11th Sep, 2017
	(xxii)	**Water requirement, source, status of clearance:** Water will be required mainly during construction period. About 250 Kl/day, water will be consumed during peak construction period for the project. Surface Water (Approx. 70%) and Ground Water (30%) shall be utilized for construction works. Source: The detail shall be provided during the detailed Environmental Impact Assessment (EIA). Status of Clearance: NoC will be obtained Prior to Construction works.
	(xxiii)	**Connectivity to the site:** The proposed road starts at Km 0+000 (NH-207– Km 131.255) and intersects at 9+500 (NH4/48– Km 50.550), 30+364 (NH-75/48–Km 42.230), 44+500 (SH-85 –Km 47.112) and 70+250 (NH-275 Ch. 318.130) and

	82+200 (SH-3–Km 52+700). The proposed road near Ramanagara shall integrate with the proposed bypasses envisaged by NHAI on NH-275 to ease the traffic congestion. (xxiv) **Terrain, level with respect to MSL, requirement of filling if any:** Terrain is Plain/Rolling with elevation ranges from 665 to 951m amsl. Overburden will be generated during excavation for alignment and at borrow areas. It is proposed to reuse these materials for constructions of embankment, rehabilitation of borrow areas, other allied sites and or filling of low lying/ disfigured wasteland. (xxv) **Tree cutting, types, numbers, girth size etc.:** As per initial assessment, it is anticipated that on an average about 150 to 200 trees are likely to be affected per km. The detailed assessment of actual trees to be affected (tree inventories) on the finalized alignment will be undertaken during detailed EIA Study. Common trees include *Eucalyptus, Azadirachta indica, Acacia catechu, Ficus* and *Tamarindus indica*. Efforts will be made to minimize the trees loss by restricting tree cutting within formation width. Avenue plantation shall be carried out as per IRC SP: 21:2009 on available ROW apart from statutory requirements. Required tree cutting will be done after obtaining requisite permission from competent authority. In order to minimize the impact of tree cutting, compensatory plantation shall be undertaken. (xxvi) **Rehabilitation involved if any:** All the temporary sites used for construction activities will be rehabilitated properly before handing over back to the land owner. The solid waste generated due to construction and allied activities will be reused for rehabilitation of borrow area / quarries sites, campsite and in temporary diversions and slopes. (xxvii) **Water bodies, diversion if any:** River Arkavathy crossing the alignment at 2 locations (at Design Ch. 64+480 and Ch. 78+380) and few minor streams crossing alignment. (xxviii) **Court cases if any:** No. (xxix) **Investment/Cost of the project (in cr.):** INR 2600 Crore (Approx.) (xxx) **Employment potential:** This Road project will improve the economic and social welfare of those using the road or served by it. Ultimately it will create jobs by increasing access to markets, education and health services etc. (xxxi) **Benefits of the project:** This project aims to improve connectivity particularly on economic corridors, border areas and to remote areas with an aim of rapid and safe movement of cargo to boost exports.
3.5.2	After detailed deliberation during 191st meeting on 25th June, 2018, EAC observed that the proposed stretch is highly sensitive from ecological point of view. Therefore, EAC recommended for a site visit by a sub-committee of the EAC before the proposal is considered further. Accordingly, the sub-committee was formed that visited the project site on 23-24 July, 2018 and submitted the report (**Annexure-1**).
3.5.3	EAC, based on the detailed deliberations during its 195th meeting dated 30-31 August, 2018, **recommended the project for the grant of ToR**, and for preparation of EIA/EMP

	report with public consultations subject to compliance of all conditions as notified in the standard ToR applicable for such projects and specific conditions, as mentioned below: (i) Cumulative Impact Assessment to be carried out along entire STRR project including Phases I, II and III. (ii) Water bodies along proposed alignment needs to be surveyed for their conservation and sustainability. Each water body should be clearly identified with its size, any important and threatened species associated with it, its usage by local community along with shape file of each of water body. Impact of proposed project on these water bodies to be identified along with mitigation measures. Emphasis should be given to avoid alignment passing through/over water bodies. (iii) Source of water availability to be ascertained for construction and domestic need. Prior permissions shall be obtained for extraction of waterfrom State Authority/CGWA, as applicable. (iv) In consultation and agreement with Chief Wildlife warden the passages of Elephants along Phase-I and Phase-II shall be identified' (v) NHAI to develop a comprehensive Environmental Management Plan (EMP) with specific focus on elephants in consultation with Chief Wildlife Warden. The EMP should identify the cross over areas and suggest proper mitigation including but not limited to structures (overpasses, underpasses etc.) that needs to be designed and constructed for free movement of Elephants along the passages. EMP should also focus on elephant-human conflict that may arise due to the new green field alignment and mitigation strategy. Adequate fund provision be made in consultation with PCCF & HoFF Karnataka for the proposed alignment and the same be provided to forest department through the mechanism as suggested by the PCCF & HoFF or through existing mechanism adopted by the forest department and depositing the funds for this special purpose. (vi) Provide dimension and location structures for conservation of the wildlife as well as safe movement of the animals in consultation with Chief Wildlife Warden. (vii) Adequate fund provision shall be made under CER to support strengthening of vulture conservation in and around the Ramadeverbetta Vulture Sanctuary, which is very near to Phase-I alignment. Also the fund provision be made in consultation with PCCF & HoFF for conservation of vultures and creating vulture safe zone. BNHS Vulture Safe Zone policy may be referred for this purpose. (viii) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project.
3.6	**Development of Satellite Town Ring Road (STRR) Phase-II newly declared National Highway NH-948A from Ramanagara to Peddamadhagondapalli (km 82.200 to km 140.00) 57.80 km in District Ramanagara and Bangalore Urban, Karnataka and District Krishnagiri, Tamil Nadu by M/s National Highways Authority of India - Reconsideration for Terms of Reference.** **[Proposal No. IA/KA/MIS/75235/2018 dated 07.06.2018] [F. No. 10-34/2018-IA.III]**
3.6.1	The project proponent made a presentation along with EIA Consultant M/s Louis Berger Consulting Private Limited and provided the following information to the Committee:

	(a)	The Satellite Town Ring Road (STRR) of Bangalore (Newly declared NH-948A) is proposed 6 lane highway having a total length of 179.969 Km in the states Karnataka and Tamil Nadu. The Project will be taken in 3 Phases viz., • Phase-I (From Ch. 0+00 to Ch. 82+200) in the state of Karnataka. • Phase-II (From Ch. 82+200 to Ch. 140+000), in the states of Karnataka and Tamil Nadu. • Phase-III (From Ch. 140+000 to Ch. 179+969) in the state of Tamil Nadu.
	(ii)	This application is for the proposed Phase-II of STRR which starts at Ch. 82+200 at Cross point of SH-3-(Km 52.700) near Kailancha Village in Ramanagara taluk in Ramanagara district (Karnataka) and ends at Ch. 140+000 in Peddamadhagondapalli in Denkanikottai of Krishnagiri District at Karnataka/TN Border.
	(iii)	The Land use pattern within 10 km on either side of project area is predominantly agricultural followed by forests and barren area. The proposed road traverses approx. 4.684 Km through Bannerghatta National Park (BNP). An elevated corridor is proposed through Bannerghatta National Park. Viaduct section would start from Design Ch. 113+350 to Design Ch. 119+980 (Total length- 6.63 km).
	(iv)	There are 16 Major Settlements along the alignment, namely, Chikkenahalli, Anajawadi, Chikka Madhawadi, Alisab Doddi, Aralalusandra, Varager Halli, Chathra, Dodda, Maralawadi, Banavasi, Maniyambal, Indalavadi, Thimmasandra, Vanakanahalli, Menasiganahalli, Muttur.
	(v)	The proposed right of way for the Greenfield alignment is considered as 70m throughout the corridor. The proposed ROW is considered as 28.5m in Bannerghatta National Park.
	(vi)	The original STRR of Government of Karnataka was taken and modified by NHAI under Bharatmala Program, which was concurred by the state government vide letter No.PWD/518/CNH/2017 dated 27th October, 2017 and Government of Tamil Nadu vide its letter No.14787/HV1/2017-2 dated 24th January, 2018.
	(vii)	The proposed land acquisition for the alignment is approx. 503.84 ha.
	(viii)	The proposed road will have 2 major bridges, 6 minor bridges, 104 culverts, 14 vehicular underpasses, 3 interchanges.
	(ix)	Safety measures shall be provided as per NHAI Safety Manual and IRC: SP 88, IRC: SP:55 and MoRT&H guidelines in this regard.
	(x)	River Akravati crossing at Ch.90+280 and River Suvarnamukhi crossing at 92+980. Dry stream crossing at design Chainage (Ch.90+300), Canal at (Ch.105+150), Canal at (Ch. 105+400), Canal at (Ch.105+700), Canal at (Ch.106+200), Canal at (Ch.106+400), Nalla dry at (Ch.107+800), Nalla dry at (Ch.118+300).
	(xi)	As per initial assessment, it is anticipated that on an average about 150 to 200 trees are likely to be affected per km. The detailed assessment of actual trees to be affected (tree inventories) on the finalized alignment will be undertaken during

	detailed EIA Study and the preparation of Forest Clearance proposals as per FC (Act) 1980, and the subsequent amendments thereafter. (xii) Efforts will be made to minimize the trees loss by restricting tree cutting with information width. Avenue plantation shall be carried out as per IRC SP: 21:2009 on available ROW apart from statutory requirements. (xiii) Materials requirement are aggregate (18.46 lakh cum), bitumen (0.30 lakh tonnes), earth (84.85 lakh cum), sand (6.31 lakh cum), steel (0.57 tonnes) and cement (1.56 lakh ton). (xiv) Fly ash will be used in the project depending upon their availability as per existing fly ash notification. (xii) **Land use of the site and around the site up to 10 km radius:** Proposed project is a Greenfield project. Agricultural (70%), Forest (19 %), other Barren/revenue land (11%) is the land use around the site up to 10Km. The major land use of STRR Phase-II is cultivation (agricultural) land and rest includes barren land. (xiii) **Project brief: nature of proposal (new/ expansion,) total area- land use, project components, connectivity to the site etc.:** A new STRR Phase-II has been proposed to improve the connectivity in order to cater the needs of growing population along the fringe areas of Bangalore. The proposed road having ROW of 70m falls in Kanakpura and Anekal (Karnataka), Denakanikottai (Tamil Nadu). (xiv) Kanakapura town (13 km), Anekal town (3 km), Hosur (15 km), Anekal Railway Station (6 km), Hosur aerodrome (approximately 7 km). (xv) **Cost of the project:** INR 1764 Crore. (xvi) **Whether the project is in Critically Polluted area:** Not Applicable. (xvii) **If the project involves diversion of forest land, extend of the forest land:** No (xviii) **If the project falls within 10 km of eco-sensitive area, Name of eco-sensitive area and distance from the project site:** The proposed road is passing through Bannerghatta National Park for a length of approx. 4.68 km. (xix) **Water requirement, source, status of clearance:** Water will be required mainly during construction period. About 170Kl/day water will be consumed during peak construction period for the project. Surface Water (Approx. 70%) and Ground Water (30%) shall be utilized for construction works. The detail of water sources shall be provided in detailed EIA. The require NoC will be obtained from Ground Water Authority prior to construction. (xxviii) **Terrain, level with respect to MSL, requirement of filling if any:** Terrain is Plain/Rolling with elevation ranges from 650m to 960m amsl. Overburden will be generated during excavation for alignment and at borrow areas. It is proposed to reuse these materials for constructions of embankment, rehabilitation of borrow areas and other allied sites and or filling of low lying/ disfigured wasteland. (xxix) **Tree cutting, types, numbers, girth size etc.:** As per initial assessment, it is anticipated that on an average about 150 to 200 trees are likely to be affected per km. The detailed assessment of actual trees to be affected (tree inventories) on the

	finalized alignment will be undertaken during detailed EIA Study and the preparation of Forest Clearance proposals as per FC (Act) 1980, and the subsequent amendments thereafter. Common trees include *Eucalyptus, Azadirachta indica, Acacia catechu Ficus and Tamarindus indica*. Details/Numbers of trees will be provided in the EIA. Efforts will be made to minimize the trees loss by restricting tree cutting within formation width. Avenue plantation shall be carried out as per IRC SP: 21:2009 on available ROW apart from statutory requirements. Required tree cutting will be done after obtaining requisite permission from competent authority. In order to minimize the impact of tree cutting, compensatory plantation shall be undertaken. (xx) **Rehabilitation involved if any:** All the temporary sites used for construction activities will be rehabilitated properly before handing over back to the landowner. The solid waste generated due to construction and allied activities will be reused for rehabilitation of borrow area / quarries sites, campsite and in temporary diversions and slopes. (xxi) **Water bodies, diversion if any:** River Akravati crossing at Ch. 90+280 and River Suvarnamukhi crossing at 92+980.Minor streams crossing the alignment are Dry stream (Ch.90+300), Canal (Ch.105+150), Canal (Ch.105+400), Canal (Ch.105+700), Canal (Ch.106+200), Canal (Ch.106+400), Nalla (Dry) (Ch.107+800), Nalla (Dry) (Ch.118+300). (xxxii) **Court cases if any:** No. (xxxiii) **Investment/Cost of the project (in crore):** INR 1764Cr. (Approx.) (xxxiv) **Employment potential:** This Road project will improve the economic and social welfare of those using the road or served by it. Ultimately it will create jobs by increasing access to markets, education and health services etc. (xxii) **Benefits of the project:** The proposed project aims to improve connectivity particularly on economic corridors, border areas and to remote areas with an aim of rapid and safe movement of cargo to boost exports. International trade considered as a key aspect in this scheme and north-eastern states have given special focus**.**
3.6.2	After detailed deliberation during 191st meeting on 25th June, 2018, EAC observed that the proposed stretch is highly sensitive from ecological point of view. Therefore, EAC **recommended for a site visit by a sub-committee** of the EAC before the proposal is considered further. Accordingly, the sub-committee was formed that visited the project site on 23-24 July, 2018 and submitted the report (**Annexure-1**).
3.6.3	EAC, based on the detailed deliberations during its 195th meeting dated 30-31 August, 2018, **recommended the project for the grant of ToR**, and for preparation of EIA/EMP report with public consultations subject to compliance of all conditions as notified in the standard ToR applicable for such projects and specific conditions, as mentioned below: (i) On request of the project proponent, the length of the proposed alignment was increasedby two km.

	(ii)	Cumulative Impact Assessment to be carried out along entire STRR project including Phases I, II and III.
	(iii)	Water bodies along proposed alignment needs to be surveyed for their conservation and sustainability. Each water body should be clearly identified with its size, any important and threatened species associated with it, its usage by local community along with shape file of each of water body. Impact of proposed project on these water bodies to be identified along with mitigation measures. Emphasis should be given to avoid alignment passing through/over water bodies.
	(iv)	Source of water availability to be ascertained for construction and domestic need. Necessary extraction prior permissions to be obtained from State Authority/CGWA, if any.
	(v)	All the electrical transmission lines passing along the existing road in the Bannerghatta National Park (BNP) should be made underground at suitable depth only.
	(vi)	During construction of road through BNP proper care to be taken for the passage of Elephants. Multi layered Elephant proof barriers to be constructed to avoid human-elephant conflict at the same time construction should be planned in such a manner that large track of areas remained disturbance free and open for the movement of elephants. A proper construction plan to be developed in consultation with Chief Wildlife Warden of Karnataka State about protection of animals during construction of elevated road.
	(vii)	Adequate alternative and safe arrangements for human & animals' movement to be made during construction phase in BNP. The movement of people living in two existing settlements inside BNP shall be taken care off to avoid human and elephant conflict at the same time providing them access to elevated road. Villagers of these two settlements within BNP shall also be provided access at-grade with a restricted passage of two wheelers and light 4-wheelers during emergency conditions.
	(viii)	Once the elevated road is completed and opened for transport, road underneath will only be used by forest department for BNP management and protection work. No repairs or maintenance will be permitted for this road so that effectively it is decommissioned for all sorts of vehicular movement within 1 year. This will make available entire stretch of 6 to 7 km road as an un-interrupted elephant corridor truly serving purpose of elevated road.
	(ix)	In consultation and agreement with Chief Wildlife warden the passages of Elephants along Phase-I and Phase-II shall be identified'.
	(x)	NHAI to develop a comprehensive Environmental Management Plan (EMP) with specific focus on elephants in consultation with Chief Wildlife Warden. The EMP should identify the cross over areas and suggest proper mitigation including but not limited to structures (overpasses, underpasses etc.) that needs to be designed and constructed for free movement of Elephants along the passages. EMP should also focus on elephant-human conflict that may arise due to the new green field alignment and mitigation strategy. Adequate fund provision be made in consultation with PCCF & HoFF Karnataka for the proposed alignment and the same be provided to forest department through the mechanism as suggested by the PCCF & HoFF or

	through existing mechanism adopted by the forest department and depositing the funds for this special purpose. (xi) Provide dimension and location structures for conservation of the wildlife as well as safe movement of the animals in consultation with Chief Wildlife Warden. (x) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project.
3.7	**Development of Satellite Town Ring Road (STRR) Phase-III newly declared National Highway NH-948A from Peddamadhagondapalli to Tamil Nadu/Karnataka Border (km 140.000 to km 179.969) 41.969 km in District Krishnagiri, Tamil Nadu by M/s National Highways Authority of India - Reconsideration for Terms of Reference.** **[Proposal No. IA/TN/MIS/75239/2018 dated 06.06.2018] [F. No. 10-35/2018-IA.III]**
3.7.1	The project proponent made a presentation along with EIA Consultant M/s Louis Berger Consulting Private Limited and provided the following information to the Committee: (i) The Satellite Town Ring Road (STRR) of Bangalore (Newly declared NH 948A) is proposed 6 lane highway having a total length of 179.969 Km in the states Karnataka and Tamil Nadu. The Project will be taken in 3 Phases viz, • Phase-I (From Ch. 0+00 to Ch. 82+200) in the state of Karnataka. • Phase-II (From Ch. 82+200 to Ch. 140+000), in the states of Karnataka and Tamil Nadu. • Phase-III (From Ch. 140+000 to Ch. 179+969) in the state of Tamil Nadu (ii) This proposal is for the Proposed Phase-III, which starts from Ch. 140+000 in Peddamadhagondapalli near to SH-17B (Denkannikottai road) and ends at Ch. 179+769 near Deeviripalli village of Hosur Taluk (Krishnagiri District) at TN/ Karnataka Border. (iii) The Land use pattern within 10 km on either side of project area is predominantly agricultural followed by built-up area and barren area. The proposed road location is falling in 15 Km from Bannerghatta National Park ESZ and Cauvery North Wildlife Sanctuary's ESZ however outside from their 10Km ESZ boundary. (iv) Hosur is an automobile industry town located in the vicinity of about 7 km away from Karnataka state border. This city generates huge amount of traffic and currently experiencing massive traffic congestions. The STRR Phase-III is designed for inclusion of Ring Road of Hosur town, Automobile Hub of Tamil Nadu and Connecting with the proposed KITCO alignment. (v) There are 16 Major Settlements along the alignment, namely Kappakollu, Payarakanahalli, S. Mudugandanahally, Golisandram, Thorapalli Agraharam, Kothur, Perandapalli, Kadirapalli, Alur, Dasapalle, Payarkuttalai, Nandimangalam, Attur, B. Mudaganahalli, Kadiriganadinna, Sampangere. (vi) It is a Greenfield project and the proposed right of way (RoW) is kept as 70m. (vii) The original STRR of Government of Karnataka was taken and modified by NHAI under Bharatmala Program, which was concurred by the state government vide

		letter No.PWD/518/CNH/2017 dated 27th October, 2017 and Government of Tamil Nadu vide letter No.14787/HV1/2017-2 dated 24th January, 2018
	(viii)	The proposed land acquisition for the proposed alignment is approximately 448.78 ha.
	(ix)	The proposed road will have 1 major bridge, 6 minor bridges, 1 ROB, 67 culverts, 18 vehicular underpasses, 4 interchanges.
	(x)	Safety measures shall be provided as per NHAI Safety Manual and IRC:SP 88, IRC:SP:55 and MoRT&H guidelines in this regard.
	(xi)	The detail of water body around the proposed project is as follows: River Poniyar crossing at (Design Ch. 158+500) and 7 streams crossing the alignment.
	(xii)	Efforts will be made to minimize the trees loss by restricting tree cutting within formation width. Avenue plantation shall be carried out as per IRC SP:21:2009 on available ROW apart from statutory requirements.
	(xiii)	Materials requirement are aggregate (13.88 lakh cum), bitumen (0.22 lakh tonnes.), earth (63.82 lakh cum.), sand (4.75 lakh cum), Steel (0.29 tonnes), and Cement (1.17 lakh tonnes).
	(xiv)	Fly ash will be used in the project depending upon their availability as per existing fly as notification.
	(xv)	**Land use of the site and around the site up to 10 km radius:** Proposed project is a Greenfield project. Agricultural (77%), Barren (22%), other revenue/forest land (1%) around the site upto 10km radius. The major land use of STRR Phase-III of cultivation land and rest includes barren land
	(xvi)	**Whether the project is in Critically Polluted area:** Not Applicable.
	(xvii)	**If the project involves diversion of forest land, extend of the forest land:** No.
	(xviii)	**If the project falls within 10 km of eco-sensitive area, Name of eco-sensitive area and distance from the project site:** The proposed road location is not falling within 10 km of Eco-sensitive area.
	(xix)	**Water requirement, source, status of clearance:** Water will be required mainly during construction period. About 130 Kl/day water will be consumed during peak construction period for the project. Surface Water (Approx. 70%) and Ground Water (30%) shall be utilized for construction works. The detail of sources of water will be provided in EIA. NoC will be obtained from Ground Water Authority prior to construction.
	(xx)	**Terrain, level with respect to MSL, requirement of filling if any:** Terrain is Plain / Rolling with elevation ranges from 828m to 945m amsl. Overburden will be generated during excavation for alignment and at borrow areas. It is proposed to reuse these materials for constructions of embankment, rehabilitation of borrow areas and other allied sites and or filling of low lying/disfigured wasteland.
	(xxvi)	**Tree cutting, types, numbers, girth size etc.:** As per initial assessment, it is anticipated that on an average about 150 to 200 trees are likely to be affected per km. The detailed assessment of actual trees to be affected (tree inventory) on the

	finalized alignment will be undertaken during detailed EIA Study. Common trees include Eucalyptus*, Azadirachta indica, Acacia catechu*, Ficus, and *Tamarindus indica*. Efforts will be made to minimize the trees loss by restricting tree cutting within formation width. Avenue plantation shall be carried out as per IRC SP:21:2009 on available ROW apart from statutory requirements. Required tree cutting will be done after obtaining requisite permission from competent authority. In order to minimize the impact of tree cutting, compensatory plantation shall be undertaken. (xxvii) **Rehabilitation involved if any:** All the temporary sites used for construction activities will be rehabilitated properly before handing over back to the land owner. The solid waste generated due to construction and allied activities will be reused for rehabilitation of borrow area / quarries sites, campsite and in temporary diversions and slopes. (xxviii) **Water bodies, diversion if any if any:** Ponnaiyar River (Ch. 158+500) and 7 streams crossing the alignment. (xxix) **Court cases, if any**: No. (xxx) **Investment/Cost of the project:** INR 1327 Crore. (xxxi) **Employment potential:** This Road projects will improve the economic and social welfare of those using the road or served by it. Ultimately it will create jobs by increasing access to markets, education and health services etc. (xxxii) **Benefits of the project:** The proposed project aims to improve connectivity particularly on economic.
3.7.2	The EAC, after detailed deliberations during 191st meeting held on 25th June, 2018, **recommended the project for grant of ToR**, with the following specific ToRs in addition to Standard ToR applicable for such projects: (i) On request of the project proponent, the length of the proposed alignment was decreased by two km. (ii) Cumulative Impact Assessment to be carried out along Phases I, II and III. (iii) Water bodies along proposed alignment needs to be surveyed for their conservation and sustainability.
3.7.3	Before the issuance of ToR, NHAI requested to reconsider the proposal in the next EAC meeting vide their letter 1013/1/2k/Env./554 dated 9th August, 2018 due to modification in the length of proposed alignments for the Phases II and III of the STRR.
3.7.4	Accordingly, the proposal was considered in this meeting (195th EAC meeting held on 30-31 August, 2018). The EAC after detailed deliberation recommended **the project for grant of ToR** subject to following specific conditions, in addition to specific conditions as recommended during 191st EAC meeting held on 25th June, 2018 (as given in para 3.7.2), as mentioned below: (i) Each water body should be clearly identified with its size, any important and threatened species associated with it, its usage by local community along with shape file of each of water body. Impact of proposed project on these water bodies to be

	identified along with mitigation measures. Emphasis should be given to avoid alignment passing through/over water bodies. (ii) Source of water availability to be ascertained for construction and domestic need. Necessary permissions to be obtained from State Authority/ CGWA if any. (iii) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project.
3.8	**Development of new proposed National Highway NH-754K greenfield alignment Sanchore - Santalpur section (Economic Corridor-3) starting from Vantdau in Banaskantha district to Ranmalpura in Patan district in the State of Gujarat (approx. 124.6 km) by M/s National Highways Authority of India (NHAI) – Terms of Reference.** **[Proposal No. IA/GJ/MIS/75732/2018] [F. No. 10-60/2018-IA.III]**
3.8.1	The project proponent along with the EIA consultant M/s Amaltas Enviro Industrial Consultant LLP, New Delhi made a presentation and provided the following information to the Committee: (i) The proposal involvesDevelopment of new NH-754K Greenfield alignment from Sanchore to Santalpur road section(Chainage 6+000 to 129+636) (EC-3 starting from Vantdau, in Banaskantha district to Ranmalpura in Patan district, approx. 124.6 Km) by M/s National Highways Authority of India (NHAI) in the state of Gujarat. (ii) **Location:**The proposed project is traverse through Banaskantha and Patan district in the state of Gujarat. The project passes through major 39 villages (approx.). (iii) **Proposed RoW:** 70m. (iv) **Land use of the site and around the site up to 10 km radius:** The general landuse pattern is agriculture followed by residential and commercial. (v) **Total water requirement and its source:** The source of water shall be assessed during detailed study. (vi) **Waste water generation, treatment and disposal:** Mobile toilets with package STP will be provided for the workers in construction phase. Toilets and STPs shall be provided in the amenities area during the operation phase. Details will be furnished in EIA report. (vii) **Water bodies, diversion if any:** There are no rivers crossing the route, but there are 3 major canals which are crossing the proposed alignment at chainage 93+500 near Kilana Village, 112+100 near Patanka village and at 123+700 near Kalyanpura village. (viii) **If the project involves diversion of forest land, extend of the forest land:** No. (ix) **Tree cutting, types, numbers, girth size etc.:** The alignment will require cutting of approximately 797no. of trees (including forest area). Detailed assessment shall be made during detailed study. (x) **Whether the project is in Critically Polluted area:** No. (xi) **Municipal solid waste generated disposal facility:** Total 137.5 kg/day of municipal waste is expected to be generated during construction considering 550 labours. During operation phase, the municipal solid waste generated from the

	amenities proposed along the alignment. Waste management during construction and operational phase shall be done as per Solid Waste Management Rules, 2016**.** (xii) **National Park/ Wild Life Sanctuary in 10 km radius area & Eco-Sensitive Zone in 10 km radius area:** The proposed project neither passes through any Sanctuary/ National Park nor falls within 10 km boundary of the Protected Area under Wildlife Protection Act. (xiii) **If the project involves diversion of forest land, extend of the forest land:** The alignment also passes through Reserved forest area, i.e., Jamvada Reserves Forest near Jamvada village, Patanka Reserved Forest near Patanka Village and Madhutra Reserved Forest near Santalpur village. Total forest area to be diverted shall be approximately 39.9 Ha. (xiv) **Investment/Cost of the project:** INR 2000 Crore (approximately) (xv) **Benefits of the project:** The entire region will be benefitted from the Project, while the project area will gain through economic development and increased access to markets and social services. (xvi) **Employment potential:** Approx. 550 labours shall be employed per day generating 1,10,000 man-days of employment. (xvii) **If any court case pending for violation of the environmental laws:** No
3.8.2	The proponent along with the EIA consultant made presentation before EAC during its 195th meeting held on 30-31 August, 2018. The observations of EAC are as under: (i) The presentation does not cover all the aspects desired for examination of the proposal for grant of ToR. (ii) There is discrepancy in the figures mentioned in length of the proposed alignment. (iii) Proponent is required to revise the proposal as well Form-1 in tune with the notification related to proposed highway issued by the MoRT&H.
3.8.3	Based on detailed deliberations during its 195th meeting on 30-31 August, 2018, the proposal for 'Development of new proposed National Highway NH-754K greenfield alignment Sanchore - Santalpur section (Economic Corridor-3) starting from Vantdau in Banaskantha district to Ranmalpura in Patan district in the State of Gujarat' is deferred for reasons mentioned in preceding para. EAC observed that the proposed stretch is important form ecological and environmental point of view. Therefore, it is recommended to conduct a site visit by a sub-committee of the EAC before the proposal is considered further.
3.9	**Construction of 6-lane highway from Chittoor to Thatchur NH-716B (Km 0.000 to 126.550) from District Chittoor, Andhra Pradesh to Thatchur, District Tiruvallur, Tamil Nadu by M/s National Highways Authority of India (NHAI) – Further consideration for Terms of Reference.** **[Proposal No IA/AP/MIS/75727/2018] [F. No. 10-49/2018-IA.III]**
3.9.1	The project proponent along with the EIA consultant M/s Louis Berger Consulting Private Limited made a presentation and provided the following information to the Committee:

	(i) The proposal involves the construction of 6-lane highway from the Chittoor to Thatchur Section (Newly declared NH 716). The proposed 6-lane highway having a total length of 126.550 Km in the states Andhra Pradesh and Tamil Nadu. (ii) The project stretch traverses the Andhra Pradesh and Tamil Nadu at following locations: - 0+000 to 38+800 –In Andhra Pradesh - 38+800 to 55+500 –In Tamil Nadu - 55+500 to 91+700 –In Andhra Pradesh - 91+700 to 126+550 –In Tamil Nadu (iii) **Land use of the site and around the site up to 10 km radius:** Proposed project is a Greenfield project. Agricultural (75%), Forest (12%), barren (6%), water (5%) and plantation (1%) around the site upto 10Km radius. The major land use of Chittoor-Thatchur Road includes cultivation land and rest includes barren land. (iv) **Total water requirement and its source:** Water will be required mainly during construction period. About 2,996,711 Kl, water will be consumed during peak construction period for the project. Surface Water (approximately 70%) and Ground Water (30%) shall be utilized for construction works. The detail source of water shall be provided in EIA. NoC will be obtained Prior to Construction. (v) **Waste water generation, treatment and disposal:** Not applicable. (vi) **Water bodies, diversion if any:** River Araniyar is crossing at 2 locations (at Design Ch. 100+200 and Ch. 109+000); River Ponnai is crossing at 1 location (Ch. 14+500) and few minor streams crossing alignment. Approx. 21 pond/check dams fall along the project road. Few are directly getting impacted due to proposed development for which enhancement, relocation of ground/surface water sources and provision of retaining walls in the periphery of the pond shall be proposed for effective conservation of water. (vii) **Municipal solid waste generated disposal facility:** Not applicable. (viii) **National Park/ Wild Life Sanctuary in 10 km radius area:** The proposed road neither passes through National Park/Sanctuary/Any Protected area nor falls within 10 Km boundary of any protected area however approx. 4.9 ha. of Pullikundram Reserve Forest is falling near Ch. 86+800 to 87+740 and Ch. 87+970 to 88+000 of proposed project road. (ix) **Eco-Sensitive Zone in 10 km radius area:** Not Applicable. (x) **Details of Forest land involved, if any:** 4.9 ha. (approximately) (xi) **Investment/Cost of the project:** INR 3197.56 Crore. (xii) **Benefits of the project:** This project aims to improve connectivity particularly on economic corridors, border areas and to remote areas with an aim of rapid and safe movement of cargo to boost exports. International trade considered as a key aspect in this scheme and north-eastern states have given special focus.

	(xiii) **Employment potential:** This Road project will improve the economic and social welfare of those using the road or served by it. Ultimately it will create jobs by increasing access to markets, education and health services etc. (xiv) **If any court case pending for violation of the environmental laws:** No.
3.9.2	The observations of EAC during 193rd meeting held on 26th July, 2018 are as under: (i) The presentation does not cover all the aspects desired for examination of the proposal for grant of ToR. (ii) The proposed alignment runs over major water tanks found in the region. The Details of tank area including their dimensions and shape files are not provided. (iii) Alternates/Options are not judiciously worked out. The project proponent presented 3 options before the committee. The committee was of the view that options of alignment are not appropriately carried out and there was no information as per the scoring matrix. Out of three options presented before EAC, the alignment selected by the proponent is passing over the water tanks and huge chunk of the Forests continuity is broken while other two options are not viable from feasibility point of view, as admitted by the proponent and DPR consultant. (iv) Starting point of the proposed Chittor-Thatchur Road is situated at the junction of the proposed Bangalore-Chennai Expressway, which actually does not exist at present. Likewise, the end point of the proposed Chittor-Thatchur Road merges at proposed Chennai Peripheral Road, which also does not exist at present. (v) Proponent is required to revise the proposal as well Form-I in tune with the notification related to proposed highway issued by the MoRT&H.
3.9.3	Based on detailed deliberations during its 193rd meeting on 26th July, 2018, the proposal for 'Construction of 6-lane highway from Chittoor to Thatchur NH-716B (Km 0.000 to 126.550) from District Chittoor, Andhra Pradesh to Thatchur, District Tiruvallur, Tamil Nadu' by M/s National Highways Authority of India (NHAI) is deferred for reasons mentioned in preceding para.
3.9.4	The proponent along with the EIA consultant made presentation before EAC during its 195th meeting held on 30-31 August, 2018. The observations of EAC are as under: (i) After due optimisation, the no. of waterbodies along proposed alignment have been reduced from 27 to 21 nos. Total area of these 21 water bodies is 34.6ha, which includes 0.24 ha of net affected area of pond due to piers. Detailed inventory of waterbodies within the proposed ROW was also provided. (ii) The proponent carried out assessment of 5 viable options and presented detailed analysis with suitability matrix based on criteria including physical, biological, social and engineering aspects. (iii) After due optimisation, the forest area is reduced from 32.14ha. to 4.9ha. Affected length of the Reserved forest along the proposed alignment (ROW 70m) is approximately 700m.

3.9.5	Accordingly, the proposal was considered in this meeting (195th EAC meeting held on 30-31 August, 2018). The EAC after detailed deliberation recommended **the project for grant of ToR**, and for preparation of EIA/EMP report with public consultations subject to compliance of all conditions as notified in the standard ToR applicable for such projects,subject to submission of further clarification on the Gazette Notification of NH716B from competent authority and following specific conditions: (i) Water bodies along proposed alignment needs to be surveyed for their conservation and sustainability. Each water body should be clearly identified with its size, any important and threatened species associated with it, its usage by local community along with shape file of each of water body. Impact of proposed project on these water bodies to be identified along with mitigation measures. Emphasis should be given to avoid alignment passing through/over water bodies. (ii) Explore the possibility of avoiding construction of pillars at the design chainage between 58330 to 59190 and 59500 to 60180. (iii) Certificate from the Chief Wildlife Wardens of the states of Andhra Pradesh and Tamil Nadu stating that no protected area/animal corridor are situated within the 10km range of the proposed alignment. (iv) Source of water availability to be ascertained for construction and domestic need. Necessary permissions to be obtained from State Authority/ CGWA if any. (v) Declaration from local wetland authority whether waterbodies are natural or manmade. (vi) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project.
	Day 2: Friday, 31st August, 2018 **12: 30 PM**
4.1	**Development of Bilaspur – Urga section of NH-130A (Raipur – Dhanbad Economic Corridor) start at Junction with NH-130 & NH-130A, near Nehru Chowk, Bilaspur and terminate at junction with NH149B & SH-4 near Urga in the State of Chhattisgarh (approx. 70.2 km) by M/s National Highways Authority of India – Terms of Reference.** **[Proposal No IA/CG/MIS/75543/2018] [F. No. 10-59/2018-IA.III]**
4.1.1	The project proponent along with the EIA consultant M/s Feedback Infra Private Limited made a presentation and provided the following information to the Committee: (i) The proposal involves the Development of Economic Corridor to improve the efficiency of freight movement in India under Bharatmala Pariyojana, Bilaspur – Urga section of NH-130A (Raipur – Dhanbad Economic Corridor). The proposed project traverses through Bilaspur, Korba and Janjgir Champa districts. (ii) **Location:** The proposed alignment shall start near Dhuma Village, Bilaspur and terminate at existing SH4 near Urga.

	(iii) **Land use of the site and around the site up to 10 km radius:** The landuse around the proposed stretch is mostly agricultural with patches of settlements and forest area. (iv) **Rehabilitation involved, if any:** The identification of the private and government structures are in progress and the drafting of Rehabilitation and resettlement plan shall be commenced after the identification of structures and consultation with stakeholders. Land acquisition shall be undertaken as per the provision of LARR, 2013 and NH Act 1956 (with its amendments). Rehabilitation and resettlement plan will be prepared after detailed census survey during EIA Study and will be submitted in EIA Report. (v) **Justification for selection of the site**: Three alternatives were considered for the project. The proposed alignment is finalized due to the following benefits: - • Major part of the alignment Passing through the agricultural and barren land with patches of Forest • No ESZ areas in the RoW • Least forest area involved • Shortest Distance. Hence least time required for commuting • Least land to be acquired • Least number of settlements to be affected • Least number of Sensitive Features Moreover, the current route between Bilaspur and Jashpur measures about 252 Km which shall be reduced to 222 Km i.e. 12 % reduction which shall lead to save the fuel and time of the commuters. (vi) **Habitation in and around:** The proposed stretch passes through about 45 villages and approx. 190 structures shall be demolished in the proposed 70m RoW of the road. (vii) **Total water requirement and its source:** Total requirement of water for construction is estimated to about 15,08,891 Kl during construction. (viii) **Waste water generation, treatment and disposal:** Waste water shall be treated in septic tanks or bio-toilets provided in the construction site. (ix) **Water bodies, diversion if any:** The proposed road stretch passes through 3 Rivers and 2 Canals. No diversion is required as bridges are proposed above them. (x) **Whether the project is in Critically Polluted area:** No (xi) **Municipal solid waste generated disposal facility:** The approximate quantity of wastes to be generated from the project is 450 Kg per day. (xii) **National Park/ Wild Life Sanctuary in 10 km radius area & Eco-Sensitive Zone in 10 km radius area:** Not Applicable.

(xiii) **If the project involves diversion of forest land, extend of the forest land:** Yes, the project passes through forest area and thus requires diversion of land. The details of the forest area are:-

Design Chainage		Length In km	Proposed ROW (m.)	LHS/RHS	Required Area in (Sq. m.)	Remark
From	To					
21+327	21+357	0.030	70	Both	2502.5405	Dalha PF
21+357	21+466	0.109	70	Both	7820.4979	
21+466	21+689	0.223	70	Both	15776.7545	Dalha PF
21+689	21+763	0.074	70	Both	6181.1149	
21+763	21+787	0.024	70	Both	1515.047	
21+787	22+000	0.213	70	Both	14744.5195	
22+000	22+533	0.533	70	Both	38218.7854	Dalha PF
22+533	22+915	0.382	70	Both	25334.1432	
42+690	44+500	1810	70	LHS	65061.5706	Chhata PF
43+180	47+281	4101	70	RHS	184581.5589	
44+600	45+700	1100	70	LHS	26767.3626	
46+100	46+540	440	70	LHS	4953.5191	
47+163	47+281	118	70	LHS	2841.8621	
48+334	48+524	190	70	Both	15066.3878	RF
Total					**411365.664**	

The application of forest diversion is under process.

(xiv) **Investment/Cost of the project:** INR 1,053 crore.

(xv) **Benefits of the project:**

- Better connectivity to economic, social and political hubs of Chhattisgarh and Odisha
- Faster growth and outreach to better and improved facilities
- Fast and safe connectivity resulting in savings in fuel, travel time and total transportation cost
- Reduction in accidents
- Better approach to medical & educational services
- Faster transportation of perishable goods like fruits, vegetables, and dairy products
- Better opportunities for transporting, processing and marketing of agricultural products
- Development of local agriculture and handicrafts
- Development of tourism and pilgrimage
- Opening up of opportunities for new occupations and trade on the route
- Indirect and direct employment opportunity to people from all skilled, semi-skilled and unskilled streams
- Improved quality of life for people and so on

	• Development of backward areas through rapid industrialization and access to distant markets • Creation of ancillary ecosystem through highway amenities, support services and industrial / manufacturing areas (xvi) **Employment potential:** 900 jobs (xvii) **If any court case pending for violation of the environmental laws:** No.
4.1.2	The proposal was considered in this meeting (195th EAC meeting held on 30-31 August, 2018). The EAC after detailed deliberation recommended **the project for grant of ToR**, and for preparation of EIA/EMP report with public consultations subject to compliance of all conditions as notified in the standard ToR applicable for such projects and specific conditions, as mentioned below: (i) Cumulative Impact Assessment to be carried for the proposed project. (ii) Water bodies along proposed alignment needs to be surveyed for their conservation and sustainability. Each water body should be clearly identified with its size, any important and threatened species associated with it, its usage by local community along with shape file of each of water body. Impact of proposed project on these water bodies to be identified along with mitigation measures. Emphasis should be given to avoid alignment passing through/over water bodies. (iii) Certificate from the Chief Wildlife Warden of the state of Chattisgarh stating that no protected area/animal corridor are situated within the 10 km range of the proposed alignment. (iv) Source of water availability to be ascertained for construction and domestic need. Necessary permissions to be obtained from State Authority/ CGWA if any. (v) Social Indicators need to be developed for understand the socio-economic profile of the society/people living around the proposed alignment. (vi) The proposed 4-lane alignment is passing through the coal belt region, where heavy load of traffic is quite common, therefore EAC suggested to find out the possibilities of developing a broader highway with additional lanes (6-lanes or more) based on the projected traffic density in the region. (vii) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project.
4.2	**Development of 8 lanes (Greenfield Expressway) from Firozpur Jhirka (Ch. 79.394 Km) to Itawa (Ch. 284.000 Km) Section of NH-148 N (Total length 204.606 Km), Under Bharatmala Priyojana Lot-4/Pkg-4 in the state of Rajasthan- Terms of Reference.** **[Proposal No. IA/RJ/MIS/75388/2018] [F. No. 10-61/2018-IA.III]**
4.2.1	The project proponent along with the EIA consultant M/s Feedback Infra Private Limited, made a presentation and provided the following information to the Committee: (i) The proposal involves Development of 8 lanes (Greenfield Highway) from Firozpur Jhirka (Ch.79.394 Km) to Itawa (Ch. 284.000 Km) Section of NH-148 N (Total length

	204.606 Km), Under Bharatmala Priyojana Lot-4/Pkg-4 in the state of Rajasthan by M/s National Highways Authority of India. (ii) **Location:** The proposed project is traverse through Alwar, Bharatpur, Dausa and Sawai Madhopur district in the state of Rajasthan. The proposed project alignment shall start from Haryana–Rajasthan boarder at Ch. 79.394 km (27°39'13.12"N, 76°57'46.62"E) near Firozpur Jhirka, Haryana and traverses entirely through plain / rolling terrain and ends near Itawa village at Ch. 284.000 km (26°01'57.27"N 76°15'42.06"E) in the district of Sawai Madhopur, Rajasthan. (iii) **Land use of the site and around the site up to 10 km radius:** The land use of the project and around is predominately agriculture land followed by barren land, habitation and forest areas. (iv) **Justification for selection of the site**: Three alignment options (3 Greenfield routes) were analyzed for the project and comparison has been drawn based on Techno-commercial characteristics (details provided in analysis of alternatives). Major technical aspects for comparative analysis were environment, social and design concepts. Efforts were made to avoid the forest, wildlife and settlement areas to the maximum extent possibilities. The proposed alignment has been selected due to the following reasons: - • Minimum disturbance to the habitation areas • Route selection in such a way, so that, forest area can be avoided to the maximum extent • Better connectivity to Alwar, Dausa and Sawai Madhopur district in the state of Rajasthan and major towns through Alwar spurs and connectivity with existing roads SH-14, SH-25A, NH-11 and NH-11A. • The new access controlled green field national highway will pave the way for economic development of the region. • Better connectivity to major towns through spurs at Alwar utilizing existing SH-18 & NH-248A. • Lesser the fuel consumption results in reduction of pollution level • Avoid the Amli Tiger Safari, which is being developed by State Govt. • Proposed project road is having significant distance from Ranthambore National Park (12.90km) and Sawai Madhopur WLS (10.58km). (v) **Total water requirement and its source:** It is estimated that the Project will need 1,26,83,000 Kl water for construction phase. The water for the construction phase will be met by water tankers from approved vendors. Bore-well, if required, will be operated after approval from the competent authority. Total water requirement will be estimated during the detail EIA study. (vi) **Waste water generation, treatment and disposal:** Waste water shall be generated by workers which shall be treated in septic tanks. (vii) **Water bodies, diversion if any:** The proposed stretch passes through 6 rivers and bridges shall be proposed at them.

	(viii) **Tree cutting, types, numbers, girth size etc.:** Tree counting is under process (ix) **Rehabilitation involved if any:** The details of structures to be rehabilitated or resettled shall be provided in the EIA report. (x) **Whether the project is in Critically Polluted area:** No. (xi) **Municipal solid waste generated disposal facility:** 585.0 Kg/day (approximately) during construction phase and 225.0 kg/day (approximately) during operation phase. (xii) **National Park/ Wild Life Sanctuary in 10 km radius area & Eco-Sensitive Zone in 10 km radius area:**Not Applicable. (xiii) **If the project involves diversion of forest land, extend of the forest land:** Yes. • Tentative length of affected forest area along the proposed alignment is about 3.05 km with approx. 30.05ha of affected forest area considering the RoW of 100 m. • The affected Forest land is ~1.5% of the total required land for the development of project road. (xiv) **Investment/Cost of the project:** INR 7900 Crore. • **Benefits of the project:** The project will provide a better connectivity to Alwar, Dausa and Sawai Madhopur district in the state of Rajasthan. It will gear up the economic growth of the region by providing time optimised reach to the wide market of Capital City. The project will provide direct employment during construction phase; and also temporary indirect employment for Vendors, suppliers, electricians, plumbers and other allied industries and permanent indirect employment during the operations phase. The implementation will result in employment generation for cleaners, guards, local vendors, kiosk operators, drivers, doctors etc. (xv) **Employment potential:** Approx. 1170 during construction and 450 (approx.) during Operation phase total 1620 Nos. (xvi) **If any court case pending for violation of the environmental laws:** No.
4.2.2	The proposal was considered in this meeting (195th EAC meeting held on 30-31 August, 2018). The EAC after detailed deliberation recommended **the project for grant of ToR**, and for preparation of EIA/EMP report with public consultations subject to compliance of all conditions as notified in the standard ToR applicable for such projects and specific conditions, as mentioned below: (i) Cumulative Impact Assessment to be carried for the entire length of all segments phases or packages of the broader project. (ii) Explore the possibilities to avoid irrigation tanks. (iii) Water bodies along proposed alignment needs to be surveyed for their conservation and sustainability. Each water body should be clearly identified with its size, any important and threatened species associated with it, its usage by local community along with shape file of each of water body. Impact of proposed project on these water bodies to be identified along with mitigation measures. Emphasis should be given to avoid alignment passing through/over water bodies.

	(iv) Certificates from the Chief Wildlife Wardens of the states of Haryana and Rajasthan stating that no protected area/animal corridors are situated within the 10 km range of the proposed alignment. (v) Source of water availability to be ascertained for construction and domestic need. Necessary permissions to be obtained from State Authority/ CGWA if any. (vi) Social Indicators need to be developed for understand the socio-economic profile of the society/people living around the proposed alignment. (vii) ROW should not exceed 70m at any point of the proposed 8-lane alignment as per MoRT&H circular no. NH-15017/21/2018 dated 10th May, 2018. (viii) Detailed study on population and habitat of Indian skimmer near Chambal river. (ix) The ROW of the proposed alignment is reduced from 100m to 70m, therefore it is important to assess the present and projected traffic densities in the region. (x) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project.
4.3	**Construction of new link National Highway 133B (Design Chainage km.0.000) starts at proposed Sahibganj Bypass and meet at Ch.200.870 of NH-80 (Design Chainage 1.800 of NH 133B) and ends at Ch.25.240 of NH-131A at Junction of NH-131A & NH-133B (Design Chainage 15.885 of NH-133B) including construction of 4-lane Ganga Bridge in the states of Bihar and Jharkhand - Terms of Reference.** **[Proposal No IA/BR/MIS/76219/2018] [F. No. 10-62/2018-IA.III]**
4.3.1	The project proponent along with the EIA consultant M/s Aarvi Associates Architect, Engineers and Consultants Private Limited, made a presentation and provided the following information to the Committee: (i) The proposal involvesConstruction of new link National Highway 133B (Design Chainage km. 0.000) starts at proposed Sahibganj Bypass and meet at Ch. 200.870 of NH-80 (new name NH-33) (Design Chainage 1.800 of NH 133B) and ends at Ch. 25.240 of NH-131A at Junction of NH-131A & NH-133B (Design Chainage 15.885 of NH-133B) including construction of 4-lane Ganga Bridge in the states of Bihar and Jharkhand. The length of the proposed road is 15.885 km. (ii) **Location:**In Bihar and Jharkhand states. (iii) **Land Acquisition and Proposed RoW:** The proposed land acquisition for the proposed alignment is approx. 59.34 ha. The proposed RoW is 60 m. (iv) **Land use of the site and around the site up to 10 km radius:** Cultivated and barren fields. (v) **Justification for selection of the site**: The environmental impact assessment is conducted in accordance with the requirement of the MoEF&CC norms and guidelines. Environment Impact Assessment Decision Supporting System (EIADSS) is used to identify the appropriate alignment of the project. (vi) **Total water requirement and its source:** Total requirement of water for the construction is estimated 4,40,617 Kl.

	(vii) **Types of wastes, sources, collection, treatment, waste generation and disposal**: Sewage generating temporarily from labour camps will be discharged into septic tanks with soak pit facility. The solid wastes mainly of earth materials generated out of construction activities will be reused for rehabilitation of borrow area/quarry sites, camp sites and in temporary diversions and slopes. The municipal solid wastes generated in construction & workers camp will be disposed off to the nearest identified location of disposal/landfill sites of local authority with payments in environmentally acceptable manner. For sewerage disposal, septic tanks with soak pits will be provided at campsites. Salvage material/demolition wastes will be reused to the possible extent in embankments, shoulders, slopes, approach roads and temporary camp sites. Unused waste will be dumped in earmarked dump yard as per applicable guidelines. (viii) **Water bodies, diversion if any:** No diversion of water bodies envisaged for the proposed project. (ix) **If the project involves diversion of forest land, extend of the forest land:** No. (x) **Tree cutting, types, numbers, girth size etc.:** No tree cutting envisaged in the present project alignment (xi) **Rehabilitation involved if any:**No rehabilitation is required for the proposed project. (xii) **Whether the project is in Critically Polluted area:** No. (xiii) **National Park/ Wild Life Sanctuary in 10 km radius area & Eco-Sensitive Zone in 10 km radius area:** Not applicable. (xiv) **If the project involves diversion of forest land, extend of the forest land:** The proposed project does not involve diversion of any forest land. The project neither passes through any National park/ Wildlife Sanctuary/ Conservation reserve etc., nor falls within 10 km boundary of any Protected Area under Wildlife Protection Act 1972. (xv) **Investment/Cost of the project:** INR2,598 Crore. (xvi) **Benefits of the project:** Project is intended to augment the Transport Infrastructure in the new state of Jharkhand and Bihar and boost the industrial and tourism sectors by providing faster inter-region connectivity. The project road will cause several benefits to local people both during construction and operation stage. Besides providing better mode and frequency of transport, access to quality health care facilities, educational and other infrastructural facilities will increase economic activities especially supporting transport like gasoline station, automotive repair shops, lodging and restaurants. Increase agro-industrial activities are also expected to take an advantage of improved access to urban centers, where there are higher demands and better prices for agricultural products. Further, tourism activities in the area and state will be enhanced which in many terms will boost the local economy and build better investment climate for industries creating more employment opportunities to local people. (xvii) **Employment potential:** It is anticipated that it will create employment for 4,800 during peak construction period (two years) and for 2,400 during non-peak construction phase (two years) for the skilled and unskilled work force in the area.

	(xviii) **If any court case pending for violation of the environmental laws:** No court cases are present for the present proposed project.
4.3.2	The proposal was considered in this meeting (195th EAC meeting held on 30-31 August, 2018). The EAC after detailed deliberation recommended **the project for grant of ToR**, and for preparation of EIA/EMP report with public consultations subject to compliance of all conditions as notified in the standard ToR applicable for such projects and specific conditions, as mentioned below: (i) Water bodies along proposed alignment needs to be surveyed for their conservation and sustainability. Each water body should be clearly identified with its size, any important and threatened species associated with it, its usage by local community along with shape file of each of water body. Impact of proposed project on these water bodies to be identified along with mitigation measures. Emphasis should be given to avoid alignment passing through/over water bodies. (ii) Certificate from the Chief Wildlife Wardens of the states of Bihar and Jharkhand stating that no protected area/animal corridor are situated within the 10 km range of the proposed alignment. (iii) Source of water availability to be ascertained for construction and domestic need. Necessary permissions to be obtained from State Authority/ CGWA if any. (iv) Study of Biodiversity in fresh water of river Ganges to be carried out. (v) Social Indicators need to be developed for understand the socio-economic profile of the society/people living around the proposed alignment. (vi) Height of bridge should not be less than 10m above the highest water level recorded till date. (vii) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project.
4.4	**Construction of 4/6 lane road from Raisar (Bikaner) to Deogarh (Jodhour) in the state of Rajasthan from chainage km 0.000 to km 180.000 (Amritsar to Kandla Expressway) under Bharatmala Pariyojana - Terms of Reference.** **[Proposal No IA/RJ/MIS/75735/2018] [F. No. 10-63/2018-IA.III]**
4.4.1	The project proponent along with the EIA consultant M/s Consulting Engineers Group Limited, made a presentation and provided the following information to the Committee: (i) The proposed project is a new 4/6 lane National Highway (NH-754K) connecting Rasiser in Bikaner district to Deogarh in Jodhpur district, Rajasthan. The proposed alignment is a 180.000 km stretch which lies in North – West region of Rajasthan. The alignment terminates onNH – 125 at Deogarh, which is near Jodhpur. (ii) **Location:** The major settlements along the alignment are Panchu, Deogarh, Osian, Rasisar town. (iii) **Land Acquisition and Proposed RoW:** The proposed land acquisition for the proposed alignment is approx. 1775 ha and the proposed RoW of the project 70m green field.

	(iv) **Land use of the site and around the site up to 10 km radius:** The land use pattern on 10 km either side of the project road is predominately agriculture followed by fallow, wastelands and few habitations. (v) **Total water requirement and its source:** Total requirement of water for the construction is estimated 1000 KLD which will be taken from IGNP canal and ground water sources. (vi) **Waste water generation, treatment and disposal:** (vii) **Water bodies, diversion if any:** The proposed road alignment crosses IGNP canal at km 145 and one rainy season Nala. (viii) **If the project involves diversion of forest land, extend of the forest land:** The Proposed Project does not involve any diversion of forest land. (ix) **Tree cutting, types, numbers, girth size etc.:** Number of Affected Trees is 7767. (x) **Rehabilitation involved if any:** The proposed land acquisition for the proposed alignment is approx. 1775 ha. Total 396 no. of structures will be affected due to proposed road. The NHAI shall compensate the affected title holder as per NHAI Act 1956. (xi) **Whether the project is in Critically Polluted area:** No (xii) **National Park/ Wild Life Sanctuary in 10 km radius area & Eco-Sensitive Zone in 10 km radius area:** Not Applicable. (xiii) **Investment/Cost of the project:** INR 4500 Crore. (approximately) (xiv) **Benefits of the project:** • It is an economic corridor which provide direct and quick excess from Amritsar to Kandla Port for export and import of goods; • Decrease the travelling time taken in the present route and provide cost effective benefits to the farmers and industries. • It provides better road connectivity to Punjab, Haryana, Rajasthan and Gujarat. • It creates direct and indirect employment in western Rajasthan where resources are very less for live hood. • It will play vital role to bust up the economy and economic growth rate of benefit states, and Nation. (xv) **Employment potential:**Total 2,78,100 jobs during construction period (3 years) and about 2,70,000 jobs during maintenance period (10-15 years). (xvi) **If any court case pending for violation of the environmental laws:** No.
4.4.2	The proposal was considered in this meeting (195th EAC meeting held on 30-31 August, 2018). The EAC after detailed deliberation **recommended the project for grant of ToR**, and for preparation of EIA/EMP report with public consultations subject to compliance of all conditions as notified in the standard ToR applicable for such projects and specific conditions, as mentioned below:

	(i)	Cumulative Impact Assessment to be carried for the entire length of all segments phases or packages of the broader project.
	(ii)	Water bodies along proposed alignment needs to be surveyed for their conservation and sustainability. Each water body should be clearly identified with its size, any important and threatened species associated with it, its usage by local community along with shape file of each of water body. Impact of proposed project on these water bodies to be identified along with mitigation measures. Emphasis should be given to avoid alignment passing through/over water bodies.
	(iii)	Certificate from the Chief Wildlife Warden of the state of Rajasthan stating that no protected area/animal corridor are situated within the 10 km range of the proposed alignment.
	(iv)	Source of water availability to be ascertained for construction and domestic need. Necessary permissions to be obtained from State Authority/ CGWA if any.
	(v)	Social Indicators need to be developed for understand the socio-economic profile of the society/people living around the proposed alignment.
	(vi)	Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project.

Members of the EAC for the Projects related to Infrastructure Development, Industrial estate/parks/complexes/areas, Export Processing Zones, Special Economic Zones, Biotech Parks, Leather Complexes and National Highways projects present during **195th meeting held on 30-31 August, 2018** at MoEF&CC, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi and approved the above minutes.

Sl. No.	Name of the EAC member	Role / Designation	Signature
1.	Dr. Deepak Arun Apte	Chairman	
2.	Dr. V. K. Jain	Member	
3.	Dr. M.V. Ramana Murthy	Member	
4.	Shri T. P. Singh	Member	
5.	Dr. N. K Verma	Member	
6.	Dr. Manoranjan Hota	Member	
7.	Dr. Anil Kumar Singh	Member	
8.	Shri Prabhakar Singh	Member	
9.	Shri Narendra Surana	Member	
10.	Dr. Mohan Singh Panwar	Member	
11.	Dr. Anuradha Shukla	Member	
12.	Shri N. K. Gupta	Member	
13.	Dr. D. Chakraborty	Member	
14.	Smt. Bindu Manghat	Member	
15.	Shri Raghu Kumar Kodali	Member Secretary	

Annexure-1

Site visit report and recommendation of Sub-committee of EAC on Satellite Town Ring Road (STRR) Phase-I newly declared National Highway NH-948A from Dobbaspete to Ramanagara (km 0.000 to km 82.200) 82.20 km in Ramanagar, Karnataka Town Ring Road (STRR) in Bengaluru in State of Karnataka. and development of Satellite Town Ring Road (STRR) Phase-II newly declared National Highway NH-948A from Ramanagara to Belagondapalli (km 82.200 to km 138.000) 55.80 km in District Ramanagara and Bangalore Urban, Karnataka and District Krishnagiri, Tamil Nadu by M/s National Highways Authority of India

1.0 Back ground:

All Phases of above-mentioned projects ware considered by EAC during its 191st meeting held on 25.06.2018 for the grant of TOR. After detailed deliberation during the meeting, EAC observed that the proposed stretch under Phase-I and Phase-II are highly sensitive from ecological point of view. Therefore, EAC recommended for a site visit by a sub-committee of the EAC before the proposal is considered further.

2.0 Site visit:

Subcommittee of EAC, MoEF&CC comprising of following members was constituted for the site visit. The subcommittee visited the site from 23rd-24rd July, 2018 and also discussed the issues with State Forest department of Karnataka, project proponent team and EIA consultant.

The names of the members of sub -committee and officials of Karnataka State Forest department, proponent and EIA consultant team are given below.

MoEFCC's Expert Appraisal Sub Committee Members

1	Dr. Deepak Arun Apte, Director, Bombay Natural History Society (BNHS), Mumbai	Chairman
2	Dr. Manoranjan Hota, Former Advisor, MoEFCC, New Delhi	Member
3	Dr. Anil Kumar Singh, IFS (Retd.), Ex. PCCF Assam	Member
4	Dr. Raghu Kumar Kodali, Director/Scientist-F, IA Director, MoEFCC	Member

Karnataka State Forest department officials

1. Sri Punati Sridhar, IFS PCCF (Head of Forest Force), Karnataka
2. Shri Jagneshar sharma Add. PCCF(FC)
3. Shri subhas Malkhede APCCF(WL)
4. Shri Manoj Kumar, IFS CCF WL Bangalore (Project Elephant)
5. Shri Suresh Kumar (I/C) Wildlife Warden (Bannerghatta National Park)
6. Shri Kranthi NE, DCF, Ramanagara
7. Shri B.V Reddy, DCF, Bangalore Rural
8. Shri Ravi Keerti K.N, RFO, Anekal

Project proponent team

9. Shri Dr. B. Mukhopadhay General Manager- Environment NHAI HQ
10. Shri T. Parvateesam, Project Director, PIU-Expressway Bangalore

DPR/EIA consultant team

1. Shri Dr. Deepak Malik M/s Louis Berger
2. Shri Sandeep Bhardwaj, M/s Louis Berger

3. 0 Observations

The State Forest Department convened a meeting under the Chairmanship of Principal Chief Conservator of Forest, Head of the Forest Force, Sri Punati Sridhar, IFS PCCF (Head of Forest Force), Karnataka as per advice of MoEF&CC, on NHAI's Satellite Town Ring Road Project phases which are as following.

- Phase-I (From Ch. 0+00 to Ch. 82+200) in the state of Karnataka.
- Phase-II (From Ch. 82+200 to Ch. 138+000), in the state of Karnataka and Tamil Nadu.

The Chairman and sub-committee, State Forest department officials of the concerned forest divisions, NHAI Officials and DPR/EIA Consultants attended the meeting. NHAI made detailed presentation in the meeting about salient features of alignment of Phase-I, Phase-II and Phase-III like land use pattern, ecological features wild life habitats, elephant routes and structures proposed for conservation of flora and fauna, as well as keeping in mind of the traffic road geometry, safety aspects.

The Sub-committee, and PCCF& HoFF were of the view that the suitability of the current alignment, dimension and location structures that may be provided for conservation of the wildlife as well as safe movement of the Elephant shall be decided after joint visit of the site along with the alignment by forest officials, members of the sub-committee and project proponent.

1. The sub-committee visited the Bannerghatta National Park (BNP) and the village falling adjacent to the existing road crossing the BNP

2. Forest Department refer the observation on Wildlife movement near to Km 84+900 (X: 754416.657; Y: 1399545.570) at Averhalli village. This is due to the presence of Handigundi and Tenginkal Reserved Forests in vicinity to the project alignment.

3. The Committee visited the Ramadeverbetta Vulture Sanctuary. It was submitted that project is away from the Sanctuary and its notified Eco-sensitive zone.

4. Forest Department refer the observation on Wildlife movement near to Km 53+800 (X: 746916.399; Y: 1424657.141) near Savandurga RF and Siddhadeverbeta in vicinity to the project alignment.

5. Forest Department refer the observation on Wildlife movement near to Km 34+600 (X: 744652.267; Y: 1442234.452).

6. The ecological sensitivity of Thalli Reserved Forest was brought to the notice of sub-committee by NHAI officials where ToR was already recommended by EAC for Phase-III (From Ch. 138+000 to Ch. 179+969) in the state of Tamil Nadu.

NHAI officials informed to committee that it is proposed to modify the Phase-II and Phase-III length to exclude the project phase-III from the purview of eco-sensitive zone of Thali RF as it is extended part of Cauvery North Wildlife Sanctuary. The sub- Committee advised project proponent to submit the modified proposals to the Ministry for reconsideration

7. A representation from a local NGO was also submitted to the Chairman during field visit by Bannerghatta nature conservation trust, Bangalore.

4. 0 Recommendations of the sub-committee

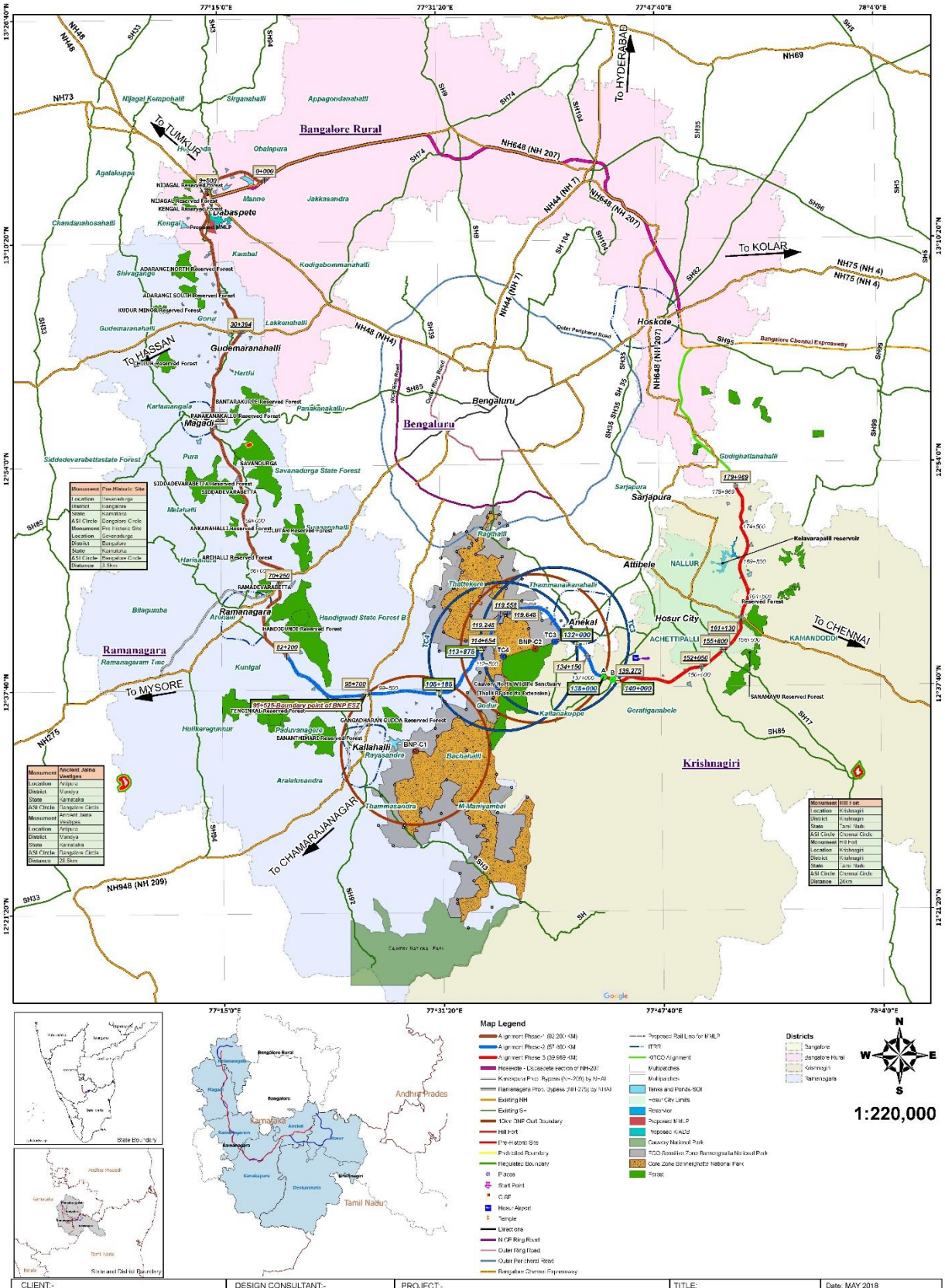
1. All the Electrical transmission lines passing along the existing road in the Bannerghatta National Park (BNP) should be made underground at suitable depth only
2. During construction of road through BNP proper care to be taken for the passage of Elephants. Multi layered Elephant proof barriers to be constructed to avoid human-elephant conflict at the same time construction should be planned in such a manner that large track of areas remained disturbance free and open for the movement of elephants. A proper construction plan to be developed In consultation with Chief Wildlife Warden of Karnatka State about protection of animals during construction of elevated road
3. Adequate alternative and safe arrangements for human & animals' movement to be made during construction phase in BNP.
4. NHAI was advised to develop a comprehensive Environmental Management Plan (EMP) with specific focus on elephants in consultation with Chief Wildlife Warden. The EMP should identify the cross over areas and suggest proper mitigation including but not limited to structures (overpasses, underpasses etc) that needs to be designed and constructed for free movement of Elephants along the passages. EMP should also focus on elephant-human conflict that may arise due to the new green field alignment and mitigation strategy. Adequate fund provision be made in consultation with PCCF&HoFF Karnataka for all two proposed aligments in phase I and II and the same be provided to forest department through the mechanism as suggested by the PCCF&HoFF or through existing mechanism adopted by the forest department and depositing the funds for this special purpose.
5. It is also observed that Phase-II alignment has two existing settlements along BNP. Hence their movements to be taken care off to avoid human and elephant conflict at the same time providing them access to elevated road
6. Once the elevated road is completed and opened for transport, road underneath will only be used by forest department for BNP management and protection work. No repairs or maintenance will be permitted for this road so that effectively it is decommissioned for all sorts of vehicular movement within 1 year. This will make available entire stretch of 6 to 7 km road as an un-interrupted elephant corridor truly serving purpose of elevated road.
7. In Phase - I alignment it was observed that there are known passages for Elephant movement. Thus NHAI is advised to prepare EMP in consultation with Chief Wildlife Warden that identify the cross over areas and suggest proper mitigation including but not limited to structures that needs to be designed and constructed for free movement of Elephants along the passages
8. Ramadeverbetta Vulture Sanctuary is very near to Phase-I alignment, a separate fund provision to be made in consultation with PCCF&HoFF for conservation of vultures and creating vulture safe zone. BNHS Vulture Safe Zone policy may be referred to in this direction.
9. In consultation and agreement with Chief Wildlife warden the passages of Elephants along Phase-I and Phase-II shall be identified'
10. The connectivity to the village was assessed in detail. After detailed deliberation, it was decided to provide access to the villagers at-grade with a restricted passage of two wheelers and light 4-wheelers during emergency conditions.
11. It was advised to provide dimension and location structures for conservation of the wildlife as well as safe movement of the animal

12. Based on sub-committee observations and views of accompanied forest officials and sanctuary personnel it was felt that sanctuary may be indirectly impacted so it was suggested that a provision should be made under CER to support strengthening of vulture conservation in and around the sanctuary.

Project Site Photographs

	
Near to the starting point of project at Bannerghatta National Park	Shivpuri Villgae inside the Bannerghatta National Park
	
Existing Road crossing inside Bannerghatta National Park	Karadikkal Madheshwara Elephant Corridor
	
Entry Point of Ramadeverabetta Vulture Sanctuary	Inside Point of Ramadeverabetta Vulture Sanctuary

Figure 1-Satellite Town Ring Road Map



The following Members of sub-committee of EAC(Infra-1) of MoEF&CC visited the project of Satellite Town Ring Road (STRR) Phase-I newly declared National Highway NH-948A from Dobbaspete to Ramanagara (km 0.000 to km 82.200) 82.20 km in Ramanagar, Karnataka Town Ring Road (STRR) in Bengaluru in State of Karnataka. and development of Satellite Town Ring Road (STRR) Phase-II newly declared National Highway NH-948A from Ramanagara to Belagondapalli (km 82.200 to km 138.000) 55.80 km in District Ramanagara and Bangalore Urban, Karnataka and District Krishnagiri, Tamil Nadu by M/s National Highways Authority of India from 23.07.2018 to 24.07.2018 and also submitted the above project site inspection report.

Sl. No.	Name of committee Member	Role/Designation	Signature
1	Dr. Deepak Arun Apte, Chairman, EAC(Infra-1)	Chairman	
2	Dr. Manoranjan Hota, Member, EAC(Infra-1)	Member	
3	Dr. Anil Kumar Singh, IFS Retd), Member, EAC(Infra-1)	Member	
4	Shri Raghu Kumar Kodali, Director/Scientist-F, IA-III Division, MoEF&CC	Member Secretary (Infra-1 EAC)