MINUTES OF 232ND MEETING OF EXPERT APPRAISAL COMMITTEE HELD ON 27TH FEBRUARY, 2020 FOR PROJECTS RELATED TO INFRASTRUCTURE DEVELOPMENT, INDUSTRIAL ESTATE / PARKS / COMPLEXES / AREAS, EXPORT PROCESSING ZONES, SPECIAL ECONOMIC ZONES, BIOTECH PARKS, LEATHER COMPLEXES AND NATIONAL HIGHWAYS

1. Opening remarks of the Chairman:

Committee remained concerned with poor quality EIA and DPR especially in the areas of ecology and biodiversity. These are not just poor in quality, in many instances information is erroneous and in most it copy paste. Committee feels urgent need to re-evaluate QCI-NABET Accreditation of consultants in these subject areas. In absence of credible information, appraisal become difficult. It also thus affects exploring/suggesting mitigation or alternatives. Delay caused in appraisals are essentially based on erroneous or incomplete information provided by the consultants. Ministry may take further action on the mater.

2. Confirmation of the minutes of the 230th meeting held on 28-29 January, 2020 at Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi:

3. Consideration of Proposals:

3.1 Development of 'Petrochemical Park' at Village Puthencruz, Taluk Kunnathunadu and Village Thiruvankulam, Taluk Kanayannur, District Ernakulam, Kerala by M/s Kerala Industrial Infrastructure Development Corporation (KINFRA) - Environmental Clearance regarding.

[Proposal No. IA/KL/NCP/74865/2018] [F.No. 21-63/2018-IA.III]

3.1.1 The project proponent along with the EIA consultant M/s Voyants Environmental Consultant, made a presentation and provided the following information:

(i) **Proposal:** SIPCOT Manallur Industrial Park. The Industrial Park is envisaged for the following category of Industries

- Synthetic Organic Chemicals - 5(f)
- Integrated Paint Industries -5(h)

(ii) **Nature of project (New/Expansion/Amendment/Extension etc.)**: New

(iii) **Location (Plot No./ Village/ Tehsil/ District):** Village: Manallur and Soorapoondi Tehsil: Gummidipoondi, District: Thiruvallur.

Village	Patta (ha)	Poramboke (ha)	Total (ha)
Manallur	2.985	203.355	206.340

Soorapoondi		79.725	79.725
Total	**2.985**	**283.080**	**286.065**

(iv) **Geo-coordinates of project site:**

- Latitude**:** 13^0 26' 48.15" to 13^0 27' 15.37" N
- Longitude: 80^0 01' 21.79" to 80^0 01' 56.24" E

(v) **Investment/Cost of the project:** 250 Crores.

(vi) **Item of Schedule to the EIA Notification, 2006:** 7(c) - A.

(vii) **Why appraisal/ approval is required at the Central level:** It falls in Category "A" as per S.O. 1533 EIA notification dated 14 September 2006 if at least one industry in the proposed industrial estate falls under the Category A, then entire area shall be treated as Category A irrespective of the area.

(viii) **Whether project involves any violation under notification S.O 804(E) dated 14.03.2017:** No

(ix) **Land use pattern:**
Land use of project site:

S. No.	Land Use	Area in Ha	% of built-up Area	Remark if Any (Approximate Area for Construction)
1	Plots (Petrochemical & Pharma)	74.78	22%	40.6516
2	Utilities & Amenities	6.98	22%	3.795
3	Truck Terminal & Ware House	1.97	22%	1.07
4	Road and Utility Corridor	11.37	22%	6.182
5	Green Area	27.97	0%	0
6	Total Area	123.07		
7	Proposed for BPCL Plots	68.80	22%	37.4
8	FACT Road	6.21	5%	0.767
9	**Grand Total Area**	**198.08**		**89.867**

Land use on 10 km radius of project site:

S. No.	Land Use Category	Area (ha)	Area in %
1	Agriculture Land	24596	58.11
2	Open Scrub / Barren Land	401	0.95

3	Waterbody	3198	7.55
4	Mangroves	20	0.05
5	Settlement	14115	33.34
Total		**42331**	**100**

(x) **Details of water bodies, impact on drainage, if any:** Chitrapuzha river is adjacent to the project boundary, while Ambalamedu lake is also in vicinity of the project site. Near the river green belt is proposed as per the norms. Ambalamedu Lake is artificial lake which is harvest the run-off from the project area.
An estimate of wastewater, which would be generated is approximately 4.45MLD, which will be treated in 1 MLD and 3.5 MLD capacity of ETP and recycled within the project area.

(xi) **Water requirements, sources (during construction and operation phases) and NOC:** Total water requirement is 14.148MLD, while fresh water requirement is 10.143MLD. Water supply demand is estimated based on the proposed land use, built-up area and the population densities proposed in the master plan. The estimated water demand is segregated into potable and non-potable water demand. It was assessed that 40% of the demand of the process industries shall be met by recycled water; the remaining 60% of the demand will be met from Kerala Export Promotion Industrial Park (KEPIP).

(xii) **Groundwater extraction/usage and NOC/Clearance from CGWA/State Ground Water Department: Not submitted by the Proponent:** Not applicable.

(xiii) **Whether the project is in Critically Polluted area:** No.

(xiv) **ToR/EC details:** ToR letter F. No. 21-63/2018-IA.III dated: 20/09/2018.

(xv) **Major issues raised during PH and response of PP:** Public hearing, chaired by the District Collector, Sri. S. Suhas, Ernakulam, was conducted at the Collectorate Conference Hall, Ernakulam on 01/07/2019.

(xvi) **If the project involves expansion copy of certified compliance report issued by concerned regional office:** Not applicable.

(xvii) **If the project involves diversion of forest land:** No.

(xviii) **If the project falls within 10 km of Protected Areas including National Parks, Sanctuaries and Tiger Reserves etc.:** No.

(xix) **Waste Management:**

Details	Calculation In KLD	Calculation In MLD
Domestic Water Requirement	257	0.257
• Fresh (70% of domestic)	180	0.180
• Flushing (30% of domestic)	77	0.077
Domestic Sullage Generated (70% of fresh and 100% of Flushing requirement)	203	0.20
Effluent from Process @ 25% to 45%	4,247	4.247
Total Effluent	4,450	4.450
CETP Capacity @ 20% more than total Effluent	5362	5.362
Treated Effluent from CETP @90%	4005	4.005

Recycled Water Demand:

Details	Calculation In KLD	Calculation In MLD
Flushing	180	0.18
Horticulture	1908	1.91
AC Cooling	1241	1.24
Total Treated Water Requirement	3329	3.33

Solid and Hazardous Waste: Total solid waste generation can be summarised as below:

- Industrial/Hazardous waste generated= 87.068 Ton / Day (including 5.29 Ton / Day of ETP Chemical Suldge waste).
- Municipal Solid Waste= **9.116** Ton / Day (including 2.27 Ton / Day of ETP Biological Suldge waste and 5.85 Ton / Day of horticulture waste).

During operation phase, the solid waste including hazardous waste shall be properly handled and disposed. A TSDF (Treatment, Storage, Disposal Facility) project (KEIL i.e., KERALA ENVIRO INFRASTRUCTURE LTD) is existing adjacent to Petro-chemical Park and same can be used for proposed project. E-waste will be given to Suchitra Mission or similar NGO/ company for recycling. Plastic, paper and other wastes will be given to CREDAI (Confederation of Real Estate Developers Association of India). KINFRA may give a plot to set up recycling unit inside the Petro Chemical Park so that hazard related to transportation will also be avoided.

(xx) **CETP:** The proposed CETP would essentially be for proposed industries with capacity of 1 MLD and 3.5 MLD.

(xxi) **Type of effluent, Quantity, effluent conveyance system from the member units to CETP with CETP's Capacity**: Dry weather industrial wastewater and The wet weather contaminated wastewater (primarily run off from open processing areas).
The Industrial process wastewater and contaminated wastewater shall have the following treatment steps with the conceptual design basis.

(xxii) **STPs:** Nil.

(xxiii) **Treatment and usage of treated sewage with STP's capacity**: None.

(xxiv) **Details of tree cutting and Green belt development:** Tree cutting details:

S. No.	Land Use	Area in Ha	Total Number Trees Cutting
1	Plots (Petrochemical & Pharma)	74.78	6,789
2	Utilities & Amenities	6.98	634
3	Truck Terminal & Ware House	1.97	178.92
4	Road and Utility Corridor	11.37	1,032.39
5	Green Area	27.97	0
6	Total Area	123.07	
7	Proposed for BPCL Plots	68.80	6,246
8	FACT Road	6.21	128.09
9	**Grand Total Area**	**198.08**	15,008

The green belt will be developed in 27.97 Ha, which is 22.73% of total area. In addition to it, 10.27% of net industrial plotted area will be developed as green belt within the industrial units.

(xxv) **Energy conservation measures with estimated saving:** To conserve the energy resources, good practices will be followed during the operation phase such as turning off lights and equipment when not in use, ensuring fuel efficiency of motors and vehicles through proper maintenance and minimal work at night. The principles of energy conservation will also be embedded in the buildings through use of energy efficient fixtures, maximum availability of natural light and use of solar energy for street lighting.

(xxvi) **Parking requirement with provision made:** The proposed Petrochemical Park will have an integrated facility for truck terminal warehousing and parking i.e. 25 ECS. As the site is separated by BPCL land the location of parking facilities have been proposed close to the entry point of the two land parcels.

(xxvii) **Details of Rain Water Harvesting:** Since the storm water on site will be harvested for recharging the water body, proper management of this resource is necessary to prevent contamination. Hence, regular inspection and cleaning of storm drains shall be carried out. Use of fertilizers and pesticides will be avoided prior to and during monsoons. Clarifiers or oil/ water separators shall also be installed in all the parking areas. Storm water drains of various sizes are proposed in the storm water drainage network system. Total length of the drain is 16km and for every 500m one rainwater harvesting pit id proposed total quantity will be 32. Each RWHP dimensions are 1.15M X 0.8M X 0.6M (LBD). The cost of the storm water drainage system for the project is estimated at Rs. 18.46 Crores.

(xxviii) **If the project is in CRZ area**: Not applicable.

(xxix) **Brief description of Socio-economic condition of local people and R&R issues involved, if any:**

a) Impact on Land:
The entire land earmarked for development of the proposed petrochemical park is currently under the possession of FACT and the same is free from all encumbrances. During the site visit, it was observed that the land was under transfer to KINFRA by the FACT for the development of the above park. Currently, it is a fallow land and not in use. Hence, there will no adverse impact on the local population, when it will be transferred to KINFRA for the proposed petrochemical park.

b) Impact on Structure:
There are 57 built up structures in the land earmarked for the development of the petrochemical park. Of these 19 are in good condition, 26 in damaged condition and 12 in scrap condition. The residential structures found in good condition are treated as staff quarters and they are resided by the staffs of M/s Fertilizer and Chemicals Travancore Ltd. (FACT), who owns the land. They will be shifted to other locations prior to handing over of the land to KINFRA by the FACT for development of the proposed Petrochemical Park. Hence, there will no adverse impact of the project on the neighbourhood people.

c) Impact on Demography of the study area:
Due to setting up of the proposed Petrochemical Project at Ambalamughal in Ernakulam district it has been estimated that the population of the study area will increase by 10186 of which 4074 will be residential population and 6112 will be Floating population. In terms of percentage, it is 40 and 60 percent respectively. Floating population refers to those people who reside in a place outside his village/town for a certain amount of time in a day and then return to his/her native place of residence in the evening. In

the official census such people are counted at the place of their residence and not at the work place. These people commute daily to their work place for earning their livelihood or education. The afore said increase in population may change the economic and socio-cultural structure of the study area and put strain on the existing infrastructure and civic amenities. Further, the floating population may carry their own culture and try to recreate their old society in the study area to maintain or secure their identity. As a result, the socio-economic environment of the study area may change significantly. This is a negative impact of the project.

d) Impact on Employment Possibilities:

It has been estimated that the up-coming Petrochemical Park project will create employment opportunities for about 9330 jobseekers. Of this 3,733 (40 percent) will be on permanent basis and the remaining 5,597 (60 percent) on temporary basis. However, the number of people to get employment and nature of employment will depend upon the type of industries to come up in the proposed park. Further, there will be employment opportunities for both unskilled, semiskilled and skilled workers. Besides the above there will be employment opportunities for thousands of people in the informal sector who will be self-employed, or who will work for those who are self-employed. This is a positive impact of the project.

e) Provision of Industrial Accommodation:

The proposed petrochemical park has been planned to be developed for the development of petrochemical based industries in the state. The park will be provided with common facilities like power, water, road and effluent treatment. It will provide accommodation to those entrepreneurs who will like to set up petroleum based downstream industries. This is expected to attract both local and foreign direct investment in petrochemical based industries in the region. This is a positive impact of the project.

f) Development of Downstream Petrochemical Industries:

Development of the proposed petrochemical park at Ernakulam district of Kerala will provide impetus to development of following downstream petrochemical industries:

- Intermediates
- Specialty Chemicals
- Drugs & Pharmaceuticals (Formulations) and
- End Products

Setting up of the above industries in the proposed petrochemical park will not only reduce dependency on imports but also on supplies from the manufacturers in Gujarat and Maharashtra. This is a positive impact of the project.

g) Promotion of Ancillary and Support Industries:

There will be promotion of ancillary and support industries in the region due to setting up of petrochemical based downstream industries in the proposed petrochemical park. The ancillary units are expected to manufacture and supply packaging materials, industrial gas etc. to the mother units who will place orders to them for such products. Setting up of ancillary units will not only provide a ready market to the entrepreneurs of such units but also create additional employment opportunities for the local job seekers. This is a positive impact of the project.

R&R:

The proposed project site having an area of approximately 489.46 acres belongs to the FACT. The rest of the land belongs to Bharat Petroleum Corporation Ltd. (BPCL), Kerala Enviro Infrastructure Ltd. (KEIL), FACT-RCF Building Products Ltd (FRBL), which is a joint venture of M/s Fertilisers & Chemicals Travancore Ltd, Kochi (FACT) and others.

The entire land earmarked for development of the petrochemical industrial park is under the possession of FACT and is free from all encumbrances so no R&R applicable to this project.

(xxx) **Employment potential, No. of people to be employed:** It has been estimated that the up-coming Petrochemical Park project will create employment opportunities for about 9330 jobseekers. Of this 3,733 (40 percent) will be on permanent basis and the remaining 5,597 (60 percent) on temporary basis.

(xxxi) **Benefits of the project: General Advantages of Industrial Estates:** Constructing Industrial Estates has lots of advantages such as:

a) Getting rid of health hazards and damages of buildings, which may be caused by accidents occurring in factories and workshops.

b) Reducing noise pollution caused by factories and workshops.

c) Industrial Estates contribute to maintain cities clean. In the absence of well organized industrial areas lots of wadis (so called Saila), streets and footpaths suffer from pollution with oils, lubricants and industrial rubbish. Reducing noise and clean cities have positive effects on tourism. Collection, transport, and disposal of normal and hazardous waste in the Industrial Estate (solid waste management) take place according to laws issued by the government and under the supervision of the responsible authority.

d) The development of Industrial Estates aims also at limiting environmental pollution caused by factories, workshops and slaughterhouses especially the pollution of groundwater.

e) Industrial Estates enable the responsible authorities to better supervise the factories, workshops and slaughterhouses.

f) Industrial Estates have among other things their own water supply, water networks, sanitation networks, electric power connection and distribution system and standby generator, thereby decreasing noteworthy the load for the cities supply, distribution and disposal networks.

g) Due to the high population growth rate in developing countries sewage treatment plants are often overloaded. The extension of these plants is hardly possible because there is no additional area or because of the high cost for the extension. Constructing Industrial Estates that have their own sewage treatment plant, decrease the load for the cities sewage treatment plant and ease the operation. As factories and workshops in developing countries usually don't have pre-treatment plants, oils and lubricants used for repair and maintenance of transportation vehicles, industrial waste water and waste water from slaughterhouses complicate the operation of sewage treatment plants. Each tenant at the Industrial Estate is required to pre-treat his industrial wastewater to agreed standards prior to conveying it to the Industrial Estate's sewage treatment plant. Treated wastewater can then more easily meet international standards for the reuse in agriculture and as such the treated effluent can be used by farmers in nearby agricultural areas or for horticulture within the premises.

h) Constructing Industrial Estates encourages local investors and foreign companies to invest in this country. The existence of Industrial Estates means, investors are not forced to go through a complicated process that can last years in developing countries (searching a suitable land, getting the necessary permissions from the concerning authorities, constructing infrastructure and get necessary services).

i) Encouraging investors through the construction of Industrial Estates contributes to create sustainable jobs, decrease unemployment and reduce poverty. In addition to the direct

	employment at the industrial estate, big number of indirect jobs is created. Workers' skills enhancement is also a noteworthy advantage. **j)** Investors contribute to the development of the national economy through paying rent for the lot or buying the lot, taxes paid by themselves and by their employees, producing goods not existing at the local market and as such reducing the import rate, production of products at competitive costs, which can be exported to foreign markets. (xxxii) **Specialised Studies carried out for the project as per the ToR, if any:** (xxxiii) **Details of Court cases, if any:** No.
3.1.2	The EAC during its 232nd meeting on 27th February, 2020, has observed the following: (i) Government notification declaring Petro-Chemical Park is not available. (ii) Chitrapuzha river is abutting the proposed project site. Demarcation of Highest Flood Line (HFL) vis-à-vis project layout plan is not shown. Revised layout plan shall include a green buffer of at least 100 m around river, lakes or any other water body. (iii) The layout design has not envisaged the safe-grade elevation in view of flood of river, if any, *inter alia* Flood Zone Mapping. (iv) EIA/EMP report does not mention about one of the important Ramsar sites, i.e., Vembanad (Vembanad Kayal or Vembanad Kol), and its proximity with the proposed site. There is a possibility that proposed project would impact this lake adversely. The lake provides the important terrestrial and aquatic habitats for large number of migratory birds and variety of flora and fauna including phyto- and zoo-planktons. Study on impact of proposed project on native biodiversity and wetland ecology including ecological productivity of the lake have not been carried out. Study should clearly state the differences in buffer and core zones separately. (v) Siting of chemical industries near the water bodies shall be avoided and layout plan shall be revised accordingly *inter alia* criterion of categorisation of industries (A and B) as per EIA Notification, 2006 as amended from time to time. (vi) Landuse plan *inter alia* common facilities, green belt and industrial units to be established within the proposed Petro-Chemical Park has not been provided.

	(vii) Social Impact Assessment has not taken into consideration of key parameters like availability of land & people's dependency in the study area, socio-economic spectrum, impact of the project at local and regional levels. (viii) During Public Hearing, proponent has committed to install or use of Membrane based water purification system, which is recently banned by the Hon'ble NGT vide order dated 15.01.2020 . The people should be informed and consulted again so that the matter may be re-examined as was raised during public hearing and commitment of proponent was duly made. Amendment should be as per recent provisions and regulations of Central/State governments. (ix) No ground water recharge measures are to be taken within the proposed premises due to possible ground water contamination. (x) The proponent is required to look in to the issues related to flood and storm water drainage within the proposed site. (xi) The CER is not computed on slab basis. Proponent is required to submit revised CER (computed on slab basis) as per Ministry's OM dated 1st May, 2020. (xii) Petro-Chemical industries produce the intermediate chemical products like Volatile Organic Compounds (VOCs), therefore EIA/EMP shall elaborate the detailed monitoring mechanism along with the associated mitigation measures for all 12 pollutants as per National Ambient Air Quality Standards as notified by CPCB on 18th November, 2009 and subsequent amendments, if any. (xiii) The proposed project site having an area of approximately 489.46 acres belongs to the M/s Fertilizers and Chemicals Travancore Limited (FACT), Kochi. The rest of the proposed land belongs to Bharat Petroleum Corporation Ltd. (BPCL), Kerala Enviro Infrastructure Ltd. (KEIL), FACT-RCF Building Products Ltd (FRBL), which is a joint venture of FACT and others. EIA/EMP report does not explicitly describe the status of existing/upcoming environmental clearances, if any, issued to these companies/agencies for the respective projects. Also, it is not clear if one or more environmental clearances, if applicable, are overlapping the proposed one. (xiv) Park is proposed to be established in approximately 489.46 acres of land in FACT premises at Ambalamughal, Kochi. In the surroundings of proposed site, there are a large no. of industrial entities that include refinery, fertiliser/chemical factories and a bulk terminal International Container Transhipment Terminal (ICTT). The LNG Terminal and Gas Pipeline Network is also being set up nearby the proposed site. In view of this, the EIA/EMP report shall include all the impacts of

potentially and inherently due to all these projects in a comprehensive manner.

(xv) There is no consistency in the figures related to total area of proposed site and various component of the proposed project as mentioned in the ToR issued by the Ministry and this proposal for grant of environmental clearance.

(xvi) A revised EIA/EMP report would be required for further appraisal.

3.1.3 In view of above mentioned observations, after detailed deliberations during 232nd meeting on 27th February, 2020, the proposal was returned in its present form.

3.2 **Development of Vikram Udyogpuri Industrial Area in Narvar, Karchha, Munjakhedi, Gawdi, Piplodha-Dwarkadhish, Madhopur village, Ujain Taluk, District Ujjain by M/s Madhya Pradesh Industrial Development Corporation - Terms of Reference regarding.**

[Proposal No. IA/MP/NCP/131190/2019] [F.No. 21-18/2020-IA.III]

3.2.1 The project proponent along with the EIA consultant M/s Abc Techno Labs India Pvt. Ltd. made a presentation and provided the following information:

(i) **Proposal:** MPIDC is proposed to develop the Vikram Udyogpuri Industrial Area in Narwar, Karchha, Munjakhedi, Gawdi, Piplodha Dwarkadhish, Madhopur Village, Ujjain Taluk and District in an area of 458.6 hectare (1133.225 acres). The proposed establishment will fall under Schedule 7 (c) of the EIA Notification 2006. The proposed establishment is treated as Category 'A, project, requires prior Environmental Clearance from the Expert Appraisal Committee of MoEF &CC.

(ii) **Nature of project:** New/Expansion/Amendment/Extension etc.: New.

(iii) **Location (Plot No./ Village/ Tehsil/ District):** Vikram Udyogpuri Industrial Area in Narwar, Karchha, Munjakhedi, Gawdi, Piplodha Dwarkadhish, Madhopur Village, Ujjain Taluk, and District, Madhya Pradesh.

(iv) **Geo-coordinates of project site:**

Sr. No.	Latitude	Longitude
1	22°05'54.83"N	75°54'19.50"E
2	23°06'08.86"N	75°54'19.39"E
3	23°04'39.62"N	75°58'54.53"E
4	23°05'06.00"N	75°58'52.32"E

(v) **Connectivity to the site:**

Sr. No.	Particulars	Details
1	Nearest highway	Ujjain Dewas Highway-2.7Km (SW)
2	Nearest railway station	• Karchha railway station-1 Km (N) • Madhupur railway station-1 Km (NE) • Ujjain Junction-12 Km (NW)
3	Nearest airport	Devi Ahilyabai Holkar Airport-Indore -55 Km (S)
4	Nearest town/city	Ujjain-12 Km (NW)

(vi) **Investment/Cost of the project:** Rs. 808.6 Crore.

(vii) **Item of Schedule to the EIA Notification, 2006:** 7(c) Industrial estates/ parks/ complexes/ areas, export processing Zones.

(viii) **Why appraisal/ approval is required at the Central level:** As per EIA Notification 2006 & its subsequent amendments the proposed DMIC Vikram Udyogpuri project is falling under Category "A", Because in this proposed industrial park Category "A" industries will be falling so it is categorised as 'A' so in this regards project requires Environmental Clearance from the EAC-Ministry of Environment, Forest and Climate Change (MoEF &CC), New Delhi.

(ix) **Land use/Land cover of project site in tabular form:** The MPIDC proposed to develop the industrial area in an area of 450.265 Ha. The land use breakup of the proposed project is given below:

S. No.	Land use/Land cover	Area (ha)	%	Remarks, if any
1	Industrial	207.973	46.19	---
2	Commercial	32.667	7.26	---
3	Residential	49.695	11.04	---
4	Public semi-public	54.058	12.01	---
5	Open/green area	35.759	7.94	---
6	Facilities	17.918	3.98	---
	M.P.E.B.			
	O.H.T.			
	S.T.P.			
	E.T.P.			
	S.W.M.			
7	Roads	52.195	11.59	---
Total Area		450.265	100%	

(x) **Land use/Land cover around 10 km radius of project site (1 km in case of Highway projects):**

S. No.	Land use/Land cover	Area (ha)	%	Remarks, if any
1	Water Bodies	6820.00	13%	---
2	Agricultural Fallow	21820.00	43%	---
3	Airstrip	1120.00	2%	---
4	Railways	4551.00	9%	---
5	Built-up	7534.13	15%	---
6	Open Scrub	3181.00	6%	---
7	Road	5876.75	12%	---
Total		**50902.88**	**100%**	

(xi) **Terrain, level with respect to MSL, requirement of filling if any:** Undulating

(xii) **Rehabilitation involved if any:**

(xiii) **Details of water bodies, impact on drainage, if any:** Kshipra River (5.0 km, SW), Narawar Nala (1.5 km, SW) and Silarkheri Talav (2.17 km, NW) No any impact on drainage.

(xiv) **Water requirements, sources (during construction and operation phases):** Total Requirement: Approx. Net 8.12 MLD & Gross 9.01 MLD. Source of water: 10 MLD is Kshipra River at Kithoda Rao check dam which is about 11 km from the project area**.**

(xv) **Groundwater extraction/usage:** Not applicable.

(xvi) **Whether the project is in Critically Polluted area:** No.

(xvii) **Tree cutting, types, numbers, girth size etc.:** Not applicable.

(xviii) **If the project involves diversion of forest land:** Not applicable.

(xix) **If the project falls within 10 km of Protected Areas including National Parks, Sanctuaries and Tiger Reserves etc.:** Not applicable.

(xx) **Whether project site is in CRZ area if yes furnish the CRZ map:** Not applicable.

(xxi) **CETP: Type of effluent, Quantity, effluent conveyance system from the member units to CETP with CETP capacity: Treatment and usage of treated sewage with STP capacity:** The 2 MLD Effluent Treatment Plant planned to cater the entire industrial effluent generated from Zone 3 of the proposed industrial area.

(xxii) **STP: Provide details of treatment and usage of treated sewage with STP's capacity:**

Sr. No.	Sewerage Zones	Treatment Proposed	Average Flow STP (MLD)	Area required (Acre)
1	Zone 1	MBBR with Tertiary Treatment	4.0	1.60
2	Zone 2	SBR with Tertiary Treatment	5.2	2.10
3	Zone 3	MBBR with Tertiary Treatment	2.1	1.20

(xxiii) **Incinerator:** Types of wastes, sources, collection, treatment, waste generation and disposal:

(xxiv) **R&R issues involved, if any:** The same area form the private is acquired and the compensation for the land losers is made as per the policy of the MPIDC.

(xxv) **Employment potential, No. of people to be employed:** Construction- 300 per day. Operational- 50- 75 per day.

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

- Direct and indirect employment generations due to the project.
- Increase in Market & Business Establishment facilities.
- Green belt development.

(xxvii) **Details of Court cases, if any:** No.

(xxviii) The proponent has informed that the SEIAA, Madhya Pradesh has already granted the Environmental Clearance to M/s MPAKVN for development of Vikram Udyogpuri Industrial Area under Category-B Projects wherein it was allowed to house industrial units of auto component, IT/ITES, logistics along iwht public and semi-public use – Industrial hub, commercial, residential and other support infrastructure without provision of Effluent Treatment Plan.

(xxix) Category A industries are approaching the State Government for allotment of land at VUL Industrial area. However, in the absence of EC for category-A project, land is not being allotted to such industries.

3.2.2 The EAC during its 232nd meeting on 27th February, 2020, observed following:

(i) In Form-1 of the application, the name of the proponent is mentioned as MPIDC Limited. However, in the documents including Pre-feasibility Report submitted to this Ministry, the name of the proponent is mentioned as DMIC VUPL Joint venture of MPIDC Govt.

	MP and DMIC Govt. of India. The proponent is required to clarify in this regard. (ii) The proposal is for seeking the Terms of Reference (ToR) for Development of Industrial township DMIC of Vikram Udyogpuri Industrial Area. However, SEIAA, Madhya Pradesh has already granted Environmental Clearance to M/s MPAKVN (full name is not given in any document) on 5th November, 2015 for the Development of Vikram Udyogpuri Industrial Area. The proposed site for this project overlaps with the area for which Environmental Clearance has already been granted by the SEIAA, Madhya Pradesh. The committee observed that proposal cannot be considered without surrender of the existing EC by M/s MPAKVN as mentioned above and acceptance by the SEIAA, Madhya Pradesh. (iii) Proponent has not provided the category wise list of industrial units (A or B) as per EIA Notification, 2006 as amended from time to time. (iv) Proponent should explore the possibility of achieving ZLD. (v) The proponent should avoid abstraction of ground water for this project. (vi) Site selection for the proposed Industrial Estate has not been planned according to guidelines of CPCB's programme on Zoning Atlas for siting of Industries. (vii) The planning of Industrial Estate has not been done basis of criteria mentioned in this Ministry's Technical EIA Guidance Manual for Industrial Estate (2009) prepared by IL&FS Ecosmart Limited, Hyderabad.
3.2.3	In view of above mentioned observations, after detailed deliberations during 232nd meeting on 27th February, 2020, the proposal was returned in its present form.
3.3	**Setting up of Industrial Area Kunjbiharipura in Tehsil Phagi, District Jaipur, Rajasthan by M/s Rajasthan State Industrial Development & Investment Corporation Ltd. (RIICO) - Further consideration for Terms of Reference regarding.** **[Proposal No. IA/RJ/NCP/56068/2016] [F. No. 21-15/2013-IA.III]**
3.3.1	In view of above mentioned observations, after detailed deliberations during 232nd meeting on 27th February, 2020, the proposal was returned in its present form.
3.3.2	The project proponent made a presentation during the 161st meeting on 26th July, 2016, and provided the following information to the Committee:

	The project involves setting up of industrial Area Kunjbiharipura in Tehsil Phagi, Jaipur (Rajasthan) by Rajasthan State Industrial Development & Investment Corporation Ltd. The proposed project comes under Jaipur (Rural) Unit of RIICO, the office of which is situated at Industrial Area 22 Godam, Jaipur. The current Site Development for the Industrial Activity is for a very large scale site development meant for mainly "B" Category Industries as per the EIA Notification 2006 and its amendments made till date. The main Industries that can be developed in the proposed Industrial Area are: Steel Industries, Rolling Mills, Stone based industries, chemical industries & other general industries. The Saleable area will be about approximately 60% of the total area. Infrastructure Development includes Roads, Storm-water Drainage System, Water supply for drinking purposes, Power supply, Green Area development etc. **Land Area:** 522.362 Hectares. It is expected that, during construction phase the requirement of labour will be 1000-3500 persons per day as per work activity proposed. Local labours will be employed from the surrounding villages. During Operational phase, there will be both Direct and Indirect employment generation. About 30 persons will get employment through direct arrangement by RIICO itself for maintenance of the industrial area, out of which 5 persons will be skilled labour. The water requirement for the proposed project is approximately 50 KLD including domestic water requirements for workers (45 lpcd per worker) during the construction phase based on construction activity requirement. Electricity will be arranged by RIICO during construction and operation phase through Jaipur Vidyut Vitaran Nigam Limited. During Operational Phase sub-station of Suitable load will be established to meet the total Industrial Load. Power back-up facility will not be provided by RIICO. Individual Industries will arrange for their own Power Back-up. Power lines will also be laid by RIICO. During construction phase, power requirement will be minimal. A 132/33/11 kV Grid sub-station of suitable capacity will be planned to ensure continuous power supply to the Industrial Area. During the operation phase of the project, water pollution will be in the form of industrial effluent as well as domestic effluent from industrial units in the industrial area. Mitigation of water pollution will be the responsibility of each individual industrial unit. Polluting industrial units will have to

	install Effluent Treatment Plant (ETP) and/or Sewage Treatment Plant (STP) as per their requirement in compliance with the RSPCB norms. RIICO is proposing to install a CETP/STP for Treatment of Effluent/Sewerage generated and ensuring a zero liquid discharge Facility. Approximately 45 to 50 kg/day of municipal solid waste will be generated from the construction camp and construction site. This will be collected and disposed off in a fenced pit at dugout the site for making compost.
3.3.3	During deliberations in 161st meeting on 26th July, 2016, the EAC was informed in response to its earlier observations that no alternative sites were available. On a query regarding identification of flood plain of river Dandi through the Water Resources Department, Government of Rajasthan, the project proponent informed that the Water Resources Department has provided high flood level bounds on river Dandi. However, the presentation on the lay out for the industrial area was not clearly indicating the contours of the flood plain within the industrial area. A comparison with the Survey of India map also could not clear the confusion. The Committee asked the project proponent to keep the flood plain of the river Dandi demarcated on the site plan of the proposed industrial area by the Water Resources Department, Government of Rajasthan, as well as in the lay out plan of the industrial area clearly excluding river Dandi and its flood plains from any activity including industrial plots and roads. The only permissible activity would be bridges to cross the flood plain wherever necessary for the connectivity. The project proponent assured that he would bring the necessary documents at the earliest.
3.3.4	The project proponent along with the EIA consultant M/s Bhagavathi Ana Labs, Hyderabad, made a presentation during the 214thmeeting on 26thApril, 2019, and provided the following information to the Committee: Submitted the map with flood plain of river Dandi and revised layout plan of industrial area Kunjbiharipura as vetted by Water Resources Department (WRD), Government of Rajasthan vide letter no. T-730/ACE/Jpr/4994 dated 24th January, 2019. Submitted the WRD design based on 100 years flood studies. Submitted the details of retaining wall proposed by WRD. No industrial plots or roads have been planned in the demarcated flood plain as approved by WRD, GoR. Only bridges will be planned. **Water requirement, source, status of clearance:** 8400 KLD (To be met through the treated waste water of Dehlawas STP, Jaipur). Requirement of drinking Water to be met through ground water abstraction (after obtaining prior permission from CGWA).

	CETP: **Type of effluent, Quantity, effluent conveyance system from the member units to CETP:** Individual industry will treat its effluent upto the inlet quality standards of CETP. Out of 25.723 Ha land area reserved under services, CETP will be planned. Provision for laying of Effluent conveyance system from the member units of CETP has been incorporated in the project. **Treatment and usage of treated sewage:** Out of 25.723 Ha land area reserved under services, STP will be planned. Treated sewage from STP will be used for Plantation and Landscaping. **Whether the project is in Critically Polluted area**: No. **If the project involves diversion of forest land, extend of the forest land**: **National Park/ Wild Life Sanctuary in 10 km radius area:** No**.** **If the project falls within 10 km of eco- sensitive area, Name of eco-sensitive area and distance from the project site**: No. **If the project falls in CRZ area:** No, the project does not fall in CRZ area. **Tree cutting, types, numbers, girth size etc**.: Development works are to be taken up preserving most of the existing trees. **Water bodies, diversion, if any**: No industrial plots & roads have been planned in the Water course of River Bandi (duly vetted by Water Resources Department, GOR) passing through the project site. **Court cases if any**: Three court cases are pending before Hon'ble Rajasthan High Court affecting 53 Bigha land area. **Investment/Cost**: INR. 1,110 Crore. **Employment potential:** 50,000 Persons. **Benefits of the project**: Industrialization of State, Employment Generation and Revenue Collection.
3.3.5	The EAC during detailed deliberations in the 214th meeting on 26th April, 2019, has observed the following: There are lot of differences in the information given by proponent during earlier meetings and this meeting. The map submitted by the proponent shows the **customised flood plain** of river Bandi (also known as river Dandi), not the natural flood plains. Water Resource Department (WRD) has just vetted the customised flood plans, but did not provide recommendation in favour of the proposed construction. Maximum discharge (100 years flood data of Hingonia Dam along with the additional discharge of catchment area situated between proposed site and Dam reported by Government of Rajasthan, i.e., State Water Resource Planning Department (SWRPD) is 2160 cumecs vetted by WRD, GoR. Submitted an undertaking that no A Category industry will be established.

	There is mismatch in the information regarding water requirement and water balance for the project as given during earlier presentation and this presentation before EAC.
3.3.6	After deliberations during 214th meeting on 26th April, 2019, the EAC deferred the project for following reasons: The project falls on the active flood plain of river Bandi. With unpredictable behaviour of nature in context of climate change, it is not advisable to develop infrastructure on the flood plains thereby enhancing risks for people, infrastructure and investments. Hence, Proponent should explore the possibility of alternative site as suggested by the earlier EAC. EAC advised the Project proponent should consult State Govt. as well as the State Pollution Control Board for alternative site for further consideration of the project. The proponent is required to submit the Natural Flood Plains, duly vetted by the Water Resource Department (WRD) along with their recommendations. As per the criteria of Industrial Estate sitting, the industrial units shall be at least 500 m away from flood plain of riverine system. The KML file to be submitted. Water requirement and water balance statement to be submitted
3.3.7	The project proponent did not attend 232nd EAC meeting held on 27th February, 2020.
3.4	**Construction of 2/4 laning road with paved shoulder and NH configuration for Satpada-Konark-Astarang-Naugaon-Paradwip Port-Ratanpur (Ch: 71+475 to 240.122 kms) in the State of Odisha by M/s National Highways Authority of India under Bharatmala Pariyojana - Terms of Reference regarding.** **[Proposal No. IA/OR/NCP/135873/2020] [F. No. 10-16/2020-IA.III]**
3.4.1	The project proponent along with the EIA consultant M/s Chaitanya Projects Consultancy Private Limited, Ghaziabad made a presentation and provided the following information: (i) **Background:** Earlier the Proponent submitted a proposal for Development of new highway 516-A that starts from its junction with NH-516 near Gopalpur Port and terminates at its junction with NH-316 near Satpada in the State of Odisha. The proposed project stretch started at Gopalpur port in Ganjam district and passes through Satapada, Konark, Astarang, Naugaon, Paradip Port and ended at Ratanpur. The length of the proposed alignment was approx. 240.122 km. The proposal was considered by the Ministry and placed before EAC in its 206th meeting held on 25th January, 2019, wherein it was

		noted that the proposed road actually started near Bhitarkanika Wildlife sanctuary and further divided Balukhand Konark WLS and Chilika (Nalaban) Wildlife Sanctuary and Important Bird Area, an important winter home for millions of migratory birds from the Arctic and sub-Arctic regions during their onward and return migration along the East Coast. Balukhand Konark WLS is a nesting site for Olive Ridley Sea Turtles. The pillers would have grave consequences on flow regime of 13 rivers and floodplains as it would pass through/over namely Rushikulya River, Chilika Lake, Kushabhadra River, Kadua River, PrachiNadi, Baradianadi, BorwanNadi, SaunliaNadi, HarhuaNadi, Gobari River, NuaNai River, Devi River and Mahanadi River. Rushikulya and Devi River mouths are home to over a million of nesting olive ridley turtles. As the proposed alignment was passing through a number of Ecological Sensitive Areas as well as critical wildlife and wetland areas, hence, the EAC **out rightly rejected** the proposed alignment during its 206th meeting held on 25th January, 2019. EAC further advised that the proponent should explore the possibilities to find alternate alignment that is far away and to the west and beyond Chilika WLS of the current alignment to avoid disturbance to the wildlife especially water birds in Chilika Lake, Bhiterkanika National Park and olive ridley turtle nesting sites in Balukhand Konark WLS for further consideration of ToR.
	(ii)	**Proposal:** The project road starts from Satpada in Puri district and terminates at Ratanpur in the State of Odisha. The project road starts from NH-316 near Satapada and follows the existing NH upto Konark. The new highway 316-A starts from its junction with NH-316 near Konark connecting Ratanpur, Satabhaya, Dhamra, Basudevpur, Talapada, Chandipur, Chandaneswar in Odisha and terminating at Digha in West Bengal. The length of the proposed alignment is approx. 168.647 km.
	(iii)	**Nature of project:** New/Expansion/Amendment/Extension etc.: New.
	(iv)	**Location (Plot No./ Village/ Tehsil/ District):** Satpada – Konark – Astarang – Naugaon - Paradwip port -Ratanpur (Pkg no.-NHAI/BM/18) in the state of Odisha.
	(v)	**Geo-coordinates of project site:**
	(vi)	Start Location: 19°41'11.80" N 85°28'2.24" E
	(vii)	End Location: 20°27'35.00" N 86°40'11.12" E

(viii) **Connectivity to the site:** The proposed National Highway is part of coastal highway which is planned to connect Satapada in Odisha State and Digha in West Bengal and our alignment is a part of this and is being planned from Satapada in Puri district and passes through Konark, Astarang, Naugaon, Paradwip Port and ends at Ratanpur in the state of Odisha.

(ix) **Investment/Cost of the project:** 2567.44 Crores.

(x) **Item of Schedule to the EIA Notification, 2006:** 7 (f).

(xi) **Why appraisal/ approval is required at the Central level:** Category "A" as per EIA notification – 14, September 2006 and its amendments.

(xii) **Whether project involves any violation under notification S.O 8 (E) dated 14.03.2017:** No.

(xiii) **Project brief: Total area, Land use of site and 10 km radius of project site, project components, connectivity to the site etc:**

S.No.	Landuse / Landcover	Area (ha)	Percentage	Remarks if any
1.	Private land	22939.73	68.02 %	Mainly agriculture
2.	Government land	9837.64	29.16 %	-
3.	Forest land	952.03	2.82 %	-
	Total	**33729.4**	**100**	-

Land use/ Land cover of the project site in tabular form:

S.No.	Landuse/Landcover	Area (ha)	%	Remarks if any
1.	Private land	516.144	68 %	Mainly agriculture
2.	Government land	221.347	29 %	-
3.	Forest land	21.42	3 %	-
	Total	**758.9115**	**100**	-

(xiv) **Right of Way (RoW)**: 45 m.

(xv) **Terrain, level with respect to MSL, requirement of filling if any:** The terrain of the alignment is basically flat to undulating in nature and some waterbodies areas.

(xvi) **Rehabilitation involved if any:**

(xvii) **Details of water bodies, impact on drainage, if any:** There are 11 stream crossings namely Kushabhadra River, Kadua River, Prachi Nadi, Baradia nadi, Borwan Nadi, Saunlia Nadi, Harhua Nadi, Gobari River, Nua Nai River, Devi River and Mahanadi river.

The total impacted area on water bodies is 50 Ha. There shall be no major impact on the drainage system as sufficient numbers of structures (such as culverts, minor bridges etc.) will be constructed.

(xviii) **Water requirements, sources (during construction and operation phases):** Total requirement of water for the construction is estimated 2100 KLD which will be met through surface water and ground water proposed to be used only for camp site for transient period after obtaining the permissions from appropriate authority.

(xix) **Groundwater extraction/usage:** Ground water proposed to be used only for camp site for transient period after obtaining the permissions from appropriate authority.

(xx) **Whether the project is in Critically Polluted area:** No.

(xxi) **Tree cutting, types, numbers, girth size etc.:** The alignment will require cutting of approximately 17278 no. of trees.

(xxii) **If the project involves diversion of forest land:** Yes, Forest area is identified along the alignment of area 21.42 Ha. The proposal for forest clearance is yet to be applied with MoEF&CC.

(xxiii) **If the project falls within 10 km of Protected Areas including National Parks, Sanctuaries and Tiger Reserves etc.: If yes, provide details of the PA, distance from project site and status of clearance from National Board for wildlife**:

S.No.	Areas	Name / Identity	Aerial distance (within 10 km.) Proposed project location boundary
1.	Areas protected under international conventions, national or local legislation for their ecological landscape	Yes	Proposed alignment is passing through Balukhanda Konark Wildlife Sanctuary in Puri district.
2.	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	The proposed alignment is crossing through CRZ I, II, III and CRZ IV areas at different chainages. Proposed alignment is passing through Balukhanda Konark Wildlife Sanctuary in Puri district.
3.	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Yes	Proposed alignment is passing through Balukhanda Konark Wildlife Sanctuary in Puri district.

4.	Inland, coastal, marine or underground waters	Yes	The proposed alignment is crossing through CRZ I, II, III and CRZ IV areas at different chainages. The proposed alignment is passing through 11 rivers: Kushabhadra River, Kadua River, Prachi Nadi, Baradia nadi, Borwan Nadi, Saunlia Nadi, Harhua Nadi, Gobari River, Nua Nai River, Devi River and Mahanadi river.
5.	Densely populated or built-up area	Yes	Puri – 2.7 km
6.	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	Temples- 52 nos. Schools/Colleges- 09 nos.
7.	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions) similar effects.	No	The area falls under seismic zone III which is categorized as moderate seismic zone.

(xxiv) **Whether project site is in CRZ area if yes furnish the CRZ map:** The proposed alignment is crossing through CRZ I, II, III and CRZ IV areas at different chainages. The CRZ map shall be prepared after the finalization of alignment from EAC.

(xxv) **CETP:** Not applicable.

(xxvi) Type of effluent, Quantity, effluent conveyance system from the member units to CETP with CETP capacity: Not applicable.

(xxvii) Treatment and usage of treated sewage with STP capacity: Not applicable.

(xxviii) **Incinerator:** Types of wastes, sources, collection, treatment, waste generation and disposal:

(xxix) **R&R issues involved, if any:** The Project requires approx. 758.9115 Ha. land. Total 1003 no. of structures are coming in the proposed RoW. The land will be acquired as per procedure laid down in RFCT LARR Act, 2013 and NH act 1956.

(xxx) **Employment potential, No. of people to be employed:** During the construction of the road project around 500 persons would be

	employed temporarily for a period of 2.5 years. And due to construction of toll plazas approx. 60 persons will be employed on permanent basis. Preference will be given to local people for employment. (xxxi) **Benefits of the project:** (xxxii) The proposed project starts at Satapada in Puri district and passes through Konark, Astarang, Naugaon, Paradwip Port and ends at Ratanpur in the state of Orissa by the Government of India. The proposed highway with new alignment has been envisaged through an area which shall have the advantage of simultaneous development as well as shall result in a shorter distance to travel. The junctions with existing road will be planned in the form of interchanges and flyover to ensure uninterrupted flow of traffic diversion. (xxxiii) The proposed road would act as the prime artery for the economic flow to this region. It will enhance port connectivity, economic development, provide employment opportunities to locals, strengthen tourist development, ensure road safety, and provide better transportation facilities and other facilities such as way side amenities. Vehicle operating cost will also be reduced due to improved road quality. The compensatory plantation and road side plantation shall further improve the air quality of the region. (xxxiv) **Details of Court cases, if any:** No.
3.4.2	The EAC during its 232nd meeting on 27th February, 2020, observed following: (i) The proposed alignment involves the CRZ area. (ii) The length of the proposed alignment has been reduced by 71.475 km (240.122 km - 168.647 km) as compared to alignment proposed earlier, which was **rejected** by the EAC during its 206th meeting held on 25th January, 2019 due to presence of various protected areas and ecologically sensitive sites as mentioned in previous para. (iii) Part of the proposed alignment is brownfield and part of it after Konark is greenfield. Earlier the starting point was Brahmapur, but now it is changed to Satpada. In this case, the proposed alignment ends abruptly that may not serve the intended purpose. (iv) Proposal is passing through 11 rivers. Also, pillars will be constructed into riverbed. The proponent should avoid construction of pillars in the riverbeds including Devi river (175 km) and Mahanadi river (225 km). (v) All the water bodies and drainage systems are to be protected.

	(vi) A large number of trees (17278 no.) are proposed to be cut and total 21.42 ha of forest land to be diverted for the proposed project. (vii) Proposed alignment is passing through Balukhanda Konark Wildlife Sanctuary, one of the important olive ridley turtle nesting sites in India. Proponent is required to re-design the alignment so as to avoid disturbance to coastal biodiversity including the aforementioned nesting site. Proponent is required to change the alignment accordingly. (viii) The proposed alignment falls/passes through some of the ecologically most sensitive sites and require utmost care in design and aliment selection. The Committee suggested some alignment changes and requested project proponent to approach Ministry with revised alignment proposal. The suggested alignment by the Committee will help reduce distance by atleast 60 km and avoid most of the ecologically sensitive areas.
3.4.3	In view of above mentioned observations, after detailed deliberations during 232nd meeting on 27th February, 2020, the proposal was returned in its present form.
3.5	**Development of Haryana Section from Km 0+000 to Km 135+056 of Delhi- Amritsar-Katra Expressway by M/s National Highways Authority of India -Terms of Reference regarding.** **[Proposal No. IA/HR/NCP/141416/2020] [F. No. 10-17/2020-IA.III]**
3.5.1	The project proponent along with the EIA consultant M/s Feedback Infra Private Limited, made a presentation and provided the following information: (i) **Proposal:** The proposed project is Development of Haryana Section from km 0.000 to km 135.056 of Delhi–Amritsar-Katra Expressway. The total length is 135.056 km. Project starts from Ch. 0+000 (28°47'44.02"N, 76°52'51.46"E) starts from Kundli Manesar Palwal Expressway (KMP) near village Kheri Jassur in Jhajjar district and ends at Ch: 135+056 (29°49'34.09"N, 76°11'12.01"E) near village Barta in Kaithal District of Haryana State. The entire expressway follows green field alignment and traverses through Jhajjar, Rohtak, Sonipat, Jind, Karnal & Kaithal districts of Haryana State. The proposed RoW for the proposed Expressway is 90 m. (ii) **Nature of project:** New/Expansion/Amendment/Extension etc.: New.

(iii) **Address of project site (Plot No./ Village/Tehsil/ District/State)** Project alignment is passing through the districts of Jhajjar, Rohtak, Sonipat, Jind, Karnal and Kaithal of Haryana State.

(iv) **Geo-coordinates of project site:**

- Latitude: 28°47'44.02"N, 76°52'51.46"E
- Longitude: 29°49'34.09"N, 76°11'12.01"E

(v) **Connectivity to the site:** Nearest Railway Station (Bhainswan) - ~1.2 km. Nearest Civil Airport (New Delhi) - ~35 km.

(vi) **Investment/Cost of the project:** Civil cost of the project is ~INR 3,737 Crore.

(vii) **Item of Schedule to the EIA Notification, 2006:** 7 (f) Highways.

(viii) **Why appraisal/ approval is required at the Central level:** New National Highway is listed as Category A in EIA Notification, 2006 (amended thereof).

(ix) **Whether project involves any violation under notification S.O 804(E) dated 14.03.2017:** No

(x) **Land use / Landcover of project site in tabular form:**

S. No.	Land use / Landcover	Area (ha)	%
1	Agricultural Land	1863.9	91.37
2	Road, Highways and Railways	68.0	3.33
3	Water-bodies (Irrigation Canal and Pond)	40.0	1.96
4	Waste Land	20.0	0.98
5	Built-up Area	0.1	0.00
6	Plantation / Forest	48.0	2.35
Total		**2040.0**	

(xi) **Land use/Landcover around 10 km radius of project site (1 km in case of Highway projects):**

S. No.	Land use/Landcover	Area (ha)	%
1	Agricultural Land	26875	93.89
2	Road, Highways and Railways	740	2.59
3	Water-bodies (Irrigation Canal and Pond)	184	0.64
4	Waste Land	180	0.63
5	Built-up Area	64	0.22

6	Plantation / Forest	582	2.03
Total		28625	

(xii) **Right of Way (RoW) in case of Highway projects only:** 90 meters

(xiii) **Terrain, level with respect to MSL, requirement of filling if any:** The proposed alignment mostly follows 'plain' and 'rolling' terrain. The elevation varies from 215 m to 238 m above MSL at different locations. Average elevation of the project stretch is 227 m above MSL.

(xiv) **Details of water bodies, impact on drainage, if any:** Alignment is crossing 1 man-made pond, 41 irrigation canals and 11 minor irrigation drains.

(xv) **Water requirements, sources (during construction and operation phases):** About 79,67,889 KL water shall be required for construction phase. Water shall be sourced from surface water bodies through Tanker after necessary approval.

(xvi) **Groundwater extraction/usage:** No groundwater extraction is proposed. However, if potable water is required same shall be extracted after necessary permission from appropriate authority.

(xvii) **Whether the project is in Critically Polluted area:** No.

(xviii) **Tree cutting, types, numbers, girth size etc.:** The tree enumeration for affected trees shall undertake during detailed EIA Study. The inventory will include tree species, girth and height.

(xix) **If the project involves diversion of forest land:** Yes.

- Extent of the forest land: About 48 ha of Protected Forest (roadside and canal side plantations declared as Forest) shall be affected by the crossing of the proposed expressway.
- Status of forest clearance: Joint inspection of identification and finalization of forest areas with Forest Dept. under process. Application for Forest Clearance yet to be submitted.

(xx) **Whether the project is located within 10 km of Protected Areas (PA) including National Parks, Sanctuaries and Tiger Reserves etc.** No Wildlife Sanctuary or National Park is located within 10 Km radius of the project alignment.

(xxi) **Whether project site is in CRZ area if yes furnish the CRZ map:** No.

	(xxii) **R&R issues involved, if any:** About 2040 ha of land shall be acquired for the project as per NH Act, 1956 and LARR, 2013. (xxiii) **Employment potential, No. of people to be employed:** Project shall provide direct employment opportunities for about 2800 persons (including permanent and temporary) based on Ministry of Road Transport & Highways Press Disclosure. (xxiv) **Benefits of the project:** Project shall provide multifold benefits as stated below. • Travel Time and Cost Savings; • Faster access and better reach to the nearby major market for perishable; products; • Direct and Indirect Employment; • Easy movement of Industrial traffic; • Tourism in the area will be benefitted from improved access and connectivity; • Improved road safety as a result of access-control Expressway and reduced crossings; (xxv) **Details of Court cases, if any:** No.
3.5.2	The EAC during 232nd meeting held on 27th February, 2020, **recommended** the project for grant of **Terms of Reference (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) The proponent shall carry out the Cumulative Impact Assessment studies for all stretches/sections of the **Delhi–Amritsar-Katra Expressway** and submit to the Ministry at the time of submitting application for the environmental clearance of this project. (ii) MoRT&H Notification declaring National Highway to be furnished at the time of submitting application for environmental clearance to this project. (iii) Since, the proposal involves acquisition of fertile agriculture land and R&R issues, the proponent, with the help of an independent institution/expert of national repute, shall carry out a comprehensive socio-economic assessment with emphasis on impact of ongoing land acquisition on the local people living around the proposed alignment. The Social Impact Assessment shall take into consideration of key parameters like people's dependency in the study area, socio-economic spectrum, impact of the project at local and regional levels. (iv) The proponent, with the help of an independent institute/expert of national repute, shall carry out a detailed traffic study to assess inflow of traffic from adjoining areas like airport/urban cities.

	(v) The RoW shall not exceed 70m at any point of the proposed 8-lane alignment, except for the junction improvement at the intersections of the other roads. The area of land for forest diversion shall be reduced accordingly. (vi) No ground water shall be used for this project and related construction activities. (vii) Rain water harvesting structures to be constructed at the either sides of the road with special precaution of oil filters and de-silting chambers. (viii) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project. (ix) Provide measures to avoid road kills of wildlife by the way of road kill management plan. (x) The alignment of road should be such that the cutting of trees is kept at bare minimum and for this the proponent shall obtain permission from the competent authorities. (xi) A comprehensive plan for plantation of three rows of native species, as per IRC guidelines, shall be provided. Within the boundaries of Delhi/NCR, the project proponent has to plant 10 trees against each tree to be cut along the proposed alignment. (xii) The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25th October, 2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report. (xiii) The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per ministry's O.M No 22-65/2017-IA.II (M) dated 1st May, 2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report. The CER shall be computed on slab basis.
3.6	**Development of Punjab Section from Km 135+056 to Km 396+863 of Delhi- Amritsar-Katra Expressway by M/s National Highways Authority of India - Terms of Reference regarding.** **[Proposal No.IA/PB/NCP/141510/2020] [F. No. 10-18/2020-IA.III]**
	The project proponent along with the EIA consultant M/s Feedback Infra Private Limited, made a presentation and provided the following information: (i) **Proposal:** The proposed project is Development of Punjab Section from km 135+056 to km 396+863 of Delhi–Amritsar-Katra Expressway. The total length is 261.807 km. The Punjab section starts at Ch. 135+056 (29°49'51.50"N, 76°11'00.25"E) near Galoli

Village in Patiala district and ends at Ch. 396+863 (32°01'04.13"N, 75°24'05.50"E) at Gurdaspur Bypass in Gurdaspur district. The entire expressway follows green field alignment and traverses Patiala, Sangrur, Ludhiana, Jalandhar, Kapurthala & Gurdaspur districts of Punjab State. The RoW for the proposed Expressway is 90 meters.

(ii) **Nature of project:** New/Expansion/Amendment/Extension etc.: New.

(iii) **Address of project site (Plot No./ Village/Tehsil/ District/State):** The Project alignment is passing through the districts of Patiala, Sangrur, Ludhiana, Jalandhar, Kapurthala and Gurdaspur.

(iv) **Geo-coordinates of project site:**

- Latitude: 29°49'51.50"N, 76°11'00.25"E
- Longitude: 32°01'04.13"N, 75°24'05.50"E

(v) **Connectivity to the site:** Nearest Railway Station (Rohira) - ~650m. Nearest Civil Airport (Pathankot) - ~30 km.

(vi) **Investment/Cost of the project:** Estimated civil cost is ~INR 7,694 Crore.

(vii) **Item of Schedule to the EIA Notification, 2006:** 7 (f) Highways.

(viii) **Why appraisal/ approval is required at the Central level:** New National Highway is listed as Category A in EIA Notification, 2006 (amended thereof).

(ix) **Whether project involves any violation under notification S.O 804(E) dated 14.03.2017**: No

(x) **Land use / Landcover of project site in tabular form:**

Land use / Landcover	**Land use / Landcover**	**Area (ha)**	**%**
Agricultural Land	Agricultural Land	3692.3	90.62
Roads, Highways and Railways	Roads, Highways and Railways	148.2	3.64
Water-bodies (Irrigation Minor / Canal and Pond)	Water-bodies (Irrigation Minor / Canal and Pond)	74.9	1.84
Waste Land	Waste Land	24.2	0.59
Built-up Section	Built-up Section	60.8	1.49
Plantation / Forest	Plantation / Forest	74.0	1.82
Total		**4074.4**	

(xi) **Land use/Landcover around 10 km radius of project site (1 km in case of Highway projects):**

S. No.	Land use/Landcover	Area (ha)	%
1	Agricultural Land	50257	92.30
2	Roads, Highways and Railways	1408	2.59
3	Water-bodies (Irrigation Minor / Canal and Pond)	756	1.39
4	Waste Land	210	0.39
5	Built-up Section	1234	2.27
6	Plantation / Forest	582	1.07
Total		**54447**	

(xii) **Right of Way (RoW) in case of Highway projects only:** 90 m.

(xiii) **Terrain, level with respect to MSL, requirement of filling if any:** The proposed alignment mostly follows 'plain' and 'rolling' terrain. The elevation varies from 213 m to 265 m above MSL at different locations. Average elevation of the project stretch is 241 m above MSL.

(xiv) **Details of water bodies, impact on drainage, if any:** Alignment is crossing 3 man made ponds, 4 rivers, 55 irrigation canals and 20 minor irrigation drains.

(xv) **Water requirements, sources (during construction and operation phases) and NOC:** About 1,60,42,330 KL water shall be required for construction phase. Water shall be sourced from surface water bodies through Tanker after necessary approval.

(xvi) **Groundwater extraction/usage and NOC/Clearance from CGWA/State Ground Water Department:** No groundwater extraction is proposed. However, if potable water is required same shall be extracted after necessary permission from appropriate authority.

(xvii) **Whether the project is in Critically Polluted area:** Proposed highway will be passing through Ludhiana District. Ludhiana City is about 8 km from the proposed alignment.

(xviii) **Tree cutting, types, numbers, girth size etc.:** The tree enumeration for affected trees shall undertake during detailed EIA Study. The inventory will include tree species, girth and height.

(xix) **If the project involves diversion of forest land:** Yes.

- Extent of the forest land: About 74 ha of Protected Forest (roadside and Canal Side Plantations declared as Forest) shall be affected by the crossing of the proposed expressway.
- Status of forest clearance: Joint inspection of identification and finalization with Forest Dept. under process. Application for Forest Clearance yet to be submitted.

(xx) **If the project falls within 10 km of Protected Areas including National Parks, Sanctuaries and Tiger Reserves etc.:** The proposed alignment passes through Beas River Conservation Reserve notified by Govt. of Punjab, Dept. of Forests and Wildlife Preservation (Forest Branch) vide Notification No. 34/13/2017-Ft-5/1052756/1 Chandigarh dated 29/08/2017.

- Name of Protected Areas including National Parks, Sanctuaries and Tiger Reserves etc. and distance from the project site: Notified eco-sensitive zone of Bir Gurdiyalpur and Bir Aishwan Wildlife Sanctuaries is located at about 9.9km and 9.4km respectively from the project alignment.
- Status of clearance from National Board for wild life: Permission from NBWL shall be obtained

(xxi) **Whether project site is in CRZ area if yes furnish the CRZ map:** No.

(xxii) **R&R issues involved, if any:** ~4074.4 ha of land shall be acquired for the project as per NH Act, 1956 and LARR, 2013.

(xxiii) **Employment potential, No. of people to be employed:** Project shall provide employment opportunities for ~5350 population (including permanent and temporary) based on Ministry of Road Transport & Highways Press Disclosure**.**

(xxiv) **Benefits of the project:** Project shall provide multifold benefits as stated below.

- Travel Time and Cost Savings;
- Faster access and better reach to the nearby major market for perishable products;
- Direct and Indirect Employment;
- Easy movement of Industrial traffic;
- Tourism in the area will be benefitted from improved access and connectivity;
- Improved road safety as a result of access-control Expressway and reduced crossings;

(xxv) **Details of Court cases, if any:** No.

3.6.1	The EAC during 232nd meeting held on 27th February, 2020, **recommended** the project for grant of **Terms of Reference (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) The proponent shall carry out the Cumulative Impact Assessment studies for all stretches/sections of the **Delhi–Amritsar-Katra Expressway** and submit to the Ministry at the time of submitting application for the environmental Clearance of this project. (ii) MoRT&H Notification declaring National Highway to be furnished at the time of submitting application for environmental clearance to this project. (iii) The area is important from wildlife/biodiversity point of view as the proposed alignment passes through Beas River Conservation Reserve and the study area (10 km radius) falls within the Eco-sensitive Zones of Bir Gurdiyalpur and Bir Aishwan Wildlife Sanctuaries. The proponent, with the help on independent ecological institution/expert of national repute, shall prepare a detailed Biodiversity Conservation Plan along with adequate mitigation measures so as to address issues related to the wildlife and biodiversity conservation in the region. (iv) Since, the proposal involves acquisition of fertile agriculture land and R&R issues, the proponent, with the help of an independent institution/expert of national repute, shall carry out a comprehensive socio-economic assessment with emphasis on impact of ongoing land acquisition on the local people living around the proposed alignment. The Social Impact Assessment shall take into consideration of key parameters like people's dependency in the study area, socio-economic spectrum, impact of the project at local and regional levels. (v) The proponent, with the help of an independent institute/expert of national repute, shall carry out a detailed traffic study to assess inflow of traffic from adjoining areas like airport/urban cities. (vi) Not more than 7 pillars to be constructed in the river bed of Beas river. (vii) The RoW shall not exceed 70m at any point of the proposed 8-lane alignment, except for the junction improvement at the intersections of the other roads. The area of land for forest diversion shall be reduced accordingly. (viii) No ground water shall be used for this project and related construction activities.

	(ix) Rain water harvesting structures to be constructed at the either sides of the road with special precaution of oil filters and de-silting chambers. (x) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project. (xi) Provide measures to avoid road kills of wildlife by the way of road kill management plan. (xii) The alignment of road should be such that the cutting of trees is kept at bare minimum and for this the proponent shall obtain permission from the competent authorities. (xiii) A comprehensive plan for plantation of three rows of native species, as per IRC guidelines, shall be provided. Within the boundaries of Delhi/NCR, the project proponent has to plant 10 trees against each tree to be cut along the proposed alignment. (xiv) The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25th October, 2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report. (xv) The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per ministry's O.M No 22-65/2017-IA.II (M) dated 1st May, 2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report. The CER shall be computed on slab basis.
3.7	**Widening and improvement of existing carriage way to 4-laning of Viluppuram- Puducherry - Poondiyankuppam Section of NH-45A in the State of Tamil Nadu/UT Puducherry under NHDP Phase-IV (Pkg-1 and Pkg-2) (total length 67.000 km) by M/s National Highways Authority of India - Terms of Reference regarding.** **[Proposal No. IA/TN/NCP/142749/2020] [F. No. 10-19/2020-IA.III]**
3.7.1	The project proponent along with the EIA consultant M/s Feedback Infra Private Limited, made a presentation and provided the following information: (i) **Proposal:** Project is Widening and improvement of existing carriage way to 4-laning of Viluppuram (km 0.000) to Puducherry-Poondiyankuppam (km 67.000) Section of NH-45A in the State of Tamil Nadu and Union Territory Puducherry under NHDP Phase-IV (Pkg-1&2). Total length of the project section 1 & 2 is 67.000 km. The project road section is from existing Km. 0.000 (Design Ch. 0+000) to existing km. 77.000 (Design Ch. 67+000) of NH-45A in the State of Tamil Nadu and Puducherry Union Territory.

(ii) **Nature of project:** New/Expansion/Amendment/Extension etc.: Expansion (Widening & Improvement).

(iii) **Location (Plot No./ Village/ Tehsil/ District):** Project alignment is passing through the districts of Viluppuram and Cuddalore in the State of Tamil Nadu and Puducherry Union Territory. Tehsils of the project districts are Villupuram, Villianur, Bahour, Cuddalore***.***

(iv) **Geo-coordinates of project site:**

- Start point: 11°54'21.40"N, 79°28'06.16"E
- End point: 11°37'59.84"N, 79°43'58.46"E

(v) **Connectivity to the site:** Chinnababusamudram Railway Station is 0.4 km and Pondicherry Airport is at 18 km from the proposed alignment.

(vi) **Investment/Cost of the project:** Estimated project cost is about 1876.17 Crore.

(vii) **Item of Schedule to the EIA Notification, 2006:** 7 (f) Highways.

(viii) **Why appraisal/ approval is required at the Central level:** Project is the widening of the existing national highway. It seems project doesn't trigger the EIA Notification 2006 Applicability condition; however, application has been submitted in compliance to Hon'ble Madras High Court Directives. (W.P.15217/2019).

(ix) **Whether project involves any violation under notification S.O 804(E) dated 14.03.2017:** No

(x) **Project brief: Total area, Land use of site and 10 km radius of project site, project components, connectivity to the site etc:**

Land use:

S. No.	Land use / Land cover	Area (ha)	Area (%)	Remarks
1	Agricultural Land	231	58.48	
2	Road, Highways and Railways	78	19.75	
3	Water-bodies	4	1.01	Including CRZ Area
4	Waste Land	64	16.20	
5	Built-up Area	18	4.56	
Total		**395**	**100**	

(xi) **Land use/Land cover around 10 km radius of project site (1 km in case of Highway projects):**

S. No.	Land use / Land cover	Area (ha)	Area (%)	Remarks
1	Agricultural Land	9260	64.1	
2	Road, Highways and Railways	1024	7.09	
3	Water-bodies	212	1.47	Including CRZ Area
4	Waste Land	2108	14.59	
5	Built-up Area	1842	12.75	
Total		**14446**	**100**	

(xii) **Right of Way (RoW) in case of Highway projects only:** 45 m in existing and 60 m in bypasses/realignments.

(xiii) **Terrain, level with respect to MSL, requirement of filling if any:** The proposed alignment mostly follows 'plain' and 'rolling' terrain. The elevation varies from 5 m to 47 m above MSL at different locations. Average elevation of the project stretch is 22 m above MSL.

(xiv) **Details of water bodies, impact on drainage, if any:** Alignment is crossing 11 Ponds, 3 Rivers, 9 Canal and 5 nallahs, etc.

(xv) **Water requirements, sources (during construction and operation phases):** About 1756 KLD water shall be required for construction phase. Surface water will source to meet the water requirement during construction phase of the project road.

(xvi) **Groundwater extraction/usage and NOC/Clearance from CGWA/State Ground Water Department:** No groundwater extraction is proposed. However, if potable water is required same shall be extracted after necessary permission from appropriate authority.

(xvii) **Whether the project is in Critically Polluted area:** No.

(xviii) **Tree cutting, types, numbers, girth size etc.:** Approx. 5840 trees need to be felled.

(xix) **If the project involves diversion of forest land:** No.

(xx) **If the project falls within 10 km of Protected Areas including National Parks, Sanctuaries and Tiger Reserves etc.:** Yes.

- Name of Protected Areas including National Parks, Sanctuaries and Tiger Reserves etc. and distance from the project site: **Oussudu Bird Sanctuary** is located at about 5.65 km distance in NE from Ch. 29+500.

Proposed alignment is outside of Eco sensitive zone as per draft ESZ notification.

- Status of clearance from National Board for wild life: Application for Wildlife Clearance yet to be submitted.

(xxi) **Whether project site is in CRZ area if yes furnish the CRZ map:** Yes, Coastal Zone IB and III.

(xxii) **R&R issues involved, if any:** Majority of Land Acquisition has already been acquired, balance out 338.53 ha of land is in the stage of disbursement as per NH Act, 1956 and LARR, 2013.

(xxiii) **Employment potential, No. of people to be employed:** Project shall provide employment opportunities for about 1690 population (including permanent and temporary) based on Ministry of Road Transport & Highways Press Disclosure.

(xxiv) **Benefits of the project:** Project shall provide multifold benefits as stated below.

- Better connectivity to economic, social and political hubs of the country.
- 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.

(xxv) **Details of Court cases, if any:** Yes, High Court of Madras.
Case No. / Orders/directions of the court, if any and relevance with the proposed project: W.P.15217/2019, Application for Environment Clearance has been submitted as per directives of Hon'ble High Court.

3.7.2	The EAC, during its 232nd meeting on 27th February, 2020, has observed that Hon'ble Madras High Court, in its order dated 8th January, 2020, in respect of W.P. Nos. 21883, 15217 & 14997 of 2019 and WMP. Nos. 21095, 1519, 14941 & 14942 of 2019, has issued following directions: a) The present project of expansion of NH-45A covering a stretch of 179.555 km shall be put on hold, and the present status quo is directed to be maintained. b) That the project proponent (NHAI) shall undertake an EIA study and obtain environmental clearance. c) The NHAI is also directed to obtain approval from CRZMA for CRZ clearance for two locations that it has indicated in its counter in W.P.15217/2019. d) Once the necessary clearances are obtained as mentioned in (b) and (c) above, the project can proceed. If the EIA study to be undertaken provides any contra-indicators to the NHAI's plan of development of NH-45A, it will be at liberty to make necessary alterations and modifications to make the project environmentally viable. e) If after ensuring the environmental viability of the project, its implementation resumes, the project proponent, and subject to the terms of the contract, the concessionaire, should first identify the places for planting the saplings of the same variety, preferably native trees, for every tree felled, and it must be grown first. Possibility of forming a "Miyawaki forest" has to be explored as well. f) This Court proposes to form a Committee to monitor the compliance of the direction given in (e) above, and hence, before resumption of the project, NHAI is required to approach this Court.
3.7.3	In view of above, the EAC after detailed deliberations in its 232nd meeting held on 27th February, 2020, has observed that as per direction 'a' in its order dated 8th January, 2020, the Hon'ble Madras High Court has considered the expansion of NH-45A as a single stretch, however, the proponent, i.e., M/s NHAI has split the entire alignment into three stretches and submitted three proposals for environmental Clearances. The court has also directed NHAI to conduct an EIA study (as per direction 'b' of abovesaid court order dated 8th January, 2020) and obtain environmental clearance. In view of this, proponent is required to submit a single proposal covering entire stretch of 179.555 km for obtaining environmental clearance from the MoEF&CC. Clarriffication to be submitted on the definition of National Highway under National Highways Act,1956 as present road width between Villupuram and Nagapatanam is 7 m only.

	Explore the possibility of alternative alignments along with justification for choosen present alignment.
3.7.4	In view of above mentioned observations, after detailed deliberations during 232nd meeting on 27th February, 2020, the proposal was returned in its present form.
3.8	**Widening and improvement of existing carriage way to 4-laning of Poondiyankuppam - Sathanathapuram Section of NH-45A in the State of Tamil Nadu under NHDP Phase-IV (Pkg-3) (total length 56.800 km) by M/s National Highways Authority of India - Terms of Reference regarding.** **[Proposal No. IA/TN/NCP/142682/2020] [F. No. 10-20/2020-IA.III]**
3.8.1	The project proponent along with the EIA consultant M/s Feedback Infra Private Limited, made a presentation and provided the following information: (i) **Proposal:** The proposed project is Widening and Improvement of existing carriage way to 4-laning of Poondiyankuppam-Sathanathapuram section of NH-45A in the state of Tamil Nadu under NHDP Phase IV (Pkg-3). Total length of the project section is 56.800 km. The proposed project is traverse through Cuddalore and Nagapattinam district in the state of Tamil Nadu. Alignment of project section starts near Poondiyakuppam in Cuddalore district (11°38'1.23"N, 79°43'58.88"E) and traverses entirely through plain / rolling terrain before ending near Sathanathapuram (11°12'29.59"N, 79°45'19.69"E) in Nagapattinam district of Tamil Nadu State. (ii) **Nature of project:** New/Expansion/Amendment/Extension etc.: Expansion (Widening & improvement). (iii) **Location (Plot No./ Village/ Tehsil/ District):** Project Road is passing through Cuddalore and Nagapattinum District of Tamil Nadu State. (iv) **Geo-coordinates of project site:** • **Start Point**: 11°38'1.23"N, 79°43'58.88"E • **End Point**: 11°12'29.59"N, 79°45'19.69"E (v) **Connectivity to the site:** Alapakam Railway Station (ALP) approximately 0.31 km away from the project road (Design Chainage- 68+500). Neyveli Airport, 50 km from project road.

(vi) **Investment/Cost of the project:** Estimated project cost is about 1777.05 Crore.

(vii) **Item of Schedule to the EIA Notification, 2006:** 7 (f) Highways.

(viii) **Why appraisal/ approval is required at the Central level:** Proposed Project is Widening of the existing national highway NH-45A. It seems project doesn't trigger the EIA Notification Applicability condition; however, application has been submitted in compliance to Hon'ble Madras High Court Directives. (W.P.15217/2019).

(ix) **Whether project involves any violation under notification S.O 804(E) dated 14.03.2017:** No

(x) **Project brief: Total area, Land use of site and 10 km radius of project site, project components, connectivity to the site etc:**

Land Use:

S. No.	Land use / Land cover	Area (ha)	Area (%)	Remarks
1	Agricultural Land	77	24.29	-
2	Road, Highways and Railways	134	42.27	-
3	Water-bodies	5	1.58	Including CRZ Area
4	Waste Land	74	23.34	-
5	Built-up Area	27	8.52	-
Total		**317**		

(xi) **Land use/Land cover around 10 km radius of project site (1 km in case of Highway projects):**

S. No.	Land use / Land cover	Area (ha)	Area (%)	Remarks
1	Agricultural Land	5226	43.24	-
2	Road, Highways and Railways	2408	19.93	-
3	Waterbodies	183	1.51	Including CRZ Area
4	Waste Land	1804	14.93	
5	Built-up Area	2464	20.39	
Total		12085		

(xii) **Right of Way (RoW) in case of Highway projects only;** 45-60 m.

(xiii) **Terrain, level with respect to MSL, requirement of filling if any:** The proposed alignment mostly follows 'plain' and 'rolling' terrain. The elevation varies from 2 m to 6 m above MSL at different locations. Average elevation of the project stretch is 5 m above MSL.

(xiv) **Details of water bodies, impact on drainage, if any:** Alignment is crossing 6 Ponds, 3 Rivers, 9 Canal and 4 Nallas etc.

(xv) **Water requirements, sources (during construction and operation phases):** About 1489 KLD water shall be required for construction phase. Surface water will source to meet the water requirement during construction phase of the project road.

(xvi) **Groundwater extraction/usage and NOC/Clearance from CGWA/State Ground Water Department:** No groundwater extraction is proposed. However, if potable water is required same shall be extracted after necessary permission from appropriate authority.

(xvii) **Whether the project is in Critically Polluted area:** No.

(xviii) **Tree cutting, types, numbers, girth size etc.:** Approx. 15446 trees need to be felled.

(xix) **If the project involves diversion of forest land:** No.

(xx) **If the project falls within 10 km of Protected Areas including National Parks, Sanctuaries and Tiger Reserves etc.:** No Wildlife Sanctuary and eco sensitive area is falling within the 10 km radius of the proposed project alignment.

(xxi) **Whether project site is in CRZ area if yes furnish the CRZ map:** Yes, Coastal Zone IB, II, III and IVB, CRZ maps were submitted.

(xxii) **R&R issues involved, if any:** Majority of Land Acquisition has already been acquired, balance out of 222.75 ha of land is in the stage of disbursement as per NH Act, 1956 and LARR, 2013.

(xxiii) **Employment potential, No. of people to be employed:** Project shall provide employment opportunities for about 1400 population (including permanent and temporary) based on Ministry of Road Transport & Highways Press Disclosure.

(xxiv) **Benefits of the project:** Project shall provide multifold benefits as stated below.

- Providing Port connectivity from Nagapattinam (TN) to Villupuram (Pondicherry).
- Better connectivity to economic, social and political hubs of the country.
- 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 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. (xxv) **Details of Court cases, if any:** Yes, High Court of Madras. **Case No. / Orders/directions of the court, if any and relevance with the proposed project ;** W.P.15217/2019, Application for Environment Clearance has been submitted as per directives of Hon'ble High Court.
3.8.2	The EAC, during its 232nd meeting on 27th February, 2020, has observed that Hon'ble Madras High Court, in its order dated 8th January, 2020, in respect of W.P. Nos. 21883, 15217 & 14997 of 2019 and WMP. Nos. 21095, 1519, 14941 & 14942 of 2019, has issued following directions: a) The present project of expansion of NH-45A covering a stretch of 179.555 km shall be put on hold, and the present status quo is directed to be maintained. b) That the project proponent (NHAI) shall undertake an EIA study and obtain environmental clearance. c) The NHAI is also directed to obtain approval from CRZMA for CRZ clearance for two locations that it has indicated in its counter in W.P.15217/2019. d) Once the necessary clearances are obtained as mentioned in (b) and (c) above, the project can proceed. If the EIA study to be undertaken provides any contra-indicators to the NHAI's plan of development of NH-45A, it will be at liberty to make necessary alterations and modifications to make the project environmentally viable. e) If after ensuring the environmental viability of the project, its implementation resumes, the project proponent, and subject to the terms of the contract, the concessionaire, should first identify the places for planting the saplings of the same variety, preferably native

	trees, for every tree felled, and it must be grown first. Possibility of forming a "Miyawaki forest" has to be explored as well. f) This Court proposes to form a Committee to monitor the compliance of the direction given in (e) above, and hence, before resumption of the project, NHAI is required to approach this Court.
3.8.3	In view of above, the EAC after detailed deliberations in its 232nd meeting held on 27th February, 2020, has observed that as per direction 'a' in its order dated 8th January, 2020, the Hon'ble Madras High Court has considered the expansion of NH-45A as a single stretch, however, the proponent, i.e., M/s NHAI has split the entire alignment into three stretches and submitted three proposals for environmental Clearances. The court has also directed NHAI to conduct an EIA study (as per direction 'b' of abovesaid court order dated 8th January, 2020) and obtain environmental clearance. In view of this, proponent is required to submit a single proposal covering entire stretch of 179.555 km for obtaining environmental clearance from the MoEF&CC. Clarriffication to be submitted on the definition of National Highway under National Highways Act,1956 as present road width between Villupuram and Nagapatanam is 7 m only. Explore the possibility of alternative alignments along with justification for choosen present alignment.
3.8.4	In view of above mentioned observations, after detailed deliberations during 232nd meeting on 27th February, 2020, the proposal was returned in its present form.
3.9	**Widening and improvement of existing carriage way to 4-laning of Sathanathapuram - Nagapattianam Section of NH-45A in the State of Tamil Nadu/UT Puducherry under NHDP Phase-IV (Pkg-4) (total length 56.824 km) by M/s National Highways Authority of India - Terms of Reference regarding.** **[Proposal No. IA/TN/NCP/142718/2020] [F. No. 10-21/2020-IA.III]**
3.9.1	The project proponent along with the EIA consultant M/s Feedback Infra Private Limited, made a presentation and provided the following information: (i) **Proposal:** The proposed project is widening and improvement of existing carriage way to 4-laning of Sathanathapuram - Nagapattinam Section of NH-45A in the State of Tamil Nadu and Union Territory Pondicherry under NHDP Phase-IV (Pkg-4). Total length of the project section is 56.824 km. The proposed project shall start from existing km 136.900 (Design Ch. km 123+800) near

Allivilagam and ends at existing km 194.000 (Design Ch. km 179+620) at Nagore-Nagapattinam Bypass (Western side).

(ii) **Nature of project:** New/Expansion/Amendment/Extension etc.: Expansion (Widening & Improvement).

(iii) **Location (Plot No./ Village/ Tehsil/ District):** The project road section passes through Nagapattinam district of Tamil Nadu State and Karaikal district of UT of Pondicherry.

(iv) **Geo-coordinates of project site:**

- Start Point: 11°12'29.64"N, 79°45'19.58"E
- End Point: 10°45'23.61"N, 79°49'28.43"E

(v) **Connectivity to the site:** Karaikal Railway Station is approximately 3.2 km away from the project road Neyveli Airport, is located at an approximate distance of 66.8 km from project road.

(vi) **Investment/Cost of the project:** Estimated project cost is about 1500.92 Crore.

(vii) **Item of Schedule to the EIA Notification, 2006:** 7 (f) Highways.

(viii) **Why appraisal/ approval is required at the Central level:** Project is the widening of the existing national highway. It seems project doesn't trigger the EIA Notification Applicability condition; however, application has been submitted in compliance to Hon'ble Madras High Court Directives.

(ix) **Whether project involves any violation under notification S.O 804(E) dated 14.03.2017:** No.

(x) **Land use/Landcover of project site in tabular form:**

S. No.	Land use / Land cover	Area (ha)	Area (%)	Remarks
1	Agricultural Land	206	66.88	-
2	Road, Highways and Railways	18	5.84	-
3	Water-bodies (River, etc.)	8	2.6	Including CRZ Area
4	Waste Land	40	12.99	-
5	Built-up Area	36	11.69	-
Total		**308**		

(xi) **Land use/Land cover around 10 km radius of project site (1 km in case of Highway projects):**

S. No.	Land use / Land cover	Area (ha)	Area (%)	Remarks
1	Agricultural Land	7701	64.28	-

2	Road, Highways and Railways	265	2.21	-
3	Water-bodies (River, etc.)	302	2.52	Including CRZ Area
4	Waste Land	1408	11.75	-
5	Built-up Area	2304	19.23	-
Total		**11980**		

(xii) **Right of Way (RoW) in case of Highway projects only:** 45 - 60 m.

(xiii) **Terrain, level with respect to MSL, requirement of filling if any:** The proposed alignment mostly follows 'plain' and 'rolling' terrain. The elevation varies from 0 m to 10 m above MSL. Average elevation of the project stretch is 4 m above MSL.

(xiv) **Details of water bodies, impact on drainage, if any:** Alignment is crossing 2 Ponds, 9 Rivers and 6 Canal etc.

(xv) **Water requirements, sources (during construction and operation phases) and NOC):** About 1490 KLD water shall be required for construction phase. Surface water will source to meet the water requirement during construction phase of the project road.

(xvi) **Groundwater extraction/usage and NOC/Clearance from CGWA/State Ground Water Department:** No groundwater extraction is proposed. However, if potable water is required same shall be extracted after necessary permission from appropriate authority.

(xvii) **Whether the project is in Critically Polluted area:** No.

(xviii) **Tree cutting, types, numbers, girth size etc.:** Approx. 13865 trees need to be felled.

(xix) **If the project involves diversion of forest land:** No.

(xx) **If the project falls within 10 km of Protected Areas including National Parks, Sanctuaries and Tiger Reserves etc.:** No Wildlife Sanctuary and eco sensitive area is falling with in the 10 km radius of the proposed project alignment.

(xxi) **Whether project site is in CRZ area if yes furnish the CRZ map:** Yes, Coastal Zone IB, II, III and IVB, CRZ maps were.

(xxii) **R&R issues involved, if any:** Majority of Land Acquisition has already been acquired, balance out 307.67 ha of land is in the stage of disbursement as per NH Act, 1956 and LARR, 2013.

	(xxiii) **Employment potential, No. of people to be employed:** Project shall provide employment opportunities for about 1400 population (including permanent and temporary) based on Ministry of Road Transport & Highways Press Disclosure. (xxiv) **Benefits of the project:** Project shall provide multifold benefits as stated below. • Port Connectivity from Nagapattinam to Villipuram. • Better connectivity to economic, social and political hubs of the country. • 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 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. (xxv) **Details of Court cases, if any:** Yes, High Court of Madras. **Case No. / Orders / directions of the court, if any and relevance with the proposed project:** Application for Environment Clearance has been submitted as per directives of Hon'ble High Court.
3.9.2	The EAC, during its 232nd meeting on 27th February, 2020, has observed that Hon'ble Madras High Court, in its order dated 8th January, 2020, in respect of W.P. Nos. 21883, 15217 & 14997 of 2019 and WMP. Nos. 21095, 1519, 14941 & 14942 of 2019, has issued following directions: a) The present project of expansion of NH-45A covering a stretch of 179.555 km shall be put on hold, and the present status quo is directed to be maintained.

	b) That the project proponent (NHAI) shall undertake an EIA study and obtain environmental clearance. c) The NHAI is also directed to obtain approval from CRZMA for CRZ clearance for two locations that it has indicated in its counter in W.P.15217/2019. d) Once the necessary clearances are obtained as mentioned in (b) and (c) above, the project can proceed. If the EIA study to be undertaken provides any contra-indicators to the NHAI's plan of development of NH-45A, it will be at liberty to make necessary alterations and modifications to make the project environmentally viable. e) If after ensuring the environmental viability of the project, its implementation resumes, the project proponent, and subject to the terms of the contract, the concessionaire, should first identify the places for planting the saplings of the same variety, preferably native trees, for every tree felled, and it must be grown first. Possibility of forming a "Miyawaki forest" has to be explored as well. f) This Court proposes to form a Committee to monitor the compliance of the direction given in (e) above, and hence, before resumption of the project, NHAI is required to approach this Court.
3.9.3	In view of above, the EAC after detailed deliberations in its 232nd meeting held on 27th February, 2020, has observed that as per direction 'a' in its order dated 8th January, 2020, the Hon'ble Madras High Court has considered the expansion of NH-45A as a single stretch, however, the proponent, i.e., M/s NHAI has split the entire alignment into three stretches and submitted three proposals for environmental Clearances. The court has also directed NHAI to conduct an EIA study (as per direction 'b' of abovesaid court order dated 8th January, 2020) and obtain environmental clearance. In view of this, proponent is required to submit a single proposal covering entire stretch of 179.555 km for obtaining environmental clearance from the MoEF&CC. Clarriffication to be submitted on the definition of National Highway under National Highways Act,1956 as present road width between Villupuram and Nagapatanam is 7 m only. Explore the possibility of alternative alignments along with justification for choosen present alignment.
3.9.4	In view of above mentioned observations, after detailed deliberations during 232nd meeting on 27th February, 2020, the proposal was returned in its present form.

3.10	**Development of 8-lane SPUR Starting from Km 26.582 of Vadodara - Mumbai Expressway Main Alignment (Design Chainage km. 0+000 of SPUR) and terminating at proposed junction with the Multi-Modal Corridor of MMRDA (Design Chainage of SPUR km. 79.783) in the state of Maharashtra (Total Length is 79.783 km) by M/s National Highway Authority of India – Further consideration for Terms of Reference regarding.** **[Proposal No. IA/MH/MIS/110764/2019] [F. No. 10-29/2019-IA.III]**
3.10.1	The project proponent along with the EIA consultant M/s International Consultant and Technocrats Private Limited, New Delhi, made a presentation and provided the following information before the Committee: (i) **Proposal:** National Highways Development Project (NHDP) Phase-VI is for development of 1000 km of expressways and includes construction of about 379 km long Vadodara-Mumbai Expressway (VME) including SPUR. Expressway proposed to be implemented under Public Private Partnership mode and to be executed as Design, Build, Finance and Operate (DBFO) contracts. (ii) **Nature of project (New/Expansion/Amendment/Extension etc.);** The proposed project is the development of 8 lane SPUR of Vadodara Mumbai Expressway (VME) Starting from Km 26.582 of VME main alignment and terminating at proposed junction with the Multi-Modal Corridor of MMRDA in the state of Maharashtra. It is a green field alignment and length of the SPUR alignment to be developed in the initial stage is 79.783 km. (iii) **Location:** The proposed SPUR starts at km 26.582 of main alignment of the Vadodara Mumbai Expressway at Koshimb village of Palghar district at Ch. 0+000 (19°29'19.45"N, 72°52'58.78"E) and terminate at the proposed junction with the Multi-Modal Corridor of Mumbai Metropolitan Region Development Authority (MMRDA) in Morbe village of Raigad district at Ch. 79+783 (19° 4'2.93"N, 73°10'50.07"E). Total length of the SPUR alignment is 79.783 km; out of which 18.864 km lies in Palghar district, 55.336 km lies in Thane district and remaining 5.583 km lies in Raigad district of Maharashtra. The proposed alignment is passing through 64 villages and 6 Tehsils (Vasai, Wada, Bhiwandi, Kalyan, Ambarnath and Panvel) in the State of Maharashtra. (iv) **Land use of the site and around the site up to 10 km radius:** Predominant land use pattern of the site and around the site up to 10 km radius is agricultural followed by forest, residential, commercial, barren land, water body etc. (v) **Justification for selection of the site:** A Comprehensive Transportation Study for the Mumbai Metropolitan Region has been done in 2008-2009 by the MMRDA. This network envisages construction of a link from NH4 to NH8 to freeway standards. The alignment options studied here generally follow the links identified in this study and have been modified to suit site conditions. Six

alternative alignments for the connection to JNPT and Mumbai Pune Expressway have been studied and it was desired that the SPUR alignment should be synergized with the other developments being envisaged in the Mumbai Metropolitan Region by the Government of Maharashtra. A committee was formed in the year 2010 under the Chairmanship of Divisional Commissioner, Konkan Region for the selection of the greenfield alignment of VME including SPUR. The committee recommended the alignment of the main Vadodara Mumbai Expressway in Maharashtra and the SPUR to JNPT (Node No. 1–2–4–11–12–9–10–14). The Government of Maharashtra accepted the recommendations of the committee and the formal approval of the alignment was communicated by the Government of Maharashtra vide their letter NHP2010/CR81/NH1 dated 03/2/2011 addressed to Chairman NHAI.

Government of Maharashtra approved SPUR alignment starts from the main Vadodara Mumbai Expressway near Koshimb village and ends at km 24.476 of NH-4B near Panvel (length was 94.390 km). In later stage, MMRDA planned to develop a Multi-Modal Corridor (MMC) which connects SPUR alignment at Morbe village. Thereafter, during the meeting between MMRDA & NHAI, it was decided to have a common corridor of MMC & SPUR beyond km 79+783. During the meeting held on 22ndMarch 2019 in the office of Regional Officer (NHAI) Mumbai, it is decided that:

- Start point of SPUR will be at Km 26.582 of main alignment of Vadodara Mumbai Expressway;
- SPUR will be initially developed up to km 79.783 i.e. the proposed junction with the Multi-Modal Corridor of MMRDA.
- Development of the remaining section (up to JNPT) shall be clubbed with the development of Multi-Modal Corridor and shall be taken up later.

Hence, length of the SPUR alignment to be developed in the initial stage is 79.783 km. The alignment of SPUR has already been included in the Mumbai Metropolitan Regional Plan 2016-36 of MMRDA.

(vi) **Proposed development:**

- Carriage way: Dual carriageway 2 x 4 x 3.75 (8 lane)
- Shoulder: Paved Shoulder: 3.0 m, Earthen shoulder: 2.0 m
- No. of bridges: Major bridge: 8; Minor bridge: 19 no.
- No. of culverts: 158 (123 box culverts and 35 pipe culverts)
- Interchanges: 4 no.
- ROBs: 2 no.
- Flyovers: 4 no.
- Vehicular overpasses: 8 no.

- Vehicular underpasses: 15 no. (Size 12 m x 4.0 m)
- Pedestrian underpasses: 30 on. (Size 12 m x 4.0 m)
- Cattle underpasses: 30 no. (Size 12 m x 4.0 m)
- Service roads: 9.990 km (on both sides)
- Wayside amenities: 2 no.
- Truck parking: 2 no.
- Toll Plaza including on interchanges: 5 no.
- A tunnel of 4.390 km length is proposed which starts from Km 71.675 (left) and Km 71.741 (Right) and ends at Km 76.071 (Left) and Km 76.121 (Right). The length of tunnel in Matheran Eco-Sensitive Area is 3.88 Km.

(vii) **Land Acquisition and Proposed RoW:** The proposed land acquisition for SPUR is tentatively 1241.551 ha out of which 1081.891 ha is private land and 222.66 ha is government land. Actual figure will be provided in the EIA Report after completion of Joint Measurement Survey. Width of proposed Right of way (PROW) is 100 m in general and 120 m width has been proposed at connecting road locations. At location of truck parking, toll plaza and interchanges, extra land has been proposed as per the actual design requirement.

(viii) **Waste Management:** Waste water would be generated mainly from the workers camp for which septic tanks with soak pits will be provided at camp sites.

(ix) **Municipal solid waste generated disposal facility:**

Construction Phase: Domestic waste will be produced from labour camps which will be disposed as per Solid Waste Management Rules, 2016.

Operation Phase: The domestic / commercial waste will be generated during operation phase from Toll Plazas, which will be handled as per Solid Waste Management Rules, 2016.

(x) **Total water requirement and its source:** Total water requirement for construction period of 4 years is 32,00,000 KL (2,666 KLD). It would be sourced from surface (60%) and ground water (40%). The required permission will be obtained by the Contractor prior to construction.

(xi) **Water bodies, diversion if any:** The proposed alignment is crossing Tansa River (Km 3+400 & 18+850), Tributory of Tansa River (Km 13+545), Kamvadi river (Km 33+350), Bhatsal River (Km 45+400), Kalu River (Km 47+300), Barvi River (Km 57+600), Ulhas River (Km 67+200) and also crosses streams & local nala at several locations.

(xii) **Tree cutting, types, numbers, girth size etc.:** Approximately 49,497 trees are proposed to be felled in the non-forest area. Actual numbers of government and private trees are to be felled can be ascertained after completion of Joint Measurement Survey (JMS) with appropriate authorities. The details will be provided in the EIA Report.

(xiii) **Terrain, level with respect to MSL, requirement of filling if any:** Mainly plain except 4 km is passing through hilly terrain with elevation ranges from 25m to 622m AMSL.

(xiv) **Utilization of Fly Ash:** Fly ash will be utilized for construction of embankment as per IRC Guidelines (IRC:SP:58-2001). Quantity of fly ash to be utilized for the project is 90,29,550 cum.

(xv) **Rehabilitation involved, if any:** Initial enumeration reveals an impact on approx. 237 properties will be affected, which includes 25 government properties, 2 religious and 13 community properties and remaining are private properties. Actual details will be provided in the EIA Report.

(xvi) **Whether the project is in Critically Polluted area:** No.

(xvii) **Whether the project is in CRZ area:** The proposed SPUR alignment passes through the intertidal zone and crossed Tansa River (19°29′04.11″ N 72°54′53.04″ E), Bhatsal River (19°18′00.27″ N 73°10′37.45″ E) and Kalu River (19°17′14.17″ N 73°11′20.01″ E), which are regulated under CRZ Notification 2011. CRZ map has been prepared by the National Centre for Earth Science Studies, Thiruvanathapuram. CRZ application will be submitted later.

(xviii) **National Park/ Wild Life Sanctuary in 10 km radius area & Eco-Sensitive Zone in 10 km radius area:**

- **Tungareshwar Wildlife Sanctuary** is located at a distance of approx. 0.698 km from the proposed alignment of SPUR.
- Proposed alignment is passing through the **ESZ of Tungareshwar Wildlife Sanctuary**. Application for obtaining clearance from NBWL will be uploaded shortly.
- **Tansa Wildlife Sanctuary** is located at a distance of approx. 13.6 km from the proposed alignment of SPUR.
- The proposed SPUR alignment passes through **Matheran Eco-Sensitive Area** at 2 locations i.e. Km 71+640 to Km 75+524 and Km 77+200 to Km 77+782. The Monitoring Committee for Matheran ESA has approved the SPUR alignment inside the Matheran ESA vide letter dated April 16, 2013. The SPUR alignment has also been included in the Zonal Master Plan for Matheran Eco-Sensitive Area.

(xix) **If the project involves diversion of forest land, extend of the forest land:** Proposal for diversion of 38.3195 ha forest land from Km 0+000 to Km 41+372 is submitted online dated 23/04/2018 (FC Proposal No. FP/MH/ROAD/33237/2018). Proposal for diversion of forest land in remaining stretch from Km 41+372 to Km 79+783 is under preparation and will be submitted online shortly. It is estimated that approx. 140 ha forest land is to be diverted for the proposed project.

(xx) **Investment/Cost of the project**: Rs. 11,175.45 Crore.

(xxi) **Benefits of the project**: Currently the traffic bound for Gujarat and further north from JNPT and NH4 follows Thane-Ghodbandar road which is already congested. This traffic has to pass through congested

	road network of Mumbai Metropolis from southward destination and the goods earmarked for export and import also find difficulty in commuting to and from JNPT and Navi-Mumbai. Therefore, it would be prudent to connect the Vadodara – Mumbai Expressway (VME) to major traffic generators like JNPT and to Mumbai – Pune expressway. To ensure proper dispersal of traffic a proposal for providing a SPUR connection to the VME originating at about km 26.5 of the VME and connecting to Mumbai Pune expressway and JNPT port was mooted in the year 2009. The proposed SPUR of VME will not only connect to these major traffic generators but will also result in better dispersal of traffic in the Mumbai Metropolitan Region. (xxii) **Employment potential**: Approx. 300 workers both skilled and unskilled during construction phase of 4 years and approx. 100 during operation phase. (xxiii) **If any court case, pending for violation of the environmental laws**: No. (xxiv) Regional Director, CGWB, Nagpur provided the location of Ground Water Monitoring Wells of CGWB located in the vicinity of the SPUR alignment including Tunnel section along with their coordinates, water level data and Reduced Level of G.L of monitoring wells. In the reply, CGWB mentioned that the tunnel probably lies at higher elevation. However, it needs to be verified in the field by carrying out the appropriate topographic surveys in and around the tunnel area by the geotechnical experts. (xxv) Submitted a map showing Drainage Network for Catchment of Streams Crossing the SPUR alignment including catchment of 1st order stream and Hydrological Computation for proposed bridges and culverts. (xxvi) In case of smaller crossing (minor bridges), single span has been proposed to avoid any pillars on the river beds. In case of major river crossing, span up to 50m have been proposed as per design requirement. (xxvii) Submitted maps/toposheets showing drainage network, location of cross drainage structures, vegetation cover within 15 km radius zone rock type, lineaments, fractured zone around proposed tunnel. (xxviii) Projected traffic is diverted traffic from existing road network of the project influence area. The major roads are old NH4 & NH8 (new NH-48), SH42, old NH-3, Mumbai-Pune expressway. Six interchanges have been proposed for traffic circulation (entry & exit) at different locations. Submitted a plan showing provisions of underpasses and interchanges. (xxix) The projected traffic was extracted from model study of the surrounding road network and have been validated with the data of IHMCL (Indian Highways Management Company Limited) under MoRTH.

	(xxx) Road safety audit is an integral part of Project Implementation by the concerned contractor/ concessioner as per scope. (xxxi) Submitted a list of major flora & fauna species in Matheran ESA prepared by the RFO, Panvel. (xxxii) Forest patches near start and end point of the tunnel and Matheran ESA comes under Alibag Forest Division. Subitted a list of major flora & fauna species of this area collected from Alibag Forest Division. (xxxiii) Submitted a list of flora & fauna species of the Tungareshwar Wildlife Sanctuary. (xxxiv) Alignment proposed to be realigned further at exit point of tunnel to avoid permanent stream between design Chainage km. 75+700 to km 77+500 in Wangani Tarf Taloje village. (xxxv) Since this section is on the approach of the tunnel, the work zone has been restricted to 50.5 m instead of 100 m, keeping in mind bare minimum tree cutting. It will reduce felling of trees by about 60%. In this regard, it may be mentioned that technically and topographically does not permit any elevated structure as it is contradictory for designing a tunnel. Submitted a typical Cross Section in this regard. (xxxvi) The preparation of CRZ Status Map of the proposed alignment is in final stage with National Centre for Earth Science Studies (NCESS), Thiruvanathapuram. Application shall be submitted with MCZMA after receiving the CRZ Status Map. The tree counting in mangroves and non-mangrove area will be done by the Forest Department and also the afforestation scheme along with conservation plan. These details are to be incorporated with CRZ Application. It may be submitted that the DPR Consultant may successfully submit CRZ application by end of April, 2020. (xxxvii) The proposed project not passing through Tungeshwar Wildlife Sanctuary nor falls in ESZ of this protected area as per MoEF&CC Notification dated 11.9.2019. The proposed alignment is approx. 275m away from the boundary of ESZ. It may be mentioned that the same has been vetted by the forest officials who were present during site visit of EAC sub-committee on 14.11.2019. A Letter was submitted to the Chief Wildlife Warden, Nagpur on 20.11.2019 requesting to certify the minimum distance of Tungeshwar Wildlife Sanctuary from proposed SPUR alignment. This proposal is under consideration with CCF(WL). (xxxviii) NHAI shall submit request with Matheran ESA for examination and vetting of proposed alignment after receiving the TOR of MoEF&CC. In this regard, the fresh recommendations /permission will be incorporated in final EIA/EMP. (xxxix) Submitted the Typical Cross Section of twin tube tunnel.
3.10.2	The observations of EAC, after detailed deliberation during its 220th meeting held on 26th July, 2019, are as under:

	(i) The proposal requires CRZ clearance. (ii) The project also involves diversion of forest land and wildlife issues. (iii) There is a need to re look into the traffic engineering design of this project as the proposed project has been designed without considering environmental concerns as the proposed alignment passes through wildlife habitats and corridors and disturbs Tansa river catchment, which supports 5 lakes supplying drinking water to 80% area of Mumbai. (iv) The permission obtained from Matheran Eco-Sensitive Area Monitoring Committee is on 16th April, 2013 and outdated. A fresh view on the matter is essential related to existing ground realities. (v) Proponent presented three options of alignment before the EAC was biased since only one option shown as viable and rest as not viable. Committee desired to know if rest of the options are not viable then why they are included as viable in the first place? (vi) Proponent did not submit the Gazette notification issued regarding proposed alignment/spur. Instead, they have provided copy of the Minutes of Meeting of Chief Secretary, State Government of Maharashtra and circulars regarding the constitution of committee for finalisation of proposed Spur. (vii) The proposal involves construction of a tunnel. However, the proponent did not provide studies on likely impacts of blasting and related activities and subsidence impact for construction of proposed tunnel.
3.10.2	The considering the above mentioned observations, EAC, after detailed deliberation during its 220th meeting held on 26th July, 2019, **deferred** the proposal for want of following information/documents: (i) Details of applications submitted for CRZ, forest and wildlife clearances. (ii) A certificate from Chief Wildlife Warden of Maharashtra regarding distances of Protected Areas from proposed alignment/spur. (iii) Re-design the proposed alignment by considering environmental concerns including wildlife habitats/corridors, ecologically sensitive sites, Tansa river catchment and all other related social concerns. (iv) Proponent to submit micro-catchment/ micro-watershed map of the area to understand the interruption of drainage pattern due to proposed spur. (v) Any underground plan of spur should have detailed aquifer study and its impact on ambient ground water. (vi) Submit fresh permission from Matheran Eco-Sensitive Area (ESA) Monitoring Committee for construction of proposed alignment/spur. (vii) Committee advised proponent to explore the possibility to avoid Matheran ESA and come up with fresh alignment.

	(viii) Provide three viable alignments so that EAC can choose the suitable one for finalising the proposed alignment/spur. (ix) Submit a copy of Gazette notification issued by the Government regarding proposed alignment/spur. (x) Provide detail design of proposed tunnel. In addition to above, EAC suggested to **carry out site inspection** to ascertain the proposed alignment of spur and its impact on the environment. It was suggested to include a traffic engineering expert from Central Road Research Institute (CRRI) for the proposed site visit.
3.10.4	Accordingly, a sub-committee was constituted that visited the proposed site from 13th-15st November 2019 and also interacted on the matter with field officials of Thane territorial and wild life divisions of Thane and Mumbai of Forest department, Maharashtra along with project proponent team and EIA consultant. The site visit report of the sub-committee of EAC regarding above mentioned project was approved in the 227th EAC meeting held on 28th November, 2019.
3.10.5	Considering the sites inspection report of sub-committee and the response of Project Proponent, the EAC after detailed deliberation during 232nd meeting held on 27th February, 2020, **recommended** the project for grant of **Terms of Reference (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) The proposal involves CRZ Clearance. (ii) The proponent shall carry out the Cumulative Impact Assessment studies for all stretches/sections of the **Vadodara-Mumbai Expressway including the proposed alignment** and submit to the Ministry at the time of submitting application for the environmental clearance of this project. (iii) MoRT&H Notification declaring National Highway to be furnished at the time of submitting application for environmental clearance to this project. (iv) The proposed road shall pass through a tunnel in the entire stretch of Matheran as provided by the project proponent. (v) Before the approach (entry points) of proposed tunnel, RoW shall not exceed 50.5 m so as to minimise the tree cutting. (vi) Not more than two pillars be constructed over riverbed of Kalu River.

	(vii) The proponent shall furnish a certificate from Chief Wildlife Warden of Maharashtra regarding distances of Protected Areas from proposed alignment/spur. (viii) The proponent shall submit fresh permission from Matheran Eco-Sensitive Area (ESA) Monitoring Committee for construction of proposed alignment/spur. (ix) The proponent, with the help of an independent institute/expert of national repute, shall carry out the topographic and geophysical surveys in the study area with special mention of the tunnel area. The study should also include 3 D modelling of the proposed alignment with interpretation on hydrology, rock type, lineaments, fractures, vegetation cover etc. using latest high-resolution Remote Sensing data and Survey of India toposheets at 1:50,000 scale. (x) The proponent shall take up detailed aquifer study at various depths and its impact of ambient ground water regime due to construction of tunnel and spur especially in the eco-sensitive zone. A specialized hydrogeological and hydrological study is essential to address this issue. It is preferred to take up resistivity profiling/ VES or advanced geophysical studies on the either side of the tunnel to decipher the fracture pattern and weathered portion. The foot hills of both sides of the proposed tunnel have high possibility of weathered rocks having good repository of ground water that need to be taken care for tunnel alignment. (xi) The proponent shall ensure that the proposed tunnel does not obstruct any major source of ground water which deprives availability of desired ground water in the down gradient side. All precautions to be taken to avoid any interference to sub-surface ground water flow. (xii) Proponent shall ensure that a detailed Project Report for construction of the proposed alignment includes all the 1st and 2nd order streams passing through spur alignment and should be provided with necessary culverts. The span of the culverts must be at least 20% excess of the total width of the drainage crossing. (xiii) Since, the area is important from wildlife point of view and Schedule-I species exists in the study area (10 km radius of the proposed project), the proponent shall prepare a detailed Wildlife Conservation Plan along with adequate mitigation measures. The Wildlife Conservation Plan shall be approved by the Chief Wildlife Warden concerned. (xiv) The proponent shall also study wildlife corridor along the proposed alignment covering atleast two seasons, winter and summer in consultation with Chief Wildlife Warden, Government of Maharashtra. The suggested mitigation measures should include

	options of long elevated stretches of the road to maintain and ensure contiguity of animal movement between Tungareshwar and Tansa forest areas. (xv) Since, the proposal involves acquisition of fertile agriculture land and R&R issues, the proponent, with the help of an independent institution/expert of national repute, shall carry out a comprehensive socio-economic assessment with emphasis on impact of ongoing land acquisition on the local people living around the proposed alignment. The Social Impact Assessment shall take into consideration of key parameters like people's dependency in the study area, socio-economic spectrum, impact of the project at local and regional levels. (xvi) The proponent, with the help of an independent institute/expert of national repute, shall carry out a detailed traffic study to assess inflow of traffic from adjoining areas like airport/urban cities. The detailed traffic planning studies shall include complete design, drawings and traffic circulation plans (taking into consideration integration with proposed alignment and other state roads etc.). Wherever required adequate connectivity in terms of VUP (vehicle underpass)/ PUP (Pedestrian underpass) needs to be included. (xvii) The proponent, with the help of an independent institute/expert of national repute, shall carry out a detailed vibration analysis associated with the construction and operation phases of the proposed tunnel and its impact on the wildlife along with mitigation measures. (xviii) Road safety audit by any third party competent organization at all stages namely at detailed design stage, construction stage and pre-opening stage to ensure that the project road has been constructed considering all the elements of road safety. (xix) The RoW shall not exceed 70m at any point of the proposed 8-lane alignment, except for the junction improvement at the intersections of the other roads. The area of land for forest diversion shall be reduced accordingly. (xx) The alignment of road should be such that the cutting of trees is kept at bare minimum and for this the proponent shall obtain permission from the competent authorities. (xxi) A comprehensive plan for plantation of three rows of native species, as per IRC guidelines, shall be provided. Such plantation alongside of forest stretch will be over and above the compensatory afforestation. Tree species should be same as per the forest type.

	(xxii) Rain water harvesting structures to be constructed at the either sides of the road with special precaution of oil filters and de-silting chambers. (xxiii) Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project. (xxiv) Provide measures to avoid road kills of wildlife by the way of road kill management plan. (xxv) The PP shall not use groundwater/surface water without obtaining approval from CGWA/SGWA as the case may be. The project proponent shall apply to the Central Ground Water Authority (CGWA)/State Ground Water Authority (SGWA)/Competent Authority, as the case may be, for obtaining No Objection Certificate (NOC), for withdrawal of ground water. (xxvi) The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25th October, 2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report. (xxvii) The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per ministry's O.M No 22-65/2017-IA.II (M) dated 1st May, 2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report. The CER shall be computed on slab basis.
3.11	**Any other item with the permission of Chair.**
3.11.1	The CRZ sector has forwarded the files regarding Environmental and CRZ Clearances of below mentioned proposals for consideration of Infra-1 sector. The NHAI, vide letters dated 20th December, 2019, has informed that following proposals are for widening and improved of Highways and requested to review the recommendation of EAC to obtain environmental clearance for these projects in the light of Ministry's OM dated 22nd August, 2013: 1. Proposal for four/six/eight laning of Mamallapuram to Mugaiyur section of NH-332A from 0.000 km to 31.000 km under Bharathmala Pariyojana, Phase-I (Package-I) in Kancheepuram District by M/s NHAI. (IA/TN/CRZ/114515/2019) (F.No. 11-37/2019-IA.III) for CRZ Clearance. 2. Proposal for four/six/eight laning of Mugaiyur to Marakkanam Section of Section of NH-332A from 31.000 km to 62.000 km under

	Bharathmala Pariyojana, Phase-I (Package-II) in Villupuram & Kancheepuram District by M/s NHAI (IA/TN/CRZ/114472/2019) (F.No. 11-17/2019-IA.III) – CRZ Clearance.
3.11.2	Subsequently, the NHAI, vide letter dated 26th February, 2020, has submitted an undertaking that the above mentioned projects are widening and improvement of existing State Highways and nomenclated as National Highways. Further, NHAI, vide letter dated 27th February, 2020, it is clarified that consequent to the introduction of the new national highway number across the country in 2009, in order to avoid the confusion with the old national highway number, the word "New National Highway No." is mentioned in the nomenclature of NH-332A in the Gazette of India S.O.896(E) dated 1st March, 2018.
3.11.3	In view of above-mentioned justification, EAC after detailed deliberation during 232nd meeting held on 27th February, 2020, has opined that above said proposals may be considered as widening and improvement projects. In the instant cases, these proposals do not require prior Environmental Clearance from this Ministry as per provisions of Ministry's notification dated 22nd August, 2013. However, the NHAI has to obtain the CRZ Clearance as per extant CRZ regulations.

List of the Members attended 232th meeting of Expert Appraisal Committee for Projects related to Infrastructure Development, Industrial Estate and Miscellaneous projects held on 27th February, 2020 and approved the above minutes.

Sl. No.	Name of the EAC member	Role/Designation	Signature
1	Dr. Deepak Arun Apte, Director, Bombay Natural History Society (BNHS), Mumbai	Chairman	
2	Dr. V.K. Jain, Professor of Chemistry, School of Sciences, Gujarat University, Ahmedabad	Member	
3	Dr. M.V. Ramana Murthy, Project Director, NIOT Campus, Pallikarai, Chennai	Member	
4	Shri Rajesh I Shah, Navjeevan, Ahmedabad - 380 014 (Gujarat)	Member	
5	Dr. N.K. Verma, Former AD, CPCB, New Delhi	Member	
6	Dr. Manoranjan Hota Former Advisor/Scientist-G, MoEF&CC	Member	
7	Dr. Anil Kumar Singh, IFS (Retd), Ex PCCF Assam, Tower F, Float No. 103 Grand Anjara Heritage, Sector 74, Noida, UP	Member	
8	Shri Prabhakar Singh, DG, CPWD, Delhi. Retd.	Member	
9	Shri Narendra Surana, Managing Director, Bhagyanagar India Limited and Surana Telecom. and Power Limited, Hyderabad	Member	
10	Dr. Mohan Singh Panwar, Associate Professor , H.N.B Garhwarl Central University, Srinagar,	Member	
11	Dr.Anuradha Shukla, Central Road Research Institute (CRRI), Mathura Road, New Delhi	Member	
12	Shri R Debroy, Member (EAC), Scientist E & In-charge (ESS), Central Pollution Control Board, Parivesh Bahwan, CBD-Cum office Cmplex, East Arjun Nagar, Delhi-110032	Member	
13	Dr. D. Chakraborty, Scientist MoWR, RD & GR, New Delhi	Member	
14	Smt. Bindu Manghat ,Director Survey of India New Delhi	Member	
15	Shri Raghu Kumar Kodali, Director/Scientist-F, IA-III Division, MoEF&CC	Member Secretary (Infra-1 EAC)	
16	Shri Ashish Kumar, Joint Director , IA-III, MoEF&CC	Special Invitee	27.02.2020