

Minutes of the 322nd meeting of Expert Appraisal Committee held on 21st – 22nd March, 2023 through Video Conferencing for the projects related to Infrastructure Development, all Ship breaking yards including ship breaking units 7(b); Industrial Estate/Parks/Complexes/Areas, Export Processing Zones, Special Economic Zones, Biotech Parks, Leather Complexes 7(c); Ports, harbors, breakwaters, dredging 7(e) and National Highways 7(f)

The 322nd Meeting of Expert Appraisal Committee (EAC) of Infra-1 (IA-III) was held at INDUS Conference in a hybrid (Physical-Video Conferencing) mode hall during 20th-21st March, 2023 under the Chairmanship of Dr. Deepak Arun Apte. A list of participants is annexed as **Annexure-A**.

1. OPENING REMARKS OF THE CHAIRMAN

At the outset, Dr. Deepak Arun Apte, Chairman, EAC welcomed the Members of the EAC and requested Shri Amardeep Raju, the Member Secretary of the EAC to initiate the proceedings of the meeting with a brief account of the activities undertaken by the Ministry under Infra-1 Division.

2. CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Committee confirmed the Minutes of 321st EAC Meeting held on 28th-1st March, 2023 except agenda 3.1 Development of Satellite Town Ring Road (STRR) Phase-II

The Proposal of Development of Satellite Town Ring Road (STRR) Phase-II was presented before the Committee during 321st EAC Meeting held on 28th-1st March, 2023 in the said proposal the Public hearing was conducted in Ramnagara, Bengaluru Urban, in Karnataka on 23-10-2019 and Krishnagiri, Tamil Nadu public hearing conducted on 24-09-2019 and the base line data also carried out during 01.06.2018 and 30.06.2018 which is also older than 3 years. As per the EIA notification, 2006 as amended, the Base line data and PH shall not be more than 3 years old at the time of application for consideration of EC. However M/s NHAI and EIA Consultant M/s Louis Berger Consulting Private Limited presented before the EAC without revealing the fact that why the older data is presented before the Committee. The EAC requested Ministry for clarification from M/s NHAI and EIA Consultant M/s Louis Berger Consulting Private Limited and to take further necessary action as appropriate.

AGENDA WISE CONSIDERATION OF PROPOSALS:

Agenda wise details of proposals discussed and decided in the meeting are as following:

Agenda No. 3.1

Development of 4/6 lane (Greenfield) access control expressway from Varanasi to Kolkata Package-I from Varanasi Ring Road Km 00.000 (near Barhuli village) to Km 73.800 (near Rampur village) in the State of Uttar Pradesh and Bihar under Bharatmala Pariyojana Phase-II (Lot-9 Package-3) M/s National Highways Authority of India (Length – 73.800 km) –Environmental Clearance.

Proposal No. IA/UP/INFRA1/417750/2023 and File No. 10/10/2022-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

3.1.1. The project proponent along with the DPR consult M/s SA Infrastructure Consultants Pvt. Ltd. and EIA Consultant P and M Solutions, Noida made a presentation through Video Conferencing and provided the following information:-

3.1.2. The proposal is for Development of 4/6 lane (green field) access control expressway from Varanasi to Kolkata Package-I from Varanasi ring road Km 00.000 (near Barhuli village) to Km 73.800 (near Rampur village) in the state of Uttar Pradesh and Bihar. The Proposed Length of the alignment – 73.800 Km by M/s National Highways Authority of India.

3.1.3. The proposed highway starts from village Varanasi Ring Road & NH-19 junction near village “Barhuli, Chandauli, U.P.” (Design Ch.00+000) 25°16'3.72"N, 83°10'16.38"E and terminating on SH-67 (Design Ch. 73+800) near village Rampur, Kaimur 24°56'25.80"N, 83°47'22.32"E. The proposed alignment passes through the districts of Samastipur and Darbhanga through important towns/villages like Chandauli, Mughalsarai, Chakia in Chandauli District and Chand, Chainpur, Bhabhua, Bhagwanpur, Rampur in Kaimur District.

3.1.4. The proposed project falls under 7(f) - Highway, Category-A, as per EIA notification 2006. Total investment/cost of the project is Rs 2903 Crores.

3.1.5. ToR details: The Terms of Reference (ToR) was considered in 289th EAC meeting during 17th - 18th February 2022 and 293rd EAC meeting during 24th-25th March, 2022, in the Ministry of Environment, Forest and Climate Change, New Delhi. TOR was granted on 9th May, 2022.

3.1.6. Public hearing: Public Hearing was conducted by Uttar Pradesh & Bihar State Pollution Control Board (SPCB) as follows.

S.No	Date	Venue	District	Chaired by
1	30.08.2022	Sphiro Infratech Pvt. Ltd., Village-Prakrihar, Post+PS- Muthani, District-Kaimur.	Kaimur, Bihar	Additional Collector
2	19.10.2022	Collectorate Sabhaghar, Chandauli	Chandauli, Uttar Pradesh	Additional District Magistrate

3.1.7. Land use/Land cover of the project site is as following:

S.No.	Land use/Land cover	Area (ha)	Percentage %	Remarks if any
1.	Private land	436.2	65.67	Agriculture/Barren Land
2.	Government land	226.494	34.10	Agriculture/Barren Land
3.	Forest land	1.506	0.23	-
	Total	664.2	100	-

3.1.8. Right of Way (RoW): The Proposed RoW is 70 m as per the requirement keeping in view the fully access controlled Highway with 4/6-lane dual carriageway configuration.

3.1.9. Terrain and topographical features: The terrain of the alignment is basically flat to undulating in nature. The project area is located in state of Uttar Pradesh and Bihar.

3.1.10. Water bodies & impact on drainage: The proposed alignment is crossing through Garai Nadi at design km 5+180, Chandra Prabha Nadi at design km 10+355, Karamansha Nadi at design km 20+600, Kohina Nadi km 41+950 it also passes through 5 no of Distributaries (Mughal sarai Distributary, Sirsi Distributary, Narotapur Distributary, Belri Distributary), 2 no of canal (Chandauli Canal, Suar left canal). There shall be no major impact on the drainage system as 04 Major Bridge, 03 Major Bridge cum Under Passes, 21 Minor Bridge, 46 Minor Bridge cum Under Passes 05 VUP, 39 LVUP, 04 flyovers, 217 Box culverts will be constructed.

3.1.11. Water requirements: The total requirement of water for construction is estimated to 2600 KL. Water will be extracted from surface sources. The ground water will be abstracted for camp site after obtaining the permission from competent authority. The ground water will be abstracted for camp site after obtaining the permission from competent authority.

3.1.12. Diversion of forest land - Approx. 1.506 ha of forest land under Kaimur forest division, Bhabua, Bihar needs to be diverted for construction of proposed highway. Forest Diversion proposal has been prepared as per the guidelines and consultation with concerned authorities and submitted on the Parivesh portal of MoEF&CC (Online proposal no. FP/BR/ROAD/404312/2022) on 07.11.2022 under the provision of FCA, 1980.

3.1.13. The Kaimur Wildlife Sanctuary is located at the distance of 4.95 km from the project road and ESZ boundary is approx. 2.53 km from the project Road.

3.1.14. Waste Management: Disposal of Sewage and other wastes in the construction yard and labor camps will be done as per directions of the Environmental Specialist / Environmental Engineer of the Engineer.

3.1.15. Details of tree cutting and Green belt development: There is approximately 1434 no. of trees (1034 no. of trees on non-forest land and approx. 400 of trees on protected forest). No protected or endangered species are noted. The proposed alignment finalizations are geometry

design endeavored to conserve the maximum amount of trees especially those that are falling outside the construction zone. Compensatory afforestation would be carried out in as per the state Forest Guidelines. Approximately 41,976 numbers of trees and shrubs will be planted along the roadside and in median portion respectively. The plantation shall be carried out as per IRC: SP: 21-2009 guidelines and Green Highway Policy-2015. Adequate space has been left on both sides of the road for greenbelt development apart from the plantation at median.

3.1.16. Rain Water Harvesting: total 296 nos Rain Water Harvesting Structure along the Project road will be provided on either side of road at 500 m interval and the pits will be at least 5 m above the highest ground water table. The Cost of each Rain Water Harvesting Structure is Rs. 40000. Total cost of Rain Water Harvesting Structure is Rs 1,18,40,000.

3.1.17. Land acquisition and R&R details: About 664.2 ha land likely to be acquired as per NH Act 1956; compensation will be given as per RFCT LARR Act, 2013.

3.1.18. Employment potential: During the construction of the project around 1000 persons would be employed through contractor. During operation phase about 100 persons will be employed through the concerned contractor. Generally, locals are employed by the contractor.

3.1.19. Benefits of the project: This is a green field alignment, access control and is proposed for 4/6 Lane. The main objective of the proposed project is to reduce the distance and travel time NH-19 and SH-67. The proposed alignment will be part of Varanasi- Kolkata 4/6 lane expressway will connect cities like Varanasi to Chatra, Hazaribagh, Ramgarh, Ranchi, Bokaro, to the other connected City like Bhabhua, Sasaram, Aurangabad, Gaya Purliya, Bankura, Jamshedpur, Kharagpur, Kolkata e.tc. The project lays emphasis on development of these areas and makes them available with the resources. The project will enhance economic development in the area through industrial areas, Agriculture (Market access), commercial development and consequent employment. It will also reduce the vehicle operating cost. The compensatory plantation and road side plantation shall further improve the air quality of the region.

3.1.20. Details of Court cases: Not court cases are involved.

3.1.21. The EAC, after examining the documents submitted by the project proponent and detailed deliberations in its 322nd meeting on 21st-22nd March, 2023, **recommended** the project for grant of Environmental for the project of 'Development of 4/6 lane (Greenfield) access control expressway from Varanasi to Kolkata Package-I from Varanasi Ring Road Km 00.000 (near Barhuli village) to Km 73.800 (near Rampur village) in the State of Uttar Pradesh and Bihar under Bharatmala Pariyojana Phase-II (Lot-9 Package-3) M/s National Highways Authority of India (Length – 73.800 km)' subject to all specific and standard conditions applicable for such projects.

i. All commitments made in the Wildlife Management & Conservation Plan submitted to the Ministry shall be implemented in letter and spirit. The status of implementation of Wildlife Management & Conservation Plan shall be submitted to the Regional Office of the Ministry along with 6 monthly compliance report.

ii. Wildlife movement during the construction be monitored by forest department and if

found necessary additional over/underpasses be developed. Provision for the same be made in the project budget.

- iii. Quarry areas shall be barricaded during mining operations. The abandoned quarry shall be developed as water reservoirs with proper fencing around quarry area. Details for Quarry area operation and rehabilitation given the EIA report shall be followed.
- iv. In all the construction sites within 150 m of the nearest habitation, noisy construction work such as crushing, concrete mixing will be stopped during the night time between 10.00 pm to 6.00 am. No noisy construction activities will be permitted around educational institutions/health centres (silence zones) up to a distance of 100 m from the sensitive receptors. All plants and equipments used in construction shall strictly conform to the CPCB/SPCB noise standards.
- v. Road side tree plantation of local fruit bearing species or in nearby village in collaboration with Gram Panchayats.
- vi. Traffic Control Devices/Road Safety Devices/ Roadside Furniture including various types of cautionary, informatory, regulatory as mandatory signboards, road markers, studs, etc. shall be provided at appropriate locations all along the project stretch in accordance with the specifications laid down in Manual of Specifications and Standards for Expressways (IRC: SP:99-2013) and IRC:8, IRC:25, IRC:26, IRC:35, IRC:67, IRC:79, IRC:103 and Section 800 of MORTH Specifications.
- vii. Prepare the traffic prediction report for complete project (including all packages of this project) considering the cumulative impact of the traffic on the environment and submit to the Ministry and concerned Regional Office within 3 months.
- viii. All the major, minor bridges and culverts should not affect the drainage systems. Flood plains of the rivers/ drainage systems are not to be disturbed.
- ix. Afforestation using compensatory plantation in the ratio of 1:10 shall be carried out by the state forest department. Native tree species shall be provided as per the IRC Guidelines on Landscaping and Tree Plantation (IRC:SP:21-2009). Plantation should be purely of native trees and Ficus species on both sides of the alignment.
- x. Project alignment should be managed in such a way to save the Heritage/old trees supposed to be affected by the proposed alignment.
- xi. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concern Authority. Old, large and heritage value trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Where the trees need to be cut/transplanted with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut/ non-survival of any transplanted tree) shall be done and maintained. Plantations to be ensured species (cut) to species (planted).
- xii. Trees with heronry (breeding ground for herons), pelicanary or community nesting of

birds like Painted Storks, Ibis, Egrets, Pelican, etc will not be allowed to fell. In case of presence of such, alignment will be required to be changed to save such trees.

- xiii. Green belt development (tree plantation) in lieu of the trees being felled in non forest land should be carried out by the State forest department as deposit work and not by the private contractor. Green belt must be developed using exclusively native species. No exotic species to be used for the same.
- xiv. Apart from land compensation, the loss for crop has also to be compensated.
- xv. No Ground water shall be extracted and used. Approval/permission of concerned authority shall be obtained before drawing surface water from canal or any other sources.
- xvi. Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table.
- xvii. Proponent shall keep the finish road level sufficiently elevated from ground level with provision of railing on both sides to restrict animal crossing in order to avoid the possibility of wildlife injury/death. Major water bodies have been observed in the vicinity of the proposed road alignment & may be potential human elephant conflict points, appropriate nos of animal safe passages as per the guideline framed by the Wildlife Institute of India and in consultation with Chief Wildlife Warden.
- xviii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the Public Hearing. The project proponent shall initiate the activities proposed by them, based on the commitment made in the Public Hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory afforestation etc., either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also become part of EMP and shall be implemented.

Agenda No. 3.2

Development of 4/6 lane (green field) access control expressway from Varanasi to Kolkata Package-II from Km 73.800 (near Rampur village) to Km 114.000 (near Tetarahar village) in the state of Bihar under Bharatmala Pariyojana Phase-II (Lot-9 package-3) (Total Length – 40.200 km) by M/s National Highways Authority of India – Environmental Clearance.

Proposal No. IA/BR/INFRA1/420526/2023 and File No. 10/11/2022-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been

suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

3.2.1. The project proponent along with the DPR consult M/s SA Infrastructure Consultants Pvt. Ltd. and EIA Consultant P and M Solutions, Noida made a presentation through Video Conferencing and provided the following information:-

3.2.2. Development of 4/6 lane (green field) access control expressway from Varanasi to Kolkata Package-II from Km 73.800 (near Rampur village) to Km 114.000 (near Tetarahar village) in the state of Bihar under Bharatmala Pariyojana Phase-II (Lot-9 package-3). Total Length – 40.200 Km by M/s National Highways Authority of India.

3.2.3. The proposed highway starts from existing (Near SH-19) Near Rampur village (Rohtas District) and terminates on Barun Nabinagar Road near NH 119 near village Tetarahar (Aurangabad district) from Design Ch. 73+800 Km (Start Location: 24°56'25.80"N, 83°47'22.32"E) to Design Ch. 114+000 Km(End Location: 24°45'30.75"N, 84°7'8.37"E). The proposed alignment is connected to Chenari, Sheosagar, Sasaram, Tilouthu in Rohtas District and Nabinagar in Aurangabad district in the state of Bihar.

3.2.4. The proposed project falls under 7(f) - Highway, Category-A, as per EIA notification 2006. Total investment/cost of the project is Rs 250000 Lakhs.

3.2.5. ToR details: The Terms of Reference (ToR) was considered in 293rd meeting during 24-25th March, 2022 in the Ministry of Environment, Forest and Climate Change, New Delhi. TOR was granted on 25th April, 2022.

3.2.6. Public Hearing: Public Hearing was conducted by Bihar State Pollution Control Board (SPCB) as follows:

S.No	Date	Venue	District	Chaired by
1	12.11.2022	Anchal Office, Tilouthu, NH - 2C, Bhadsa, Tilouthu East, District - Rohtas	Rohtas, Bihar	Additional District Magistrate
2	16.01.2023	Block office Amba, Tehsil-Kutumba, District - Aurangabad	Aurangabad, Bihar	Additional District Magistrate

3.2.7. Present Breakup of the Land use/Land cover of the project site is as following:

S.No.	Land use/Land cover	Area (ha)	Percentage %	Remarks if any
1.	Private land	217.3	62.93	Agriculture/Barren Land
2.	Government land	92.4529	26.93	Agriculture/Barren Land

3.	Forest land	35.546061	10.14	-
	Total	345.3	100	-

3.2.8. Right of Way (RoW): The Proposed Right of Way is 70 m except tunnel position which all the configurations shall be fitted with. This is a green field alignment, and is proposed for 4/6-Lane.

3.2.9. Terrain and topographical features: The terrain of the alignment is basically flat to undulating in nature. The project area is located in Rohtas and Aurangabad district of Bihar.

3.2.10. Details of water bodies, impact on drainage: The proposed alignment is crossing 6 no. of Rivers (Durgauti Nadi, Belwai Nadi, Dhansol Nadi, Dhunsoot River, Dhoba Nadi, Son River), 4 no. of canal (Distributary/Canal and BT Road, Canal, Canal, Western son high level canal), 2 no. of Nala (Belwai Nala, Tutla Nala) and 1 no. of Distributary. There shall be no major impact on the drainage system as 02 Major Bridge, 01 Major Bridge cum Under Passes, 13 Minor Bridge, 12 Minor Bridge cum Under Passes, 3VUP, 08 LVUP, 04 flyovers, 59 Box culverts are provided.

3.2.11. Water requirements: The total requirement of water for construction is estimated to 1250 KL. Water will be extracted from surface sources. The ground water will be abstracted for camp site after obtaining the permission from competent authority.

3.2.12. Diversion of forest land: Approx. 35.546061 ha of forest land under Rohtas forest division and protected forest that needs to be diverted for construction of proposed highway. Forest Diversion proposal has been prepared as per the guidelines and consultation with concerned authorities and submitted on the Parivesh portal of MoEF&CC (Online proposal no. FP/BR/ROAD/401205/2022) on 30.09.2022 under the provision of FCA, 1980. The proposal is under examination by the concerned Forest Divisions.

3.2.13. The expressway is passing approximately 5.5 km length of Kaimur Sanctuary i.e. from Gitaghat to Belawai to avoid the damages in wild life sanctuary tunnel is provided from Ch. 93+930 to Ch. 98+440. Tunnel is proposed to avoid the surface and biodiversity of wild life sanctuary area. NBWL clearance is under process. The application for seeking recommendation from NBWL has been submitted via application no. SW/100834/2022 dated 20.10.2022. Approx. 4.51 km long tunnel is provided to avoid the damages in Kaimur wild life sanctuary.

3.2.14. Waste Management: Disposal of Sewage and other wastes in the construction yard and labor camps will be done as per directions of the Environmental Specialist / Environmental Engineer of the Engineer.

3.2.15. Details of tree cutting and Green belt development: There is approximately 3247 no. of trees (1417 no. of trees on non-forest land and approx. 1830 of trees of trees on protected forest). No protected or endangered species are noted. The proposed alignment finalizations are geometry design endeavoured to conserve the maximum amount of trees especially those

that are falling outside the construction zone. The possibilities of relocating of existing trees shall be finalized in consultation with DFO. 2 nos. of trees shall be planted for every tree to be cut. Compensatory afforestation would be carried out in as per the state Forest Guidelines. Approximately 19938 numbers of trees and shrubs will be planted along the roadside and in median portion respectively. The plantation shall be carried out as per IRC: SP: 21-2009 guidelines and Green Highway Policy-2015. Adequate space has been left on both sides of the road for greenbelt development apart from the plantation at median.

3.2.16. Rain Water Harvesting: Total 112 nos Rain Water Harvesting Structure along the Project road will be provided. Rain water harvesting pits will construct at an average distance of 500 m on either side of the highway which will be connected with longitudinal drains. The pits should be at least 5 m above the highest ground water table. The Cost of each Rain Water Harvesting Structure will be 40000 and total cost of Rain Water Harvesting Structure will be Rs 448000.

3.2.17. Land acquisition and R&R issues involved: About 345.3 ha land likely to be acquired as per NH Act 1956; compensation will be given as per RFCT LARR Act, 2013.

3.2.18. Employment potential, No. of people to be employed: During the construction of the project around 1000 persons would be employed through contractor. During operation phase about 100 persons will be employed through the concerned contractor. Preference will be given to locals.

3.2.19. Benefits of the project: The main objective of the proposed project is to reduce the distance and travel time from SH-19 to NH 119 and North-Bihar to South Bihar and to give connectivity to remote areas and major cities. The proposed alignment is connected. The proposed alignment will be part of Varanasi- Kolkata 4/6 lane expressway will connect cities like Varanasi to Chatra, Hazaribagh, Ramgarh, Ranchi, Bokaro, to the other connected City like Bhabhua, Sasaram, Aurangabad, Gaya Purliya, Bankura, Jamshedpur, Kharagpur, Kolkata e.tc. The project lays emphasis on development of these areas and makes them available with the resources. The proposed access controlled project 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 project will also enhance economic development in the area through industrial areas, Agriculture (Market access), commercial development and consequent employment.

3.2.20. Details of Court cases: Details of Court cases: Not court cases are involved.

3.2.21. The EAC, after examining the documents submitted by the project proponent and detailed deliberations in its 322nd meeting on 21st-22nd March, 2023, **recommended** the project for grant of Environmental for the project of 'Development of 4/6 lane (green field) access control expressway from Varanas to Kolkata Package-II from Km 73.800 (near Rampur village) to Km 114.000 (near Tetarahar village) in the state of Bihar under Bharatmala Pariyojana Phase-II (Lot-9 package-3) (Total Length – 40.200 km) by M/s National Highways Authority of India' subject to all specific and standard conditions applicable for such projects.

- i. The environmental clearance is subject to obtaining prior clearance from the wildlife angle, including clearance from the Standing Committee of the National Board for Wildlife, as applicable, Grant of environmental clearance does not necessarily imply that Wildlife Clearance and other clearances shall be granted to the project and that their proposal for Wildlife Clearance and other clearances will be considered by the respective authorities on its merit and decision taken.
- ii. All commitments made in the Wildlife Management & Conservation Plan submitted to the Ministry shall be implemented in letter and spirit. The status of implementation of Wildlife Management & Conservation Plan shall be submitted to the Regional Office of the Ministry along with 6 monthly compliance report.
- iii. The alignment is passing through Kaimur wildlife Sanctuary from Gitaghat (Ch. 93+930) to Belawai(Ch. 98+440) user agency shall provide tunnel for animal and wild life movement.
- iv. Wildlife movement during the construction be monitored by forest department and if found necessary additional over/underpasses be developed. Provision for the same be made in the project budget.
- v. Quarry areas shall be barricaded during mining operations. The abandoned quarry shall be developed as water reservoirs with proper fencing around quarry area. Details for Quarry area operation and rehabilitation given the EIA report shall be followed.
- vi. In all the construction sites within 150 m of the nearest habitation, noisy construction work such as crushing, concrete mixing will be stopped during the night time between 10.00 pm to 6.00 am. No noisy construction activities will be permitted around educational institutions/health centres (silence zones) up to a distance of 100 m from the sensitive receptors. All plants and equipments used in construction shall strictly conform to the CPCB/SPCB noise standards.
- vii. Road side tree plantation of local fruit bearing species or in nearby village in collaboration with Gram Panchayats.
- viii. Traffic Control Devices/Road Safety Devices/ Roadside Furniture including various types of cautionary, informatory, regulatory as mandatory signboards, road markers, studs, etc. shall be provided at appropriate locations all along the project stretch in accordance with the specifications laid down in Manual of Specifications and Standards for Expressways (IRC: SP:99-2013) and IRC:8, IRC:25, IRC:26, IRC:35, IRC:67, IRC:79, IRC:103 and Section 800 of MORTH Specifications.
- ix. Prepare the traffic prediction report for complete project (including all packages of this project) considering the cumulative impact of the traffic on the environment and submit to the Ministry and concerned Regional Office within 3 months.
- x. All the major, minor bridges and culverts should not affect the drainage systems. Flood plains of the rivers/ drainage systems are not to be disturbed.
- xi. Afforestation using compensatory plantation in the ratio of 1:10 shall be carried out by

the state forest department. Native tree species shall be provided as per the IRC Guidelines on Landscaping and Tree Plantation (IRC:SP:21-2009). Plantation should be purely of native trees and Ficus species on both sides of the alignment.

- xii. Project alignment should be managed in such a way to save the Heritage/old trees supposed to be affected by the proposed alignment.
- xiii. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concern Authority. Old, large and heritage value trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Where the trees need to be cut/transplanted with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut/ non-survival of any transplanted tree) shall be done and maintained. Plantations to be ensured species (cut) to species (planted).
- xiv. Trees with heronry (breeding ground for herons), pelicanary or community nesting of birds like Painted Storks, Ibis, Egrets, Pelican, etc will not be allowed to fell. In case of presence of such, alignment will be required to be changed to save such trees.
- xv. Green belt development (tree plantation) in lieu of the trees being felled in non forest land should be carried out by the State forest department as deposit work and not by the private contractor. Green belt must be developed using exclusively native species. No exotic species to be used for the same.
- xvi. Apart from land compensation, the loss for crop has also to be compensated.
- xvii. No Ground water shall be extracted and used. Approval/permission of concerned authority shall be obtained before drawing surface water from canal or any other sources.
- xviii. Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table.
- xix. Proponent shall keep the finish road level sufficiently elevated from ground level with provision of railing on both sides to restrict animal crossing in order to avoid the possibility of wildlife injury/death. Major water bodies have been observed in the vicinity of the proposed road alignment & may be potential human elephant conflict points, appropriate nos of animal safe passages as per the guideline framed by the Wildlife Institute of India and in consultation with Chief Wildlife Warden.
- xx. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the Public Hearing. The project proponent shall initiate the activities proposed by them, based on the commitment made in the Public Hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory afforestation etc., either proposed by the project proponent

based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also become part of EMP and shall be implemented.

Agenda No. 3.3

Development of 4/6 lane (green field) access control expressway from Varanasi to Kolkata Package-III from Km 114.000 (near Tatarahar village) to Km 184.400 (near Shahpur village, Bihar/Jharkhand Border) in the state of Bihar under Bharatmala Pariyojana Phase-II (Lot-9 package-3) (Total Length - 70.40 km) by M/s National Highways Authority of India –Environmental Clearance.

Proposal No. IA/BR/INFRA1/419217/2023 and File No. 10/12/2022-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

3.3.1. The project proponent along with the DPR consult M/s SA Infrastructure Consultants Pvt. Ltd. and EIA Consultant P and M Solutions, Noida made a presentation through Video Conferencing and provided the following information:-

3.3.2. Development of 4/6 lane (green field) access control expressway from Varanasi to Kolkata Package-III from Km 114.000 (near Tatarahar village) to Km 184.400 (near Shahpur village, Bihar/Jharkhand Border) in the state of Bihar under Bharatmala Pariyojana Phase-II (Lot-9 package-3). Total Length – 70.40 Km by M/s National Highways Authority of India.

3.3.3. The proposed highway starts from Barun Nabinagar Road near NH 119 near village Tatarahar (Aurangabad district) and terminates village Shahpur, Bihar/Jharkhand Border (Gaya district). From Design Ch. 114+000 Km (Start Location: 24°45'30.75"N, 84° 7'8.37"E to Design Ch. 184+400 Km(End Location: 24°23'50.56"N, 84°40'1.58"E). The proposed alignment is connecting through important talukas such as Nabinagar, Kutumba & Deo in District of Aurangabad and Dumaria & Immamganj in District of Gaya in the state of Bihar.

3.3.4. The proposed project falls under 7(f) - Highway, Category-A, as per EIA notification 2006. Total investment/cost of the project is Rs 279200 Lakhs.

3.3.5. ToR details: The Terms of Reference (ToR) was considered in 289th EAC meeting during 17th-18th February, 2022 in the Ministry of Environment, Forest and Climate Change, New Delhi. TOR was granted on 09th May, 2022.

3.3.6. Public Hearing: Public Hearing was conducted by Bihar State Pollution Control Board (SPCB) as follows:

S.No	Date	Venue	District	Chaired by
1	16.01.2023	Block office –Amba, Tehsil-Kutumba, Aurangabad	Aurangabad, Bihar	Additional District Magistrate
2	26.11.2022	Town Hall, Thana Mod, Immamganj, Sheghati, Gaya	Gaya, Bihar	Additional District Magistrate

3.3.7. Land use/Land cover of the project site is as following:

S.No.	Land use/Land cover	Area (ha)	Percentage %	Remarks if any
1.	Private land	319.9	54.26	Agriculture/Barren Land
2.	Government land	166.389	28.23	Agriculture/Barren Land
3.	Forest land	103.211	17.51	-
	Total	589.5	100	-

3.3.8. Right of Way (RoW): The Proposed Right of Way is 70 m in non-forest Area and 60 m in Forest areas in which all the configurations shall be fitted with. This is a green field alignment, and is proposed for 4/6-Lane.

3.3.9. Terrain and topographical features: The terrain of the alignment is basically flat to undulating in nature. The project area is located in Aurangabad and Gaya district of Bihar.

3.3.10. Details of water bodies, impact on drainage: the proposed alignment is crossing 10 no. of Rivers (Punpun River, Ramrekha River, Batre River, Batane River, Adri River, Salnadra Nadi, Surahar Nadi, Chhotki Nadi, Labji Nadi, Doraha Nadi), 7 no. of canal (Riur Canal, Kulhana canal, Nahauri Canal, North Koel canal, Batane Main Canal), 4 no. of Nala (Jhama Nala, Ramrekha Nala, Narkatia Nala, Nagdaha Nala, Nagdaha Nala) and 1 no. of Bishunpur Minor(Distributary). There shall be no major impact on the drainage system as 07 Major Bridge, 10 Minor Bridge, Minor Bridge cum Under Passes (25 nos. at MCW and 04 nos. at Interchange location), VUP (6 nos. at MCW and 01 nos. at Interchange location), 25 LVUP, SVUP (7 nos. at MCW and 02 nos. SVUP at Interchange location), 06 nos. of Flyover and 06 nos. Viaduct at MCW and 2 nos. flyovers at Interchange location, 217 Box culverts, 01 no. of ROB, 228 nos. of Box. Culverts are provided.

3.3.11. Water requirements: The total requirement of water for construction is estimated to 2650 KL. Water will be extracted from surface sources. The ground water will be abstracted

for camp site after obtaining the permission from competent authority. The ground water will be abstracted for camp site after obtaining the permission from competent authority.

3.3.12. Diversion of forest land: Approx. 103.211 ha of forest land under Kaimur forest division and protected forest that needs to be diverted for construction of proposed highway. Forest Diversion proposal has been prepared as per the guidelines and consultation with concerned authorities and submitted on the Parivesh portal of MoEF&CC (Online proposal no. FP/BR/ROAD/404838/2022) on 04.11.2022 under the provision of FCA, 1980. The proposal is under examination by the concerned Forest Divisions.

3.3.13. The nearest Sanctuary is Kaimur Wildlife Sanctuary which is about 11.33 km from the project road and ESZ boundary is approx. 5.55 km from the project Road.

3.3.14. Waste Management: Disposal of Sewage and other wastes in the construction yard and labor camps will be done as per directions of the Environmental Specialist / Environmental Engineer of the Engineer.

3.3.15. Details of tree cutting and Green belt development: There is approximately 7362 no. of trees (3062 no. of trees on non-forest land and approx. 4300 of trees of trees on protected forest). No protected or endangered species are noted. The proposed alignment finalizations are geometry design endeavoured to conserve the maximum amount of trees especially those that are falling outside the construction zone. The possibilities of relocating of existing trees shall be finalized in consultation with DFO. Compensatory afforestation would be carried out in as per the state Forest Guidelines. Approximately 40460 numbers of trees and shrubs will be planted along the roadside and in median portion respectively. The plantation shall be carried out as per IRC: SP: 21-2009 guidelines and Green Highway Policy-2015. Adequate space has been left on both sides of the road for greenbelt development apart from the plantation at median.

3.3.16. Details of Rain Water Harvesting: Total 208 nos Rain Water Harvesting Structure along the Project road will be provided. Rain water harvesting pits will construct at an average distance of 500 m on either side of the highway which will be connected with longitudinal drains. The pits should be at least 5 m above the highest ground water table. The Cost of each Rain Water Harvesting Structure will be 40000 and total cost of Rain Water Harvesting Structure will be Rs 832000.

3.3.17. Land acquisition and R&R issues: About 589.5 ha land likely to be acquired as per NH Act 1956; compensation will be given as per RFCT LARR Act, 2013.

3.3.18. Employment potential, No. of people to be employed: During the construction of the project around 1000 persons would be employed through contractor. During operation phase about 100 persons will be employed through the concerned contractor. Generally, locals are employed by the contractor.

3.3.19. Benefits of the project: This is a green field alignment, access control and is proposed for 4/6 Lane. The main objective of the proposed project is to reduce the distance and travel time from NH 119 to Bihar/Jharkhand Border and North-Bihar to South Bihar and to give connectivity to remote areas and major cities. The proposed alignment will be part of

Varanasi- Kolkata 4/6 lane expressway will connect cities like Varanasi to Chatra, Hazaribagh, Ramgarh, Ranchi, Bokaro, to the other connected City like Bhabhua, Sasaram, Aurangabad, Gaya Purliya, Bankura, Jamshedpur, Kharagpur, Kolkata e.tc. The project lays emphasis on development of these areas and makes them available with the resources. The project will enhance economic development in the area through industrial areas, Agriculture (Market access), commercial development and consequent employment. The proposed road would act as the prime artery for the economic flow to this region. It will enhance opportunities to locals, strengthen tourist development, ensure road safety, and provide better transportation facilities and other facilities such as way side amenities.

3.3.20. Details of Court cases: Details of Court cases: Not court cases are involved.

3.2.22. The EAC, after examining the documents submitted by the project proponent and detailed deliberations in its 322nd meeting on 21st-22nd March, 2023, **recommended** the project for grant of Environmental for the project of 'Development of 4/6 lane (green field) access control expressway from Varanasi to Kolkata Package-III from Km 114.000 (near Tetarahar village) to Km 184.400 (near Shahpur village, Bihar/Jharkhand Border) in the state of Bihar under Bharatmala Pariyojana Phase-II (Lot-9 package-3) (Total Length - 70.40 km) by M/s National Highways Authority of India' subject to all specific and standard conditions applicable for such projects.

- i. All commitments made in the Wildlife Management & Conservation Plan submitted to the Ministry shall be implemented in letter and spirit. The status of implementation of Wildlife Management & Conservation Plan shall be submitted to the Regional Office of the Ministry along with 6 monthly compliance report.
- ii. Wildlife movement during the construction be monitored by forest department and if found necessary additional over/underpasses be developed. Provision for the same be made in the project budget.
- iii. Quarry areas shall be barricaded during mining operations. The abandoned quarry shall be developed as water reservoirs with proper fencing around quarry area. Details for Quarry area operation and rehabilitation given the EIA report shall be followed.
- iv. In all the construction sites within 150 m of the nearest habitation, noisy construction work such as crushing, concrete mixing will be stopped during the night time between 10.00 pm to 6.00 am. No noisy construction activities will be permitted around educational institutions/health centres (silence zones) up to a distance of 100 m from the sensitive receptors. All plants and equipments used in construction shall strictly conform to the CPCB/SPCB noise standards.
- v. Road side tree plantation of local fruit bearing species or in nearby village in collaboration with Gram Panchayats.
- vi. Traffic Control Devices/Road Safety Devices/ Roadside Furniture including various types of cautionary, informatory, regulatory as mandatory signboards, road markers, studs, etc. shall be provided at appropriate locations all along the project stretch in accordance with the specifications laid down in Manual of Specifications and Standards

for Expressways (IRC: SP:99-2013) and IRC:8, IRC:25, IRC:26, IRC:35, IRC:67, IRC:79, IRC:103 and Section 800 of MORTH Specifications.

- vii. Prepare the traffic prediction report for complete project (including all packages of this project) considering the cumulative impact of the traffic on the environment and submit to the Ministry and concerned Regional Office within 3 months.
- viii. All the major, minor bridges and culverts should not affect the drainage systems. Flood plains of the rivers/ drainage systems are not to be disturbed.
- ix. Afforestation using compensatory plantation in the ratio of 1:10 shall be carried out by the state forest department. Native tree species shall be provided as per the IRC Guidelines on Landscaping and Tree Plantation (IRC:SP:21-2009). Plantation should be purely of native trees and Ficus species on both sides of the alignment.
- x. Project alignment should be managed in such a way to save the Heritage/old trees supposed to be affected by the proposed alignment.
- xi. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concern Authority. Old, large and heritage value trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Where the trees need to be cut/transplanted with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut/ non-survival of any transplanted tree) shall be done and maintained. Plantations to be ensured species (cut) to species (planted).
- xii. Trees with heronry (breeding ground for herons), pelicanary or community nesting of birds like Painted Storks, Ibis, Egrets, Pelican, etc will not be allowed to fell. In case of presence of such, alignment will be required to be changed to save such trees.
- xiii. Green belt development (tree plantation) in lieu of the trees being felled in non forest land should be carried out by the State forest department as deposit work and not by the private contractor. Green belt must be developed using exclusively native species. No exotic species to be used for the same.
- xiv. Apart from land compensation, the loss for crop has also to be compensated.
- xv. No Ground water shall be extracted and used. Approval/permission of concerned authority shall be obtained before drawing surface water from canal or any other sources.
- xvi. Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table.
- xvii. Proponent shall keep the finish road level sufficiently elevated from ground level with provision of railing on both sides to restrict animal crossing in order to avoid the possibility of wildlife injury/death. Major water bodies have been observed in the vicinity of the proposed road alignment & may be potential human elephant conflict points, appropriate nos of animal safe passages as per the guideline framed by the

Wildlife Institute of India and in consultation with Chief Wildlife Warden.

- xviii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the Public Hearing. The project proponent shall initiate the activities proposed by them, based on the commitment made in the Public Hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory afforestation etc., either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also become part of EMP and shall be implemented.

Agenda No. 3.4

Development of 4/6 lane (green field) access control expressway from Varanasi to Kolkata Package-IV from Km 184.400 (near Shahpur village, Bihar/Jharkhand Border) to Km 387.200 (near Kamalpur village, Jharkhand/WB Border) in the state of Jharkhand under Bharatmala Pariyojana Phase-II (Lot-9 package-3) (Total Length - 202.800 km) by M/s National Highways Authority of India – Environmental Clearance.

Proposal No. IA/JH/INFRA1/421051/2023 and File No. 10/13/2022-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

3.4.1. Development of 4/6 lane (green field) access control expressway from Varanasi to Kolkata Package-IV from Km 184.400 (near Shahpur village, Bihar/Jharkhand Border) to Km 387.200 (near Kamalpur village, Jharkhand/WB Border) in the state of Jharkhand under Bharatmala Pariyojana Phase-II (Lot-9 package-3) (Total Length - 202.800 km) by M/s National Highways Authority of India.

3.4.2. The proposed highway starts at 184.400 km & SH-69 junction Shahpur village (Chatra district) and terminates near Kamalpur village, Jharkhand/WB Border (Bokaro district). From Design Ch. 184+400 Km (Location: 24°23'54.23"N, 84°39'56.21"E) to Design Ch. 387.200 Km (Location: 23°29'8.31"N, 86°3'12.08"E). The proposed alignment is connecting through important talukas such as Hunterganj, Chatra, Pahalgada, Simaria in District of Chatra, Katamdag, Hazaribagh, Bakkagaon, Churchu, Dadi in District of Hazaribagh. Mandu, Chitarpur, Gola in District of Ramgarh. Gomia, Petarwar, Kasmar, Jardih, Chandankiari in District of Bokaro in the state of Jharkhand.

3.4.3. The proposed project falls under 7(f) - Highway, Category-A, as per EIA notification 2006. Total investment/cost of the project is Rs 7466.00 Crores.

3.4.4. ToR details: The Terms of Reference (ToR) was considered in 289th EAC meeting during 17th - 18th February 2022 and 293rd meeting during 24th -25th March, 2022 in the Ministry of Environment, Forest and Climate Change, New Delhi. TOR was granted on 09th May, 2022.

3.4.5. Public Hearing: Public Hearing was conducted by Bihar State Pollution Control Board (SPCB) as follows:

S.No	Date	Venue	District	Chaired by
1	30.12.2022	Nagar Bhawan, Chatra	Chatra	Additional District Magistrate
2	27.12.2022	Block Office, Katkamdag	Hazaribagh	Regional Officer
3	23.12.2022	Gram Panchayat Bhawan, Bongabar, Ramgarh	Ramgarh	Regional Officer
4	28.12.2022	Block Office, Petarwar, Bokaro	Bokaro	Additional District Magistrate

3.4.6. Diversion of forest land: Approx. 761.35 ha of forest land under protected forest land that needs to be diverted for construction of proposed highway. Forest Diversion proposal has been prepared as per the guidelines and consultation with concerned authorities and submitted on the Parivesh portal of MoEF&CC (Online proposal no. FP/JH/ROAD/411228/2022) on 19.12.2022 under the provision of FCA, 1980. The proposal is under examination by the concerned Forest Divisions.

3.4.7. The nearest Sanctuary is Hazaribagh Wildlife Sanctuary whose ESZ boundary is about 4.88 Km from the project road.

3.4.8. Waste Management: Disposal of Sewage and other wastes in the construction yard and labor camps will be done as per directions of the Environmental Specialist / Environmental Engineer of the Engineer.

3.4.9. Details of tree cutting and Green belt development: Approximately 142087 no. of trees (2087 no. of trees on non-forest land and approx. 140000 of trees of trees on protected forest). No protected or endangered species are noted. The proposed alignment finalizations are geometry design endeavoured to conserve the maximum amount of trees especially those that are falling outside the construction zone. The possibilities of relocating of existing trees shall be finalized in consultation with DFO. Compensatory afforestation would be carried out in as per the state Forest Guidelines. Approximately 116017 numbers of trees and shrubs will be planted along the roadside and in median portion respectively. The plantation shall be carried out as per IRC: SP: 21-2009 guidelines and Green Highway Policy-2015. Adequate space has been left on both sides of the road for greenbelt development apart from the

plantation at median.

3.4.10. Details of Rain Water Harvesting: Total 292 nos Rain Water Harvesting Structure along the Project road will be provided. Rain water harvesting pits will construct at an average distance of 500 m on either side of the highway which will be connected with longitudinal drains. The pits should be at least 5 m above the highest ground water table. The Cost of each Rain Water Harvesting Structure will be 40000 and total cost of Rain Water Harvesting Structure will be Rs.12320000.

3.4.11. Land acquisition and R&R issues: About 1546.21 ha land likely to be acquired as per NH Act 1956; compensation will be given as per RFCT LARR Act, 2013.

3.4.12. Employment potential: During the construction of the project around 1000 persons would be employed through contractor. During operation phase about 100 persons will be employed through the concerned contractor. Generally, locals are employed by the contractor.

3.4.13. Benefits of the project: This is a green field alignment, access control and is proposed for 4/6 Lane. The main objective of the proposed project is to reduce the distance and travel time from SH-69 Bihar/Jharkhand Border to Jharkhand/WB Border and to give connectivity to remote areas and major cities. The proposed alignment is connected. The proposed alignment will be part of Varanasi- Kolkata 4/6 lane expressway will connect cities like Varanasi to Chatra, Hazaribagh, Ramgarh, Ranchi, Bokaro, to the other connected City like Bhabhua, Sasaram, Aurangabad, Gaya Purliya, Bankura, Jamshedpur, Kharagpur, Kolkata e.tc. The project will enhance economic development in the area through industrial areas, Agriculture (Market access), commercial development and consequent employment.

3.4.14. Details of Court cases: Details of Court cases: Not court cases are involved.

3.4.15. *During the deliberation, EAC observed the following*

- i. The proposed alignment is passing through four districts namely Chatra, Bokaro, Hazaribagh and Ramgarh and the Public hearing conducted on 30/12/2022, 28/12/2022, 27/12/2022, 23/12/2022 respectively however it is noted that the public hearing has been chaired by Regional Officer in the state of Bokaro and Hazaribagh districts. As per the EIA notification, 2006 as amended the District Magistrate/District collector/Deputy Commissioner or his or her representative not below the rank of an Additional District Magistrate assisted by a representative of SPCB or UTPCC, shall Supervise and preside over the entire public hearing process. In the instant proposal public hearing presided by the Director, Project Land and Rehabilitation, Bokaro District and Regional Officer, Hazaribagh. However during the EAC sought the clarification in this regard, PP/Consultant couldn't justified the same.*
- ii. The EAC requested the Ministry that the proposal may be considered after submission of clarification from the PP.*

3.4.16. The EAC, after examining the documents submitted by the project proponent and detailed deliberations in its 322nd meeting on 21st-22nd March, 2023, **Deferred** the project for

want of the following information.

- i. The EAC requested the Ministry that the proposal may be considered after submission of the clarification by the PP whether the Public Hearing is presided by the District Magistrate/District collector/Deputy Commissioner or the Director/Regional Officer.
- ii. PP shall also explore the possibility of construction of structures as suggested by the EAC, the suggested structures are enclosed as **Annexure-C**.

Agenda No. 3.5

Development of Coastal Roads, Economic Corridors, Inter Corridors, Feeder Routes and to improve the efficiency of freight movement in India (Lo- 3/Tamil Nadu & Puducherry/Package-1) Nagapattinam to Tuticorin via Ramananthpuram in the State of Tamilnadu by M/s National Highways Authority of India(Length - 312.350 Km) – Terms of Reference.

Proposal No. IA/TN/INFRA1/415090/2023 and File No. 10/7/2023-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent”.

3.5.1 Development of Coastal Roads, Economic Corridors, Inter Corridors, Feeder Routes and to improve the efficiency of freight movement in India (Lo- 3/Tamil Nadu & Puducherry/Package-1) Nagapattinam to Tuticorin via Ramananthpuram in the State of Tamilnadu by M/s National Highways Authority of India(Length - 312.350 Km). The proposed project road is to be upgraded from 2 Lane to 4 Lane affecting the existing length for 19.100 Kms and new Greenfield alignment of 289.600 Kms with Right of Way (ROW) of 45mts and the length of 3.650 Kms is overlapping with NH-49 by M/s National Highways Authority of India.

3.5.2 The proposed alignment is for Development of Coastal Roads, economic corridors, inter corridors, feeder routes and to improve the efficiency of fright movement in India (lot.3/Tamil Nadu & Puducherry/package 1). Nagapattinam to Tuticorin via Ramananthpuram in the state of Tamil Nadu. The proposed project traverses through six (6) districts of Tamil Nadu state the details are as following:

District	Chainages		Length (Km)
	From (Km)	To (Km)	
Nagapattinam	314.400	342.180	27.780
Tiruvarur	342.180	346.867	4.687
Nagapattinam	346.867	348.047	1.180

Tiruvarur	348.047	376.317	28.270
Thanjavur	376.317	419.476	43.159
Pudukkottai	419.476	458.789	39.313
Ramanathapuram	458.789	590.258	131.469
Tuticorn	590.258	626.750	36.492

3.5.3 The proposed project falls under 7(f) - Highway, Category-A, as per EIA notification 2006. Total investment/cost of the project is Rs 12232.58 Crores.

3.5.4 Land use/Landcover of project site details are as following:

S. No	Classes	Area (ha.)	Area in %
1	Settlement	16	1.06
2	Agriculture	1022.4	81.39
3	Vegetation	0	0
4	Waste Land	672.6	17.07
5	Water Bodies	45	0.48
Total		1756	100.00

3.5.5 Right of Way (RoW): 45m throughout the corridor except at interchange, toll plaza, truck parking, grade separated structures etc.

3.5.6 Terrain and topographical features: The project alignment is characterized by plain terrain.

3.5.7 Water bodies, impact on drainage: The proposed alignment is passing through 21 rivers/33 ponds/26Nalas/8 Waterlogged areas. Bridges/culverts etc are proposed along the project for safe movement and free flow of the natural water.

3.5.8 Water requirements: It is estimated that approx. 8057 KL/day water will be required during the construction stage. Water shall be sourced through surface water and water tankers. NHAI will purchase water tankers from the approved empaneled agencies of respective districts. Necessary permission will be obtained from the appropriate authority prior to construction as per law/agreement. No groundwater extraction proposed.

3.5.9 Tree cutting: About 18314 trees (6818 Coconut tree, 9929 Palm tree and 1567 others) are falling under Corridor of Impact. Necessary permission from the forest department will be obtained before felling of these trees. The proposed alignment finalization and geometry design endeavored to conserve the maximum number of trees especially those are falling outside the construction zone.

3.5.10 Diversion of forest land: The project alignment passes outside the boundary of

the Selvanur Reserve Forest- 20 M from the PROW at Chainage 567+400.

3.5.11 The proposed alignment passes outside the core/ESZ of Melselvanur-Keelselvanur Bird Sanctuary, Sakkarakottai Birds Sanctuary, Therthnagal Bird Sanctuary, Udayamarthandapuram Birds Sanctuary and Gulf of Mannar National Park.

3.5.12 Details of CRZ area: Project Road passes through CRZ areas and attracts CRZ clearance under Coastal Regulation Zone, 2011. The approximate zonation of Tuticorin to Nagapattinam highway may be CRZ 1B, CRZ IVB and CRZ III, Detailed Assessment report will be provided after filed visit by IRS.

3.5.13 Land acquisition and R&R issues: Total 1756 hectare of land is required to develop the proposed project in which 1582.26 hectare in private and 173.7 hectare in government land.

3.5.14 Employment potential: Approx. 840 employees during construction and 640 employees during operation phase in direct and indirect ways will be required.

3.5.15 Benefits of the project: Savings in travel times from faster vehicle speeds and reductions in congestion of Nagapattinam to Tuticorin via Ramananthpuram, the projected overall savings in travel time and fuel consumption and it will also reduce the emission of dust. Reduced cargo delays – from faster vehicle speeds and reductions in travel time. Improved access to the Chennai city. It will further reduce road accidents and enhance safe traffic movement. Project will help in ribbon development along the project corridor.

3.5.16 Details of Court cases: Details of Court cases: Not court cases are involved.

3.5.17 The EAC, taking into account the submission made by the project proponent had a detailed deliberation in its 322nd meeting during 21st – 22nd March, 2023 and **recommended** the proposal for grant of Terms of Reference (ToR) with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. Submit a copy of layout superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scale.
- ii. Recommendation of the Tamilnadu CZMA shall be obtained and submitted.
- iii. Submit superimposing of latest CZMP as per CRZ Notification on the CRZ map.
- iv. Submit a complete set of documents required as per para 4.2 (i) of CRZ Notification, 2011.
- v. Hydrodynamics study on impact of dredging on flow characteristics shall be carried out.
- vi. The proponent, with the help of an independent institution/expert of national repute, shall carry out the impact of proposed alignment on avifauna, migratory avifauna, other biodiversity and wetland ecology including ecological productivity of the important lakes/waterbodies situated within 10 km distance of proposed alignment and prepare a detailed Conservation Plan along with adequate mitigation measures. The plan shall be duly prepared in consultation and endorsement of Chief Wildlife Warden of Tamil Nadu with requisite financial provisions.

- vii. A comprehensive assessment of water catchment, hydrology and drainage pattern within 10km of the alignment, impacts of project on the same and its mitigation with requisite financial allocation.
- viii. 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.
- ix. Road safety audit (along with accident/black spots analysis) 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.
- x. Cumulative impact assessment study to be carried out along the entire stretch including the other packages in the same stretch.
- xi. Rain water harvesting structures to be constructed at the either sides of the road with special precaution of oil filters and de-silting chambers.
- xii. Provide compilation of road kill data on existing roads (national and state highways) in the vicinity of the proposed project. Provide measures to avoid road kills of wildlife by the way of road kill management plan.
- xiii. 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.
- xiv. 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.
- xv. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent, based on the commitments made during the public hearing, shall include all the activities required to be taken to fulfill these commitments in the Environment Management Plan along with cost estimates of these activities, in addition to the activities proposed as per recommendations of EIA Studies and the same shall be submitted to the ministry as part of the EIA Report. The EMP shall be implemented at the project cost or any other funding source available with the project proponent.
- xvi. In pursuance of Ministry's OM No stated above the project proponent shall add one annexure in the EIA Report indicating all the commitments made by the PP to the public during public hearing and submit it to the Ministry and the EAC.
- xvii. 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.

- xviii. 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.

Agenda No. 3.6

Improvement to Uran-Panvel-Karjat-Vandre-Shrigaon- Mandoshi - Bhimashankar - Vada-Khed-Shirur Road S.H. 103 (Km 29/00 to 284/00, District-Raigad and Pune, in the state of Maharashtra. Project starts from Neral on Karjat–Badlapur Road in Karjat Taluka of Raigad District and ends at Shirur Junction on Ahmednagar-Pune Road i.e.,existing SH 27 (Pune Ahmednagar Road) recently declared as NH 773F admeasuring approx. 135.910 km. by the M/s Public Works Department (PWD). – Terms of Reference.

Proposal No. IA/MH/INFRA1/415638/2023 and File No. 10/8/2023-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMPreport. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3.6.1. The proposed project is for Improvement to Uran-Panvel-karjat-Vandre-Shrigaon-mandoshi- Bhimashankar -Vada-Khed-Shirur Road S.H. 103 (Km 29/00 to 284/00, District-Raigad and Pune, in the state of Maharashtra. Project starts from Neral on Karjat–Badlapur Road in Karjat Taluka of Raigad District and ends at Shirur Junction on Ahmednagar-Pune Road i.e.,existing SH 27 (Pune Ahmednagar Road) recently declared as NH 773F admeasuring approx. 135.910 km. by the M/s Public Works Department (PWD).

3.6.2. Project starts from Neral on Karjat–Badlapur Road in Karjat Taluka of Raigad District and ends at Shirur Junction on Ahmednagar-Pune Road i.e., existing SH 27 (Pune Ahmednagar Road) recently declared as NH 773F. The alignment Start point- Ch: 0+000 Km (Neral) - 19° 3'23.11"N to 73°18'53.24"E and End point- Ch: 135+910 Km (Shirur), 18°49'2.80"N to 74°21'8.04"E.

3.6.3. The proposed project falls under 7(f) -Highway, Category-A, as per EIA notification 2006, due to applicability of General Condition i.e., the state highway is passing within 5 km radius of protected areas of Matheran (1.3km), Bhimashankar WLS (1.44km) and Great Indian Bustard WLS (4.2km). Total cost of the project is Rs. 12,042.00 Cr.

3.6.4. Land use/Land cover of the project site is as following:

SN	Land use/Land cover	Area (Ha)	%	Remarks, if any
1	Water bodies	0.123	0.20	-

2	Trees	7.08	11.53	-
3	Open area	36.86	59.73	-
4	Built up Area	5.06	8.33	-
5	Bare Land	12.33	20.17	-

3.6.5. Right of Way (RoW): For the road alignment the ROW has been proposed 45.00 m, additional land width is proposed for interchanges, way side amenities, toll plaza and in cutting and embankment sections of road. The proposed carriageway configuration is 4-lane with paved shoulder.

3.6.6. Terrain and topographical features: The proposed project site has plain/rolling terrain and hilly terrain topography.

3.6.7. Details of water bodies, impact on drainage:

S.no	Nmae of the River/Canal	Crossing/Abutting at
1	Ulhas river crossing	CH 01+ 935.
2	Lake near Kondiwale Village at a distance of ~0.50 km NS	CH 1+ 970.
3	Thokarwadi Dam at a distance of 3.9 km SE	Ch: 47+800
4	Bhima Askhed Dam at a distance of 1.9 km SE	Ch: 58+400
5	Bhima river crossing	CH 85+440.
6	Chaskaman Dam at a distance of 10.17 km NE	Ch: 61+400
7	Thotewadi bandhara at a distance of 0.13 km S	Ch 101+800
8	Ghod river at a distance of 0.11 km N	Ch:129.500

3.6.8. Water requirement: The water requirement is approximately 54 m³ /day (i. e. 45 lpd for 1200 laborer) and Water required for construction will be 3,24,000 m³ and 400 m³/day. Additional water will be required for dust suppression and other construction activities. The water shall be obtained from nearby surface water sources, prior permissions from the concerned authorities will be obtained.

3.6.9. Details of Tree cutting: Tree cutting is involved in the project. Exact number of tree felling will be submitted in EIA report.

3.6.10. Diversion of forest land: About 24.16 km long road passing through forest area.

Forest clearance will be obtained.

3.6.11. The state highway is passing within 5 km radius of protected areas of Matheran (1.3km), Bhimashankar WLS (1.44 km) and Great Indian Bustard WLS (4.2km)

3.6.12. Employment potential: Temporarily 1200 labours shall be employed per day.

3.6.13. Benefits of the project: the proposed alignment will reduce the travel time substantially. In addition, the improved road will provide other benefits like proposed activity improves the economic status of the village people along project area. Also development and improvement in transportation infrastructure facility will connect villages with the neighbouring City.

3.6.14. Details of Court cases: Details of Court cases: Not court cases are involved.

3.6.15. During deliberation, EAC observed and noted the following:

- i. The state highway is passing within 5 km radius of protected areas of Matheran (1.3km), Bhimashankar WLS (1.44 km) and Great Indian Bustard WLS (4.2km).
- ii. Proponent will design the alignment with least curvature having with necessary structural provisions for safe passage of wildlife and re-alignment for saving of forest patch.
- iii. The alignment is passing through Western Ghats and bisecting the pristine western Ghats area most of the area.

3.6.16. The EAC, taking into account the submission made by the project proponent had a detailed deliberation in its 322nd meeting during 21st – 22nd March, 2023 and **returned** the proposal in present form. The Committee is of the view that the proposed alignment is bisecting the pristine Western Ghats and crossing near by the wild life sanctuary namely Bhimashankar and as such can not be considered due to its large scale ecological impacts. Committee instead suggested to the PP to explore the other alternative alignments avoiding the western Ghats such as Sirur-Rajgurunagar bypassing Chakan and connecting to existing Pune Mumbai Expressway near Talegaon. PP may consider connecting the alignment from Sirur to Surat-Chennai NHAI Green field alignment for larger connectivity in consultation with NHAI.

Agenda No. 3.7

Development of 6-lane access control greenfield highway from Ahmednagar – Solapur – Akkalkot Section starts at Sarola Baddi village near Ahmednagar (Km 290.000) and ends on NH-150C (MH/KN Border to Kurnool section) near Umarge village (Km 524.500) in the state of Maharashtra by M/s National Highways Authority of India (Total Length – 234.500 km) – Terms of Reference.

Proposal No. IA/MH/INFRA1/418904/2023 and File No. 10/9/2023-IA.III

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been

suppressed in the EIA/EMPreport. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3.7.1. Development of 6-lane access control greenfield highway from Ahmednagar – Solapur – Akkalkot Section starts at Sarola Baddi village near Ahmednagar (Km 290.000) and ends on NH-150C (MH/KN Border to Kurnool section) near Umarge village (Km 524.500) in the state of Maharashtra by M/s National Highways Authority of India (Total Length –234.500 km) .

3.7.2. The proposed project corridor starts at Sarola Baddi Village, Maharashtra (Design Ch. 290.000) Lat: 19° 4'44.37"N to Long:74°50'34.25"E and Ends near NH-150C Umarge Village Maharashtra (Design Ch. 524.500) Lat: 17°29'31.30"N to Long:76° 14'26.49"E.

3.7.3. The proposed project falls under 7(f) - Highway, Category-A, as per EIA notification 2006. Total cost of the project is Rs. 12,042.00 Cr.

3.7.4. The land use pattern in 1 km either side of the project road is predominately cultivated and barren fields. In terms of land use, majority of adjoining lands were observed to be used for agriculture purposes (89.2%), barren land (9.7%), Forest Land is (0.5%) and other land (0.6).

3.7.5. A minimum Right of Way (ROW) of 60m is considered throughout the project length.

3.7.6. Terrain and topographical features: Terrain is classified by the general slope of the country across the highway alignment. Based on this criterion, the entire project stretch traverses predominantly through Plain terrain.

3.7.7. Details of water bodies, impact on drainage: The alignment is passing across River Mehekri at Km 312+600, Talwar River at Km. 340+800 Vincharna river at km 352+580, Chandni river at 410+53 Km and Bori river at 524.03 Km. Proper care shall be taken to free from dumping of solid wastes and earth materials. No change in hydrology of water courses is envisaged due to the project. Adequate number of balancing culverts will be provided to maintain the natural water flow and drainage.

3.7.8. Water requirements: The construction water requirement will be met from surface water bodies. Ground water will be used for construction, where surface water is not available after obtaining prior permission from concerned authorities. Approximate water requirement for the construction is 39,03,535 KL. Ground water will be extracted from bore wells or surface water will be extracted from the nearby river depending on the season of construction and water availability with the permission of ground water board / irrigation department.

3.7.9. Tree cutting: About 5,600 Nos. trees proposed to be removed tentatively within RoW of 60 m and as per IRC:SP-21: 2009, plantation programme shall be developed after approval of alignment.

3.7.10. Diversion of forest land: The proposed project involves diversion of 9.1 ha of forest

land (refer Table 3 for break-up). The forest clearance is not yet submitted.

Sr No.	Name Of District	Name Of Taluka	Name Of Village	Affected Gat No.	Affected Area as per JMS (Ha)	Chainages	Remark	Name of the Forest
1	Beed	Ashti	Shirapur	90	3.0	Km 319.930 - Km 320.530	(On Ground and on 7/12 abstract Forest available)	Shirapur Protected Forest
2	Ahmednagar	Jamkhed	Potewadi	140	0.114	Km 368.600 - Km 368.700	(On Ground and on 7/12 abstract Forest available)	
3	Osmanabad	Parandha	Pandhrawadi	34	0.97	Km 375.660 - Km 375.860	(On Ground and on 7/12 abstract Forest available)	Pandhrawadi Protected Forest
4	Solapur	Barshi	Sarjapur	135	0.18	Km 446.300 - Km 446.500	JMS completed (On Ground and on 7/12 abstract Forest available)	
		Akkalkot	Konhalli	102	0.12	Km 511.00 - Km 511.500	JMS completed (On Ground and on 7/12 abstract Forest is not available)	
				103	1.81			
				104	0.81			
				105	0.62			
		Boregaon	139/1	0.61	Km 498.600 - Km 498.800			
			139/2	0.9				
				Total	9.1			

3.7.11. The proposed alignment is not passing through any protected forest/Eco sensitive

zone/Wildlife sanctuary., nor falls within 10 km boundary of any Protected Area under Wildlife Protection Act 1972.

3.7.12. Solid waste management: Septic tank, soak pit will set-up for canteen/kitchen waste in construction camp and toilet waste liquids are discharge to septic/soak pit. Other liquid waste treated at sites by using storage and sedimentation tank. The effluent of the sedimentation tank is discharge within permissible limits of respective parameters. The sewage system shall be properly designed and built so that no water pollution takes place.

3.7.13. Employment potential: Approx. 2,600 workers shall be employed for the construction of the proposed project.

3.7.14. Benefits of the project: Existing road between Ahmednagar – Solapur is very congested with Built-up Locations. Hence, this proposed green field corridor is very much required as it reduces substantial length, travelling time and fuel consumption. This proposed corridor is also intended to augment the Transport Infrastructure in the state of Maharashtra and boost the industrial, freight movement and tourism sectors by providing faster inter-region connectivity. The project road will cause several benefits to local people both during construction and operation stage. Besides providing better mode and frequency of transport, access to quality health care facilities, educational and other infrastructural facilities will increase economic activities especially supporting transport like gasoline station, automotive repair shops, lodging and restaurants. Increase agro-industrial activities are also expected to take an advantage of improved access to urban centers, where there are higher demands and better prices for agricultural products. Further, tourism activities in the area and state will be enhanced which in many terms will boost the local economy and build better investment climate for industries creating more employment opportunities to local people.

3.5.18 Details of Court cases: No court cases are involved.

3.5.19 The EAC, taking into account the submission made by the project proponent had a detailed deliberation in its 322nd meeting during 21st – 22nd March, 2023 and **recommended** the proposal for grant of Terms of Reference (ToR) with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. Proponent will design the alignment with least curvature having with necessary structural provisions for safe passage of wildlife and re-alignment for saving of forest patch.
- ii. The proponent shall carry out a detailed traffic flow 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.
- iii. Road safety audit (along with accident/black spots analysis) 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.
- iv. Provide compilation of road kill data on the wildlife on the existing roads (national and state highways) in the vicinity of the proposed project. Provide measures to avoid road kills of wildlife by the way of road kill management plan.
 - v. 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. Alignment also should be such that it will avoid cutting old and large and heritage trees if any. All such trees should be geo-tagged, photographed and details be submitted in the EIA –EMP report. PP should explore possibility of reducing RoW considering very large number of tree cutting involved.
 - vi. The proponent shall carry out a comprehensive socio-economic assessment and also impact on biodiversity with emphasis on impact of ongoing land acquisition on the local people living around the proposed alignment. The Social Impact Assessment should have social indicators which can reflect on impact of acquisition on fertile land.
 - vii. The Social Impact Assessment shall take into consideration of key parameters like people’s dependency on fertile agricultural land, socio-economic spectrum, impact of the project at local and regional levels.
 - viii. As per the Ministry’s Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent, based on the commitments made during the public hearing, shall include all the activities required to be taken to fulfil these commitments in the Environment Management Plan along with cost estimates of these activities, in addition to the activities proposed as per recommendations of EIA Studies and the same shall be submitted to the ministry as part of the EIA Report. The EMP shall be implemented at the project cost or any other funding source available with the project proponent.
 - ix. In pursuance of Ministry's OM no stated above the project proponent shall add one annexure in the EIA Report indicating all the commitments made by the PP to the public during public hearing and submit it to the Ministry and the EAC.
 - x. The Action Plan on the compliance of the recommendations of the CAG as per.

Agenda No. 3.8

Development of Industrial Estate (Phase-II) at Sector-30, 30-A, 31 & 32, Manakpur, Jagadhri, Harayana by M/s Haryana State Industrial and Infrastructure Development Corporation Limited – Term of Reference Proposal No. IA/HR/INFRA1/420201/2023 and File No. 10/12/2023-IA.III

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMPreport. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent”.

PP did not attend the meeting. The committee deferred the proposal and ask the Member Secretary to consider the proposal only after a formal request received from PP.

Agenda No. 3.9

Proposed Industrial Park at village Golana and Mitali, Taluka Khambhat, District Anand, Gujarat by M/s Vibrant Industrial Park Limited – Amendment in Terms of Reference

Proposal No. IA/GJ/NCP/297717/2023 and File No. 10/5/2022-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent”.

3.9.1. The project proponent along with EIA Consultant Hubert Enviro Care Systems Pvt. Ltd, Chennai, Tamil Nadu made a presentation through Video Conferencing and provided the following information:-

3.9.2. The M/s Vibrant Industrial Park Limited had obtained TOR from MoEF vide letter File No 10/5/2022-IA.III dated 30th June, 2022 for proposal of Industrial Park at Village Golana and Mitali, Taluka Khambhat, District Anand, Gujarat.

3.9.3. Now PP made application for requesting an amendment in ToR was submitted to MoEF&CC on 14th March 2023. The PP sought following amendments:

S.no	Plant/ Equipment/ Facility	Existing Configuration	Proposed Configuration	Final configuration after Amendment	Remarks if Any
1	Synthetic Organic Chemicals and other non EC units	Plots: 231 Nos.	Plots: -75 Nos.	Plots: 156 Nos.	Due to change in total area of industrial park
2	Textile Industries	Plots: 3 Nos.	Plots: -3 Nos.	Plots: 0 Nos.	Due to change in total area of industrial park
3	Captive Power Plant	31.5 MW	-18.5 MW	13 MW	Due to change in total area of industrial park

4	Pesticides Industries	Plots: 17 Nos.	Plots: -17 Nos.	Plots: 0 Nos.	Due to change in total area of industrial park
5	Pulp and Paper Industries	Plots: 4 Nos.	Plots: -4 Nos.	Plots: 0 Nos.	Due to change in total area of industrial park
6	Common Boiler House	960 TPH	-480 TPH	480 TPH	Due to change in total area of industrial park
7	Treatment Storage Disposal Facility	21,82,500 cu. m.	-17,17,500 cu. m.	4,65,000 cu. m.	Due to change in total area of industrial park
8	Common Effluent Treatment Plant	60 MLD	-40 MLD	20 MLD	Due to change in total area of industrial park
9	Sewage Treatment Plant	2 MLD	-0.6 MLD	1.4 MLD	Due to change in total area of industrial park
10	Spent Acid Management Facility	1,265 KL/d	-780 KL/d	485 KL/d	Due to change in total area of industrial park
11	Water Treatment Plant	40 MLD	-26 MLD	14 MLD	Due to change in total area of industrial park
12	Co-processing Facility	5,75,455 MT/Annum	-2,74,330 MT/Annum	3,01,125 MT/Annum	Due to change in total area of industrial park
13	Common MEE followed by Spray Dryer	20 MLD	-9.5 MLD	11.5 MLD	Due to change in total area of industrial park
14	Spent Solvent Management Facility	300 MT/d	-30 MT/d	270 MT/d	Due to change in total area of industrial park

15	Decontamination Facility	10,56,050 MT/Annum	-8,42,825 MT/Annum	2,13,225 MT/Annum	Due to change in total area of industrial park
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3.9.4. Other Amendment sought by the PP:

S.no	Reference of Approved ToR	Description as per Approved ToR	Description as per Proposal.	Remarks
1	Point no. 18 Page no. 5 of 11 of ToR Letter	CETP: For the treatment of Low COD effluent, CETP	CETP: For the treatment of Low COD effluent, CETP	Due to change in total area of industrial park
2	Point no. 13 Page no. 5 of 11 of ToR Letter	Total Water requirement shall be 1,15,143.00 KL/d	Total Water requirement shall be 47,070.00 KL/d	Due to change in total area of industrial park
3	Point no. 20 Page no. 5 of 11 of ToR Letter	Around 1,000 Nos. of manpower shall be required du	Around 1,000 Nos. of manpower shall be required du	Due to change in total area of industrial park

3.9.5. Reason for Amendment: Industrial park's overall size is reducing to 156.52 Ha which was earlier 408.12 Ha. This will lead to decrease in total no. of plots, nature of units proposed, resource requirement and pollution load.

3.9.6. After amendment total proposed land area is 156.52 Ha considering Plots for various member units, common infrastructures and common treatment facilities and other amenities is as following.

Particular	Area (Ha)	% of Total Area
Ground Coverage Area		
Treatment Facilities such as Water Treatment Plant (WTP), Common Effluent Treatment Plant (CETP), Common MEE & Spray Dryer, Spent Acid Management Facility, Sewage Treatment Plant (STP), Decontamination Facility, Co-processing Facility, Spent Solvent Management Facility	3.50	

Particular	Area (Ha)	% of Total Area
Treatment Storage & Disposal Site (TSDF)	3.58	
Boiler House	1.47	
Common Facility such as security cabin, admin building, fire station, hospital etc.	1.70	
Members	42.62	
Total [A]	52.87	33.78%
Greenbelt Area		
Treatment Facilities such as Water Treatment Plant (WTP), Common Effluent Treatment Plant (CETP), Common MEE & Spray Dryer, Spent Acid Management Facility, Sewage Treatment Plant (STP), Decontamination Facility, Co-processing Facility, Spent Solvent Management Facility	2.69	
Treatment Storage & Disposal Site (TSDF)	2.36	
Boiler House	0.97	
Greenbelt Area along periphery of estate & road	19.18	
Members	28.13	
Total [B]	53.33	34.07%
Road & Parking		
Treatment Facilities such as Water Treatment Plant (WTP), Common Effluent Treatment Plant (CETP), Common MEE & Spray Dryer, Spent Acid Management Facility, Sewage Treatment Plant (STP), Decontamination Facility, Co-processing Facility, Spent Solvent Management Facility	0.83	
Treatment Storage & Disposal Site (TSDF)	1.03	
Boiler House	0.26	
Road & parking of common area of park	4.68	
Members	7.67	
Total [C]	14.48	9.25%

Particular	Area (Ha)	% of Total Area
Open Area		
Treatment Facilities such as Water Treatment Plant (WTP), Common Effluent Treatment Plant (CETP), Common MEE & Spray Dryer, Spent Acid Management Facility, Sewage Treatment Plant (STP), Decontamination Facility, Co-processing Facility, Spent Solvent Management Facility	1.11	
Treatment Storage & Disposal Site (TSDF)	0.19	
Boiler House	0.24	
COP of Park	27.49	
Members	6.82	
Total [D]	35.85	22.90%
Grand Total	156.52	100.00%

3.9.7. List to industries to be housed with the proposed project site, only for projects covered under 7(c) category of EIA Notification, 2006:

S. No.	Industries/ Facilities	Anticipated Types of industries/activities	Sector No. as per NABET Scheme	Categorisation of Industry as per EIA notification, 2006	Categorization as per CPCB
1.	Synthetic organic chemicals industry	Dyes & dye intermediates; bulk drugs and intermediates; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates, specialty chemicals, engineering, textile, etc.	21	5(f) "A"	Red
2.	Thermal Power Plant - Captive (Co-generation	Supply of electricity to estate	4	1(d) "B"	Red

S. No.	Industries/ Facilities	Anticipated Types of industries/activities	Sector No. as per NABET Scheme	Categorisation of Industry as per EIA notification, 2006	Categorization as per CPCB
	Plant)				
3.	Treatment Storage Disposal Facility	Disposal of Landfillable waste Generated	32	7 (d) "B"	Red
4.	Common Effluent Treatment Plant	Treatment of Low COD Effluent Generated	36	7 (h) "B"	Red
Common Facilities proposed which are not covered under EIA notification, 2006 and its subsequent amendments					
5.	Common Boiler House	Supply of steam	-	-	Red
6.	Common MEE followed by Spray Dryer	Treatment of High COD Effluent Generated	-	-	Red
7.	Sewage Treatment Plant	Treatment of Domestic Effluent Generated	-	-	Red
8.	Spent Solvent Management Facility	Collection, storage, treatment & disposal/ sell of Spent Solvent Generated	-	-	Red
9.	Spent Acid Management Facility	Collection, storage, treatment & disposal/ sell of Spent Acid Generated	-	-	Red
10.	Decontamination Facility	Collection, storage, treatment & disposal/ sell of discarded bags	-	-	Red
11.	Water Treatment Plant	Treatment of fresh water & supply	-	-	-
12.	Co-processing Facility	Collection, storage, treatment & disposal/ sell	-	-	Red

S. No.	Industries/ Facilities	Anticipated Types of industries/activities	Sector No. as per NABET Scheme	Categorisation of Industry as per EIA notification, 2006	Categorization as per CPCB
		of co-processible waste			

3.9.8. The EAC, taking into account the submission made by the project proponent has a detailed deliberation in its 322rd meeting during 21st-22nd March, 2023 and recommended the proposal mentioned at para 3.9.3 and 3.9.4 for amendment in Terms of **References** issued by the Ministry in favor of M/s Vibrant Industrial Park Limited vide F. No. 10/5/2022-IA.III dated 30th June, 2022 for proposal of Industrial Park at Village Golana and Mitali, Taluka Khambhat, District Anand, Gujarat with the following specific conditions.

- i. PP shall carry out the EIA/EMP studies for full capacities for all the individual industries located inside the industrial area, as prescribed in the earlier tot letter.
- ii. All other terms and conditions mentioned in the terms of references vide F. No. 10/5/2022-IA.III dated 30th June, 2022 shall remain unchanged.

Agenda No. 3.10

Development of Green field Bhavanapadu Port (Phase I) in the area of 1010 acres (408.72 ha), in the villages of Mulapeta, Vishnuchakram Rajapuram, Kothalingudu of Santhabommali Mandal, Srikakulam District, Andhra Pradesh by M/s Andhra Pradesh Maritime Board – Environmental and CRZ Clearance

Proposal No. IA/AP/INFRA1/421536/2023 and File No. 10-56/2020-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3.10.1. The project proponent along with EIA Consultant M/s Voyants Solutions Private Limited., made a presentation through Video Conferencing and provided the following information:-

3.10.2. Development of proposed Green field Bhavanapadu Port (Phase I) is proposed to handle ~23.50 Million Tonnes per Annum (MTPA) of various types of Cargo. The port is located in the villages of Mulapeta, Vishnuchakram Rajapuram, Kothalingudu of Santhabommali Mandal, Srikakulam District, Andhra Pradesh. The total port area will be developed in the area of 1010 acres (408.72 ha). Port will be developed as an all-weather deep water multipurpose port with world class terminal facilities appropriate to handle present and

future cargo demands keeping the flexibility to handle a wide variety of cargoes.

3.10.3. In phase-I four berths are proposed; out of which three are General Cargo berths (270mx34m) and One Coal Handling berth (300mx28m) and the South breakwater will be 2455 m long and North breakwater - 580 m long. The total port will be developed in the area of 1010 acres (408.72 ha). Out of 1010 Acres total land 826.62 Acres pertains to Port backup area and remaining 183.38 Acres pertains to road/rail corridor.

3.10.4. As per the EIA Notification issued by MoEF&CC on 14th September 2006, proposed project is listed in schedule 7(e) i.e., Ports and Harbours, breakwater and dredging. The total Project Cost for phase-I will be Rs. 353681 Lakh.

3.10.5. Terms of References (ToR): The Terms of References (ToR) was considered in 269th EAC meeting held on 10th August, 2021, the EAC recommended the proposal grant of ToR and Ministry granted the ToR to M/s. Andhra Pradesh Maritime Board obtained Terms of Reference vide MoEF&CC F.No. 10-56/2020-IA.III dated 01st September, 2021, for the Phase I development of Bhavanapadu Port. Further, further PP applied on 01.07.2022 for amendment in ToR for increase in cargo handling capacity from 12.18 MTPA to 23.50 MTPA and the same was considered in 304th EAC meeting held on 22.07.2022 and TOR amendment letter was issued on 23.08.2022.

3.10.6. Public Hearing Details: Public Hearing was conducted on 06.05.2022 at Mandal Parishath Upper Primary School, Mulapeta, Santhabommali Mandal, Srikakulam District under the chairmanship of the district Collector, Srikakulam.

3.10.7. Landuse/Land cover of project site is as following:

S. No.	Landuse/ Land cover	Area (ha)	%	Remarks, if any
1	Agriculture Land	318.36	77.89	-
2	Settlement	2.41	0.59	-
3	Waterbody	5.76	1.41	-
4	Forest	0.97	0.24	-
5	Saltpan	6.76	1.65	-
6	Mangrove	1.52	0.37	-
7	Road and Rail	72.94	17.85	-
Total		408.72	100	-

3.10.8. The forest land proposed to be diverted for the project is 0.97 Ha as against 1.21 Ha, mentioned in ToR. While applying the ToR application PP has provided a tentative area of 2.99 Acres (1.21 Ha) as forest area after that DGPS survey was conducted and area proposed comes to 0.97 Ha only. DGPS survey maps were authenticated by the office of the Principal

Chief Conservator of Forests, Guntur. Forest Diversion proposal is in process as per the Forest (Conservation) Act 1980. In case of approval under Forest (Conservation) Act, 1980 for diversion of this forest land is not recommended by the MoEF&CC, still it is technically feasible to execute the road cum conveyor corridor along the alternate alignment

3.10.9. The elevation of the Port site ranges between 2.0 m to 10 m. At the Port eastern boundary, ground level varies from 6.0 m to 10.0 m and raise down to 2.0 m towards the western boundary of Port location. However, in the creek near shoreline, the ground levels are in the range of 1.0 m to 4.0 m. The proposed green field Port location at Bhavanapadu is falling in Zone II as per revised seismic zoning map of Andhra Pradesh.

3.10.10. Water requirement: The Creek is located 3 km away from the northern breakwater, construction of breakwaters has no impact on the creek.

3.10.11. Water requirement: During construction phase water requirement will be 100 KLD which will be sourced from Gotta Barrage. During operation phases fresh water requirement for Phase-I development of the Port is assessed as 0.5 MLD. Fresh water will be sourced from, Gotta barrage, which is about 50 km from Bhavanapadu. Pipeline from the reservoir shall be provided for supply of water. No ground water is envisaged.

3.10.12. Waste Management: Garbage collection bins will be provided at various locations in port. Bio-degradable and non-degradable solid wastes will be segregated at collection points. Solid waste from the port is envisaged to be about 1750 kg/day. Bio-degradable and Non-Biodegradable waste will be collected, temporally stored and transported to secured Integrated MSW Facility. STP sludge will be dried into cakes and subsequently used as manure in greenbelt. Other wastes which can be re-cycled will be sold. Wastes which cannot be recycled, effluent sludge and hazardous wastes will be disposed at nearest Treatment, Storage and Disposal Facility (TSDF) through approved APPCB vendors. STP details: The proposed Port project generates 32.00 KLD of sewage which will be treated in 40 KLD capacity STP. The treated wastewater will be recycled completely for horticulture and flushing purpose, maintaining a zero-discharge system. Workshop effluent will be treated in 10 KLD ETP.

3.10.13. Tree cutting and Green belt development: All efforts have been made to minimize the no of trees to be removed. Only 110 trees which are not covered under either protected or endangered category will be removed, with due permission from the competent authority. The species which are Suitable for translocation shall be translocated.

3.10.14. Energy conservation measures: The estimated power requirement, taking all the requirements of power for conveyors, equipment and illumination including future requirements, will be 15 MW. Renewable energy proposed to be installed is 3500 KW which is 23% of the total power requirement.

3.10.15. Energy conservation measures would be undertaken for ensuring minimum use of energy resources.

3.10.16. Rain Water Harvesting: One open pond with capacity of 1,00,000 Litre (size 10m x 10m x 1.5m) has been proposed along with 150 Nos. of rain water harvesting pits of size

1.5 x 1 x 2 Mtr. for rain water harvesting. The Storage capacity of rainwater harvested in cum : 100 cubic meter and the harvested rain water will be utilized for dust suppression, fire fighting etc.

3.10.17. CRZ details: The proposed project is falls under CRZ – IA, CRZ-IB, CRZ III, CRZ-IVA, CRZ –IVB. National Centre for Sustainable Coastal Management (NCSCM), has been entrusted for demarcation of HTL, LTL and CRZ areas in and around the proposed Port site. APCZMA recommendation was obtained vide letter no. 445/CRZ/INFRA/2022 dated 11.01.2023 and subsequently obtained the amendment vide letter dated 10.03.2023.

S.No	CRZ Classification	Area (Ha)
1	CRZ-IB (Intertidal zone)	11.86
2	Area between LTL and HTL-CRZ III	6.54
3	200m to 500m from HTL-CRZ III	2.56
4	CRZ-IVA (Sea LTL to 12 Nm)	145.96
5	CRZ –IVB (River or Creek)	0.63
6	CRZ - IA	2.22

3.10.18. Erosion and accretion study for the proposed development of Bhavanapadu Port was conducted by Department of Ocean Engineering, Indian Institute of Technology, Chennai. Proposed Bhavanapadu Port falls under stable coast. Further, Hydrodynamics study on impact of dredging on flow characteristics has been carried out- The estimated capital dredging quantity for the proposed port is 14 million cum. Out of it, 4.6 million cum quantity will be used for land reclamation and remaining 9.4 million cum quantity will be disposed at identified dredge spoil disposal location.

3.10.19. The bathymetric survey of the coastal waters within port limits was conducted for the proposed Bhavanapadu Port. The bathymetry charts indicate that the depth contours prevail almost parallel to the coastline. As the Creek is located 3 km away from the northern breakwater, construction of breakwaters has no impact on the creek.

3.10.20. Cargo handling capacity.

S.No	Commodity	Capacity (MTPA)
1	Coal	11.96
2	Lime stone	0.84
3	Lime stone	3.25
4	Edible Oil	1.02

5	Multipurpose/general cargo	6.02
6	Other cargo	0.41
	Total Phase I Capacity	23.50

3.10.21. Land acquisition and R&R issues: As per the Detailed Project Report approximately 1010 Acres of land would be required for the development of proposed Bhavanapadu Greenfield Port at Rajapuram village, Santhabomali Mandal, Srikakulam District, Andhra Pradesh. Out of 1010 Acres total land 826.62 Acres pertains to Port backup area and remaining 183.38 Acres pertains to road/rail corridor. Total R&R cost for Mulapeta and Vishnu chakram has been estimated is approximately Rs. 116.84 Crore.

3.10.22. Employment potential: About 10,000 (2500 during operation phase and 7500 during construction phase) persons will get employed in terms of Direct and Indirect which include skilled, semi-skilled and unskilled labour with specific attention to employment potential of local population.

3.10.23. Benefits of the project: Improved sea transport facilities, further, the project improves the social infrastructure like roads, railways, townships, housing, water supply, electrical power, drainage, educational institutions, hospitals, improved environmental conditions etc. further the proposed project provides the better employment opportunities (skilled, semi-skilled and unskilled labour during construction and operation phases of the project with specific attention to employment potential of local population.

3.10.24. Details of Court cases: No court cases are involved.

3.10.25. The EAC, taking into account the submission made by the project proponent has a detailed deliberation in its 322rd meeting during 21st-22nd March, 2023 and **recommended** the proposal for grant of environmental clearance for 'Development of Green field Bhavanapadu Port (Phase-I) in the villages of Mulapeta, Vishnuchakram Rajapuram, Kothalingudu of Santhabommali Mandal, Srikakulam District, Andhra Pradesh by M/s Andhra Pradesh Maritime Board' with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects.

- i. The Environmental and CRZ Clearance to the project is primarily under provisions of EIA Notification, 2006 and CRZ Notification, 2011. It does not tantamount to approvals/consent/permissions etc required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes as applicable to the project.
- ii. The project proponent shall abide by all the commitments and recommendations made in the Form-II, EIA and EMP report, submissions made during Public Hearing and also that have been made during their presentation to EAC.

- iii. Construction activity shall be carried out strictly according to the provisions of the CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- iv. All the recommendations and conditions specified by the Andhra Pradesh State Coastal Zone Management Authority (APCZMA) who has recommended the project vide letter no. 445/CRZ/INFRA/2022 dated 11.01.2023 and subsequently amendment vide letter dated 10.03.2023 shall be complied with.
- v. Since stage-1 forest clearance is not obtained for the diversion of 0.97 Ha of forest land, the road cum conveyor corridor shall be taken up along the alternate alignment as proposed in the EIA/EMP report.
- vi. The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained. Creek water monitoring program shall be implemented during the construction phase.
- vii. The proponent should carry out Fugitive Dust Modelling to analyze the fugitive coal dust dispersion extent near the storage/ loading and unloading points. FDM model can be used from USEPA.
- viii. During the operational phase, the proponent should carry out sampling of Particulate Matter near the coal storage/ loading and unloading area at a frequency of 3 days per week
- ix. As committed by the PP Storage of the Coal, iron, limestone and other hazardous materials shall be under covered shed accommodated with a Stacker reclaimed inside provided with DFS (Atomized Automatic Sprinkling System) including peripheral drainage system, internal roads, fire fighting system etc.
- x. Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- xi. The project proponent shall comply with the air pollution mitigation measures as submitted.
- xii. No underwater blasting is permitted. The dredge spoil from capital dredging shall be used for reclamation purpose whereas the dredge spoil from maintenance dredging will be disposed-off into the identified offshore location at depth greater than -20m from msl. With the enhanced quantities, the impact of dumping on the coastal environment should be studied and necessary measures shall be taken on priority basis if any adverse impact is observed.

- xiii. Shoreline should not be disturbed due to dumping. Periodical study on shore line changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring report.
- xiv. While carrying out dredging, an independent monitoring shall be carried out by Government Agency/Institute to check the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.
- xv. The fresh water requirement of 100 KLD during construction phase, which will be sourced from Gotta Barrage. The fresh water requirement for Phase-I development of the Port is assessed as 0.5 MLD. Fresh water will be sourced from, Gotta barrage, which is about 50 km from Bhavanapadu. Pipeline from the reservoir shall be provided for supply of water.
- xvi. A continuous monitoring programme covering all the seasons on various aspects of the coastal environs need to be undertaken by a competent national organization / university available in the State or by entrusting to the National Institutes/reowned Universities/accredited Consultant with rich experiences in marine science aspects. The monitoring should cover various physico-chemical parameters coupled with biological indices such as microbes, plankton, benthos, inter-tidal fauna and fishes etc. on a periodic basis during construction and operation phase of the project. Any deviations in the parameters shall be given adequate care with suitable measures to conserve the marine environment and its resources.
- xvii. Continuous online monitoring of for air and water covering the total area shall be carried out and the compliance report of the same shall be submitted along with the 6 monthly compliance reports to the regional office of MoEF&CC.
- xviii. Effective and efficient pollution control measures like covered conveyors/stacks (coal, iron ore and other bulk cargo) with fogging/back filters and water sprinkling commencing from ship unloading to stacking to evacuation shall be undertaken. Coal and iron ore stack yards shall be bounded by thick two tier green belt with proper drains and wind barriers wherever necessary.
- xix. Sediment concentration should be monitored fortnightly at source and disposal location of dredging while dredging.
- xx. The quantum of maintenance dredging estimated by IITM, Chennai as 4.7 Million Cum based on model studies and need for monitoring after construction was suggested to asses the exact quality. Considering the sensitivity of the coast to sea erosion, beach nourishment of 2 million cum on north of port to be undertaken for protection of coast from erosion.
- xxi. Marine ecology shall be monitored regularly also in terms of sea weeds, sea grasses, mudflats, sand dunes, fisheries, echinoderms, shrimps, turtles, corals, coastal vegetation, mangroves and other marine biodiversity components as part of the

management plan by entrusting the same to the National Institutes, renowned Universities or not-for profit organizations with rich experiences in marine science aspects.

- xxii. Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.
- xxiii. All the recommendations mentioned in the risk assessment report, disaster management plan and safety guidelines shall be implemented.
- xxiv. Necessary arrangement for general safety and occupational health of people should be done in letter and spirit.
- xxv. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to the RO, MoEF&CC along with half yearly compliance report.
- xxvi. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory Aforestation etc, either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also be implemented and become part of EMP.

Agenda No. 3.11

Rail Connectivity to Vizhinjam International Seaport from Balaramapuram Station at Vizhinjam International Container Transshipment Terminal at Thiruvananthapuram, Kerala – Amendment in Environmental and CRZ Clearance.

Proposal No. IA/KL/INFRA1/420053/2023 and File No. 11-122/2010-IA.III.

“The EAC noted that the Project Proponent/consultant have given undertaking that the data and information given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

3.11.1. The project proponent along with the EIA Consultant M/s. L&T Infrastructure

Engineering Ltd., Hyderabad made a presentation through Video Conferencing and provided the following information:-

3.11.2. The proposed project is for amendment in the Environmental and CRZ clearance for 'Underground tunnel' in project of Vizhinjam International Deepwater Multipurpose Seaport at Vizhinjam in Thiruvananthapuram District, Kerala by M/s Vizhinjam International Seaport Ltd.

3.11.3. Environmental and CRZ Clearance for phase 1 of the development of Vizhinjam International Deepwater Multipurpose Seaport at Vizhinjam in Thiruvananthapuram District, Kerala by m/s Vizhinjam International Seaport Ltd was granted vide letter no.11-122/2011-IA.III dated 03rd January, 2014. The validity of clearance(s) was extended by MoEF and CC, vide letter of even no dated 29.12.2020 which is valid up to 02.01.2024.

3.11.4. The proposed project falls under 7(e)-Ports, Harbours, Category-A, as per EIA notification 2006. Total investment/cost of the project is Rs 1,06,012.3 Lakhs.

3.11.5. The Environmental/CRZ Clearance dated 03rd January, 2014 was obtained for the development included rail connectivity for the port through an elevated structure. However, the rail connectivity is now planned to be provided through an underground tunnel of 9.43km out of which 0.8kms section falls in CRZ area. The rail connectivity shall be parallel to the harbour road on elevated structure at +4/5.00m level without affecting the entry to the existing harbour. Proposed development is having the length of 10.70km out of which 9.43 kms will be underground and the remaining length of ~1.20 kms land above the tunnel will continue to be used in its current form. Underground tunnel passing through villages of Balaramapuram, Pallichal, Athiyannur and Vizhinjam in Neyyattinkara Tehsil, of Thiruvananthapuram District, in Kerala. This being a deviation to the project development considered in the current Environmental/CRZ Clearance, VISL intends to obtain an amendment to the existing Environmental/CRZ Clearance.

3.11.6. Current land use along the corridor above the proposed tunnel has mostly buildings upto G+1 or maximum G+2 heights only as well as coconut trees and homestead gardens.

3.11.7. Hydro geological Study and Geo-Hydrological Study and Vibration/Ground Movement and its mitigation measures was carried out.

3.11.8. CRZ details: The total rail connectivity length of ~10.70 kms, out of which ~0.8 kms at the Vizhinjam end falls under the purview of the CRZ Notification. The railway line in CRZ area passes through CRZ IB (~192 m length) and CRZ II (~608 m) categories. CRZ Mapping, Layout on CRZ Map in 1:4000 scale has been carried out by National Centre for Earth Science Studies, Ministry of Earth Sciences, Government of India, Thiruvananthapuram.

3.11.9. The proposal has been appraised by Kerala Coastal Zone Management Authority (KCZMA) in the 123rd meeting of KCZMA held on 29.06.2022 and recommended to the Ministry vide letter no. 1540/A2/2022/KCZMA dated 01.08.2022.

3.11.10. Reason for Amendment: Vizhinjam being densely populated coastal town and the

area already attaining urban status, the rail alignment proposed in the current EC has land constraints and requirement of more Resettlement and Rehabilitation (R&R). Also, four (04) religious structures are seen as impacted along the alignment. Hence instead of running across the settlements and to minimize the disturbance to existing settlements/structures, this current proposal of rail connectivity through an underground tunnel is planned. The tunnel alignment is mostly beneath the Balaramapuram to Vizhinjam road. There are several structures along the road under which the tunnel will pass through; as land will not need to be acquired above the tunnel portion, these structures will not be impacted due to land acquisition. Also, project will have benefits in the form of temporary employment for at least few locals during the construction stage (envisaged to be for a period of ~42 months).

3.11.11. Environmental Impact Assessment (EIA) Report has been prepared by the EIA Consultant M/s. L&T Infrastructure Engineering Ltd., Hyderabad.

3.11.12. Risk Assessment Due to flood in the proposed railway tunnel alignment from Vizhinjam Port To Balaramapuram was prepared by the Department of Civil Engineering College of Engineering Trivandrum Thiruvananthapuram.

3.11.13. Observations of EAC

- i. *It has been observed that the vibration studies, as suggested earlier by the EAC, for the stretch of the railway line which is passing underground through the habitation area has not been conducted. Since the stretch of the alignment has an overburden of only 10 m at several places, the EAC suggested the PP to first conduct studies on subsidence related risks from an institute of repute and submit the report to the EAC for taking further decision in the matter.*

The EAC, taking into account the submission made by the project proponent has a detailed deliberation in its 322rd meeting during 21st-22nd March, 2023 and **deferred** the proposal for grant of amendment in environmental clearance. Since the stretch of the alignment has an overburden of only 10 m at several places, the EAC suggested the PP to first conduct the subsidence risk related studies from an institute of repute and submit the report to the EAC for taking further decision in the matter.

Agenda No. 3.12

Development of Captive Jetty, Desalination Plant with Intake and Outfall and related Infrastructures (Backup Storage, Utilities and Amenities) for Integrated Unit of Lakhpat Cement Works at Village Kapurasi, Tehsil Lakhpat, District Kutch, Gujarat by M/s Adani Cementation Limited – Terms of Reference.

Proposal No. IA/GJ/INFRA1/418608/2023 and File No. 10/10/2023-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3.12.1. The project proponent along with EIA Consultant M/s Indomer Coastal Hydraulics (P) Ltd., made a presentation through Video Conferencing and provided the following information:-

3.12.2. Captive Jetty, Desalination plant with intake and outfall and related Infrastructures (backup storage, utilities and amenities) for integrated unit of Lakhpat Cement Works at Village Kapurasi, Tehsil Lakhpat, District Kutch (Gujarat) by M/s Adani Cementation Limited.

3.12.3. The proposed project falls under 7 (e), Category - A, Ports & harbours as per EIA notification 2006. Estimated costs of the project aggregates to around Rs. 450 Crores.

3.12.4. Adani Cementation Limited (ACL) proposes to setup an integrated cement project as Lakhpat Cement Works which includes Limestone Mine in 251.9 ha area, Cement Plant of rated production capacity of 10 MMTPA Clinker as well as 3 MMTPA OPC/ PPC/ PSC/ COMPOSITE CEMENT in three phases, and a berthing jetty of 15 MMTPA bearing capacity in phase wise manner in Taluka Lakhpat, District Kutch (Gujarat).

3.12.5. ACL proposes to part grind clinker to produce bulk OPC at Lakhpat and transfer the same to its proposed Blending Unit (BU) in Mumbai, whereas the balance clinker is proposed to be transferred to the proposed Grinding Units (GU) at Mundra, Udupi and Dahej in Phase I. ACL proposes to export any excess clinker which is left after fulfilling the requirements of its proposed GU's and BU's.

3.12.6. Activity wise location of the proposed Lakhpat Cement Works is given below:

Mudhvay Limestone Mine	Cement Plant	Conveyor Corridor	Berthing Jetty
Village: Mudhvay, Tehsil Lakhpat, District Kutch (Gujarat)	Village: Koriyani, Tehsil Lakhpat, District Kutch (Gujarat)	Village: Maldo, Koriyani and Kapurasi, Tehsil Lakhpat, District Kutch (Gujarat)	In Kori Creek with anchorage in Gulf of Kutch and Backup Storage Area near village Kapurasi of Tehsil Lakhpat, District Kutch (Gujarat)

3.12.7. Land use land cover details are as follows

Forest Land (ha.)	2.66
Private Land (ha.)	142.08
Government Land (ha.)	307.81
Revenue Land (ha.)	0

Other Land (ha.)	1.72
Total Land (ha.)	454.27

3.12.8. Terrain and topographical features: Plain barren land with 0 m (near berthing jetty) and 20 m (Cement Plant) above MSL.

3.12.9. Details of water bodies, impact on drainage: Nearest water bodies: Kori creek (~5 km W), Kapurasi Nala (Seasonal River). Contaminated drainage from waterfront areas, if allowed to flow unimpeded into the project site it may lead to contamination and water quality degradation. To the extent possible, the direct drainage from port to the sea shall be prevented. Area should be paved and sloped to direct the water towards the catch basins (collection Systems) / treatment plant. Proposed project will have adequate facilities like catch basin/treatment plant to deal with runoff from port areas. Drainage should not be disposed off to wetland area, this will cause impact to benthic community.

3.12.10. Water requirements: Total water requirement of the entire project will be 9 MLD. This requirement will be met through Kori creek by having 9 MLD desalination plant. The water requirement will be met from proposed desalination plant, hence no impact on competitive user. Brine reject of 21 MLD having salinity of 57 ppt will be disposed into Kori creek. Sewage treatment plant will be provided to treat the wastewater generated from the Integrated project. Treated wastewater will used for gardening.

3.12.11. Diversion of forest land: about 2.6564 Ha forest land involved. Stage - I forest clearance has been obtained vide File No. 6-GJB026/2019-BHO/720 dt. 28.06.2019.

3.12.12. Proposed cement plant, mining area and berthing jetty falls away from the boundary of notified Eco Sensitive Zone of Narayan Sarovar wildlife sanctuary. Shortest distance from the boundary of ESZ and Narayan Sarovar to proposed berthing jetty is 2.8 km and 5.8 km respectively.

3.12.13. CRZ details: According to the CRZ map based on the classification of CRZ Notification, 2011, the proposed development falls under CRZ area, the details are as following.

CRZ I A	Ecologically Sensitive Areas
CRZ I B	Area between Low Tide Line (LTL) and High Tide Line (HTL)
CRZ III	100 mts or width of the creek whichever is less on the landward side.
CRZ IV B	Water area of the tidal influenced water body from the mouth of the water body at the sea upto the influence of tide which is measured as five parts per thousand during the driest season of the year

3.12.14. Shoreline Change: Status of shoreline due to erosion/accretion has been evaluated

using IOM, Anna University – MoEFCC prepared shoreline map for Gujarat. The study shows that the eastern stretch of Kori creek shoreline is divided with low accretion, medium erosion, low erosion, stable and high erosion. Proposed Jetty area is classified under low erosion zone followed by stable coast in the south and low accretion zone in the north. Medium to high erosion is seen at coast close to Lakhpur. Western side of Kori creek is characterized with medium to high eroding stretch.

3.12.15. Dredge Disposal: Appropriate location having more than 30 m water depth based on mathematical modelling study will be chosen for dredge disposal.

Plant/ Activity	Commodity	Unit	Capacity
Captive Jetty	Clinker	MTPA	5
	Cement	MTPA	10
	Limestone	MTPA	1
	Coal/Petcoke/FlyAsh, Slag/Gypsum etc.	MTPA	3
	Total	MTPA	19
Desalination Plant	Water	MLD	9
Conveyor corridor	Total length of 10.2 km		

3.12.16. Employment potential: Significant employment opportunities will be generated from the proposed project. During construction phase and operational phase 630 and 600 nos. of employment will be generated. The impact of the project on the economic aspects can be clearly observed. The proposed project activities will provide employment to persons of different skills and trades. The local population will be given preference to employment according to the skill set required for the job. The employment potential will ameliorate economic conditions of these families directly and provide employment to many other families indirectly.

3.12.17. The development of this proposed facility will generate and support economic development as it will create economic benefits both in a direct and indirect way. By giving preference to local employment, the project will reduce influx of immigrants from other parts of the country and there by not creating stress on the existing amenities and infrastructure. The indirect employment opportunities as a result of operation of project will aid in improving the economic status of the area.

3.12.18. During construction phase, it is likely to provide employment during construction phase estimated to be about 630 nos. and during operational phase 600 nos. including both skilled and unskilled labourers. The local people will be employed to the extent possible. The proposed project is likely to have positive impact on socio-economic condition of the project region.

3.12.19. Benefits of the project: The beneficial impact of proposed project on the civic amenities will be substantial after the commencement of project activities. The basic requirement of the community needs will be strengthened by building roads/strengthening of existing roads in the area. Adani Cementation Limited (ACL) will make efforts to improve the facilities in the area, which will help in uplifting the living standards of local communities.

3.12.20. Employment Potential: During construction phase and operational phase 630 and 600 nos. of employment will be generated.

3.12.21. Details of Court cases: No court cases are involved

3.12.22. During the EAC, PP submitted that to the Committee that

- i. *ToR for the project was granted by the Ministry vide letter no F. No. 10-63/2017-IA-III dated 22nd March, 2018 for Captive Jetty, Desalination plant with intake and outfall and related Infrastructures (backup storage, utilities and amenities) for integrated unit of Lakhpat Cement Works at Village Kapurasi, Tehsil Lakhpat, District Kutch (Gujarat) by M/s Adani Cementation Limited. The baseline data was carried out during the Post Monsoon - September to October 2018 Pre Monsoon - March to April 2019 and the public hearing was conducted on 28th May 2019 for integrated project (Plant, Mine & Jetty) under the chairmanship of District collector and magistrate.*
- ii. *The EAC noted that the EIA/EMP for the project was already completed, however, due to delay in grant of GCZMA recommendations the PP could not able to submit the EIA/EMP report in time.*
- iii. *Since the validity of ToR has been expired, the PP has made the application afresh for grant of ToR with a request to exempt the conduct of Public Hearing.*
- iv. *EAC observed that since ToR has been expired due to delay in grant of GCZMA recommendations and since there is no change in the project configuration, exemption for conduct of public hearing can be granted for the project.*

3.12.23. The EAC, taking into account the submission made by the project proponent has a detailed deliberation in its 322nd meeting during 21st-22nd March, 2023 and **recommended** the proposal for grant of Terms of References with exemption of conduct of Public Hearing with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. Importance and benefits of the project.
- ii. Submit a copy of layout superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scale.
- iii. Recommendation of the Gujarat CZMA shall be obtained and submitted.
- iv. Submit superimposing of latest CZMP as per CRZ (2011) on the CRZ map.
- v. Submit a complete set of documents required as per para 4.2 (i) of CRZ Notification, 2011.

- vi. Hydrodynamics study on impact of dredging on flow characteristics shall be carried out.
- vii. Studies on impact of approach bund and marine structure on morphology.
- viii. The proponent, shall carry out the impact of proposed project on the migratory avifauna, other biodiversity and coastal ecology through a nationally reputed institution such as GUIDE.
- ix. Study the impact of dredging and dumping on marine ecology and draw up a management plan through the NIO or any other institute specializing in marine ecology.
- x. The conservation action plan and mitigation measures to avoiding the impacts on Narayan Sarovar wildlife sanctuary shall be carried out by the GUIDE or ZSI or any other national reputed institutions.
- xi. Erosion and accretion studies shall be carried out.
- xii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).
- xiii. A certificate from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
- xiv. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project.
- xv. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- xvi. An assessment of the cumulative impact of all development and increased inhabitation being carried out or proposed to be carried out by the project or other agencies in the core area, shall be made for traffic densities and parking capabilities in a 05 kms radius from the site. A detailed traffic management and a traffic decongestion plan drawn up through an organization of repute and specializing in Transport Planning shall be submitted with the EIA.
- xvii. Disaster Management Plan for the project shall be prepared and submitted.
- xviii. Details and status of court case pending against the project, if any.
- xix. A tabular chart with index for point-wise compliance of above ToRs. The specific ToRs as recommended above are in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006.
- xx. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent, based on the commitments made during the public hearing, shall include all the activities required to be taken to fulfill these commitments in the Environment Management Plan along with cost estimates of these activities, in addition to the activities proposed as per recommendations of

EIA Studies and the same shall be submitted to the ministry as part of the EIA Report. The EMP shall be implemented at the project cost or any other funding source available with the project proponent.

- xxi. In pursuance of Ministry's OM No stated above the project proponent shall add one annexure in the EIA Report indicating all the commitments made by the PP to the public during public hearing and submit it to the Ministry and the EAC.

Agenda No. 3.13

Expansion of Captive Port from 15 MTPA to 5 MTPA with Lighterage Operation and Desalination Plant of 40 MLD & Associated facilities at Kottattai village, Bhuvangiri Taluk, Cuddalore District, Tamil Nadu by M/s IL&FS Tamil Nadu Power Company Ltd. (ITPCL) – Further consideration for Terms of Reference

Proposal No. IA/TN/INFRA1/417541/2023 and File No. 10/5/2023-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3.13.1. The project proponent along with the EIA consultant M/s Indomer Coastal Hydraulics and L&T infrastructure Ltd provided the following information.

3.13.2. The above mentioned proposal was placed before the EAC in its 321st meeting on 28th February-1st March, 2023 wherein the EAC deferred the proposal for want of additional information.

3.13.3. At this instance, the aforementioned proposal was further placed before the EAC in its 322nd meeting during 21st – 22nd March, 2023. The project proponent/consultant submitted the following:

S.No	Information sought during 321st meeting on 28th February-1st March, 2023	Reply given by PP during 322nd meeting held on 21 st – 22 nd March, 2023
	To consider above proposal further PP shall submit the PP/Consultant shall provide the copy of EC obtained for the Port facilities for further consideration of the proposal.	<ul style="list-style-type: none"> • Environmental & CRZ Clearance from MoEF&CC vide F.No.J-13012/34/2008-IA-II (T) dated 31.05.2010 for the capacity of 3600 MW. • Amendment to EC from MoEF & CC vide J-13012/34/2008-IA.II (T) dated 4th February, 2014 • Amendment to EC for transportation of coal by rail route vide F.No.13012/34/2008-IA.II (T) dated 27th

		<p>March, 2015</p> <ul style="list-style-type: none"> EC Validity Extension F.No.13012/34/2008-IA.II (T) dated 26.02.2018
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3.12.24. The EAC, taking into account the submission made by the project proponent has a detailed deliberation in its 322nd meeting during 21st-22nd March, 2023 and **recommended** the proposal for grant of Terms of References with the specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. Importance and benefits of the project.
- ii. Submit a copy of layout superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scale.
- iii. Recommendation of the Tamil Nadu CZMA shall be obtained and submitted.
- iv. Submit superimposing of latest CZMP as per CRZ (2011) on the CRZ map.
- v. Submit a complete set of documents required as per para 4.2 (i) of CRZ Notification, 2011.
- vi. Hydrodynamics study on impact of dredging on flow characteristics shall be carried out.
- vii. Marine biodiversity conservation plan be prepared by an institute of national repute.
- viii. Study the impact of dredging and dumping on marine ecology and draw up a management plan through the NIO or any other institute specializing in marine ecology.
- ix. Erosion and accretion studies shall be carried out.
- x. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).
- xi. A certificate from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
- xii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project.
- xiii. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.

- xiv. An assessment of the cumulative impact of all development and increased inhabitation being carried out or proposed to be carried out by the project or other agencies in the core area, shall be made for traffic densities and parking capabilities in a 05 kms radius from the site. A detailed traffic management and a traffic decongestion plan drawn up through an organization of repute and specializing in Transport Planning shall be submitted with the EIA.
- xv. Disaster Management Plan for the project shall be prepared and submitted.
- xvi. Details and status of court case pending against the project, if any.
- xvii. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- xviii. A tabular chart with index for point-wise compliance of above ToRs. The specific ToRs as recommended above are in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006.
- xix. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent, based on the commitments made during the public hearing, shall include all the activities required to be taken to fulfill these commitments in the Environment Management Plan along with cost estimates of these activities, in addition to the activities proposed as per recommendations of EIA Studies and the same shall be submitted to the ministry as part of the EIA Report. The EMP shall be implemented at the project cost or any other funding source available with the project proponent.
- xx. In pursuance of Ministry's OM No stated above the project proponent shall add one annexure in the EIA Report indicating all the commitments made by the PP to the public during public hearing and submit it to the Ministry and the EAC.

Agenda No. 3.14

Expansion of Greenfield Non-Major Port from total cargo capacity of 24.91 MTPA to 34.04 MTPA (additional iron ore cargo of 9.13 MTPA) at Ramayapatnam in Nellore District, Andhra Pradesh by M/s Andhra Pradesh Maritime Board – Environmental and CRZ Clearance under 7(ii)

Proposal No. IA/AP/INFRA1/422223/2023 and File No. 10-8/2020-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in EIA/EMP report. If any part of data/information submitted is found to be false/misleading at any stage, the project will be rejected and ToR/Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

3.14.1. The abovementioned proposal was placed before the EAC in its 322nd meeting on 21st-22nd March, 2023. The project proponent along with the EIA Consultant M/s. Indomer

Coastal Hydraulics (P) Ltd made a presentation and presented at the Ministry in Physical mode and provided the following information:

3.14.2. The proposed project falls under 7 (e) Ports, Harbour, Cat –A (≥ 5 million TPA of cargo handling capacity, excluding fishing harbours) as per EIA notification 2006.

3.14.3. Ministry granted the Environmental and CRZ clearance vide letter No. 10-8/2020-IA.III dated 17/02/2022 for handling 24.91 MTPA cargo in phase-I in at Ramayapatnam in Nellore District, Andhra Pradesh and APCZMA was recommended the proposal and forwarded to MoEF&CC vide letter no. 327/CRZ/Port/2021 dt.: 18.09.2021.

3.14.4. Environmental and CRZ clearance was obtained by the MoEF&CC vide EC 10-8/2020-IA.III dated 17/02/2022 for handling 24.91 MTPA cargo during Phase I. Subsequently due to the development of demand from customers, Ramayapatnam Port has proposed to handle additional iron ore cargo of 9.13 MTPA in Phase I exceeding the total cargo capacity of 24.91 to 34.04 MTPA in Phase I.

3.14.5. The proponent has requested for the following amendments in the EC letter No. F.No.10-8/2020-IA.III dated: 17.02.2022.

S.no	Existing	Proposed	Remarks
1	Ramayapatnam Port has proposed to handle iron ore cargo of 9.13 MTPA in Phase I exceeding the total cargo capacity of 24.91.	Proposed to handle additional iron ore cargo of 9.13 MTPA in Phase I exceeding the total cargo capacity of 24.91 to 34.04 MTPA in Phase I. However, 9.13 MTPA of coal handling capacity will be reduced in the master plan to match the approved port capacity of 138.54 MTPA in the master plan, thus there shall not be any change in overall port capacity of 138.54 MTPA.	Due to the development of demand from customers, Ramayapatnam Port has proposed to handle additional iron ore cargo of 9.13 MTPA in Phase I exceeding the total cargo capacity of 24.91 to 34.04 MTPA in Phase I. However, 9.13 MTPA of coal handling capacity will be reduced in the master plan to match the approved port capacity of 138.54 MTPA in the master plan, thus there shall not be any change in overall port capacity of 138.54 MTPA.

3.14.6. : Revised Traffic Projections for Amendment of Environment Clearance of MoEF – Ramayapatnam Port.

S. No.	Facility	Phase I as per Approved EC	Phase I Proposed for Expansion	Remarks
(A) Exports				
1	Iron Ore / Barytes	0.59	0.59	No change
2	Agricultural products	0.93	0.93	
3	Cement / Cement clinker	0.06	0.06	
4	Granite blocks	4.30	4.30	
5	Other commodities	0.43	0.43	
6	VCIC / SEZ	-	-	
7	Containers (MT)	2.98	2.98	
Total exports (A)		9.29	9.29	
(B) Imports				
1	Iron Ore	0.27	9.40	Increase in iron ore handling capacity by 9.13 MTPA
2	Fertilizers	2.74	2.74	
3	Edible Oil	1.39	1.39	
4	Coal	10.18	10.18	
5	Other commodities	0.43	0.43	
6	Containers (MT)	0.61	0.61	
8	Containers Divertible	-	-	
9	VCIC / SEZ (Containers)	-	-	
Total imports (B)		15.62	24.75	
Total (A + B)		24.91	34.04	Expansion from 24.91 to 34.04 MTPA

3.14.7. Reason for the Amendment: Due to the development of demand from customers,

Ramayapatnam Port has proposed to handle additional iron ore cargo of 9.13 MTPA in Phase I exceeding the total cargo capacity of 24.91 to 34.04 MTPA in Phase I. However, 9.13 MTPA of coal handling capacity will be reduced in the master plan to match the approved port capacity of 138.54 MTPA in the master plan, thus there shall not be any change in overall port capacity of 138.54 MTPA.

3.14.8. Revised Report for Expansion also prepared and Various studies has been conducted in Environmental Impact Assessment & Environmental Management Plan Report for Development of Greenfield Non-Major Port at Ramayapatnam in Prakasam District of Andhra Pradesh and Andhra Pradesh State Coastal Zone Management Authority (APCZMA) vide letter No 327/CRZ/Port/2021 dated 18th September 2021 recommended the project for total capacity of 138.54 MTPA for Phase-I and Phase-II.

3.14.9. Subsequently due to the development of demand from customers, Ramayapatnam Port has proposed to handle additional iron ore cargo of 9.13 MTPA in Phase I exceeding the total cargo capacity of 24.91 to 34.04 MTPA in Phase I. Environmental Impact Assessment & Environmental Management Plan has been prepared for handling additional cargo in Phase I of the proposed Ramayapatnam port.

3.14.10. AP maritime board also submitted the undertaking stating that M/s RITES Limited have revised the traffic assessment and optimized the port layout to handle the additional cargo without changes in the existing approved layout.

3.14.11. During deliberation, EAC observed and noted the following:

- i. Due to the development of demand from customers, Ramayapatnam Port has proposed to handle additional iron ore cargo of 9.13 MTPA in Phase I exceeding the total cargo capacity of 24.91 to 34.04 MTPA in Phase I. However, 9.13 MTPA of coal handling capacity will be reduced in the master plan to match the approved port capacity of 138.54 MTPA in the master plan, thus there shall not be any change in overall port capacity of 138.54 MTPA.*

3.14.12. The EAC, taking into account the submission made by the project proponent has a detailed deliberation in its 322nd meeting during 21st-22nd March, 2023 and **recommended** the proposal for grant of EC under 7(ii) of the EIA notification, 2006 for Revised Traffic Projections mentioned at 3.14.7 with the specific conditions, as mentioned below

- i. Storage of the Coal, Iron ore shall be under covered shed accommodated with a Stacker reclaimed inside provided with DFS (Atomized Automatic Sprinkling System) including peripheral drainage system, internal roads, fire fighting system etc.
- ii. All other terms and conditions mentioned in the Environmental and CRZ clearance vide letter No. 10-8/2020-IA.III dated 17/02/2022 shall remain unchanged.

Agenda No. 3.15

Development of Kuduthini Industrial Area (Phase-1) in area of 261 Ha at Kuduthini village, Bellary Taluk, Bellary District, Karnataka by M/s Karnataka Industrial Areas Development Board – Environmental Clearance

Proposal No. IA/KA/INFRA1/420997/2023 and File No. 10/37/2021-IA.III

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3.15.1. The project proponent along with the EIA consultant M/s Hubert Enviro Care Systems provided the following information.

3.15.2. The proposal is for Development of Kuduthini Industrial Area (Phase-1) in area of 261 ha (645.18 acres) at Kuduthini village, Bellary Taluk, Bellary District, Karnataka by M/s Karnataka Industrial Areas Development Board.

3.15.3. The proposed project falls under 7(C)-Industrial Park, Category A and appraisal in MoEF&CC (since Karnataka- Andhra Pradesh State Boundary is within 10 Km radius). Total investment/cost of the project is Rs 23300 Lacks.

3.15.4. ToR details: The Terms of Reference (ToR) was considered in 291st EAC meeting during 10th March, 2022, in the Ministry of Environment, Forest and Climate Change, New Delhi. TOR was granted on 12th April, 2022 under violation category.

3.15.5. The EAC based on the information submitted and clarifications provided by the project proponent and detailed discussions held on all the issues during 322nd meeting during 21st-22nd March, 2023, the EAC advised that the instant proposal is a violation proposal before consider the violation proposal the committee opined that one EAC member who dealt with the violation cases may be coopted to appraise the instant proposal and the same proposal may be relist or reconsider in the upcoming EAC meeting.

Agenda No. 3.16

Development of Gowribidanur Industrial Area (Phase-III) at Gowdasandra & Doddakurugodu villages, Kasaba Hobli, Gowribidanuru Taluk, Chikkaballapura District, Karnataka by M/s Karnataka Industrial Area Development Board – Terms of Reference

Proposal No. IA/KA/INFRA1/420258/2023 and File No. 10/13/2023-IA.III

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3.16.1. The project proponent along with the EIA consult M/s Aditya Environmental Services Pvt. Ltd made a presentation through Video Conferencing and provided the following information:-

3.16.2. KIADB is proposing to develop 3rd Phase Industrial Area over an area of 333.89 ha (825.07 acres) located at Gowdasandra & Doddakurugodu Villages, Kasaba Hobli, Gowribidanuru Taluk Chikkaballapura District, Karnataka. The proposed site is bifurcated by the broad gauge Indian Railway Line.

3.16.3. The geo coordination location of the project site is North-East Corner: 13°41'45.55"N 77°31'10.40"E to North-West Corner: 13°41'38.99"N 77°30'5.78"E and South-East Corner: 13°40'48.94"N 77°31'37.99"E to South-West Corner: 13°40'45.69"N 77°30'49.29"E.

3.16.4. The proposed project falls under 7(C)-Industrial Park, Category A and appraisal in MoEF&CC (since Karnataka- Andhra Pradesh State Boundary is within 0.01 Km radius). Total investment/cost of the project is Rs 49,200 Lakhs.

3.16.5. Landuse/Landcover details of the project site:

S.No	Description of Activity/ Facility/Plant /Others	Land requirement in Ha
1	Industrial Plots	214.65
2	Commercial	5.03
3	Amenity	11.44
4	Utility	5.42
5	Park/Buffer	46.63
6	Parking	16.75
7	Road	33.97
Total		333.89

3.16.6. Terrain and topographical features: The topography of the land is plain terrain without undulation. However, much of the land is leveled with an elevation of ~ 680m from the MSL.

3.16.7. Details of water bodies impact on drainage: Penneru River is passing approximately 1.13 km from the project site. Apart from this, approx. 21 and 11 number of small lakes are present in the 15 km radius to the project site passing Karnataka and Andhra Pradesh respectively. The impact on the drainage shall be addressed in chapter 04 of the EIA report.

3.16.8. Water requirements: During Construction Phase 5 kld water requirement for domestic use for labourers and 100 kld for construction purposes. Water for domestic requirement of labourers will be sourced from available tanker water supply. Construction

water will also be sourced from CETP treated water from Phase I and II. Operation Phase water requirement will be 8.5 MLD, water will be sourced from Visveswaraya Jala Nigam Ltd, Yethinahole project range, Tumkur and treated water will be sourced from Proposed CSTP of 550 kld and CETP of 5 MLD capacity. Permission from Visveswaraya Jala Nigam Ltd, Yethinahole project range, Tumkur is obtained.

3.16.9. Tree cutting: 1060 nos. of trees shall be cleared in an approximate area of 0.63 ha. The clearance shall be on the carriageway only. More details shall be appended in the EIA report.

3.16.10. No forest land involved in the proposed project area and no wildlife sanctuaries are located within 10 km radius of the project.

3.16.11. Land acquisition and R&R issues involved: Total land is Land Requirement for the proposed project is 333.89 ha. Land acquisition is complete as per G.O. No.CI52 SPQ(E) 2019 dated 19th August, 2022.

3.16.12. Employment potential: The proposed project will generate 200 nos employment during construction phase and Permanent employment: 05.

3.16.13. Benefits of the project: Social benefits Creation of new job (training and social upliftment) financial benefits of project or activity Reduction in import cost as specific products will be meeting India's need to certain extent and export of the finished products would enhance the economy of the country.

3.16.14. Details of Court cases: No court case is pending against the proposed project.

3.16.15. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 322nd meeting during 21st-22nd March, 2023 and **recommended** the proposal for grant of Term of reference with specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects.

- i. The planning of Industrial Estate should be based on the criteria mentioned in this Ministry's Technical EIA Guidance Manual for Industrial Estate (2009) as well as CPCB's Zoning Atlas Guidelines for siting industries.
- ii. Detailed air quality study for each point source to be conducted along with the Micro metallurgical data.
- iii. Wherever possible, plantations around the periphery of the industrial area/SEZ/park, in the downwind direction and along the road sides shall be provided for containment of pollution and for formation of a screen between the industrial area and the outer civil area. The choice of plants should include shrubs of height 1 to 1.5 m and tree of 3 to 5 m height. The intermixing of trees and shrubs should be such that the foliage area density in vertical is almost uniform. The layout plan shall be submitted accordingly.
- iv. No ground water shall be used in any case. Proponent is required to obtain permission from competent authority to use water from river or other surface water sources.

Consent to Operate shall not be issued without obtaining permission competent authority for use of surface water.

- v. Provide detailed water balance statement a scheme to achieve ZLD by each industrial unit as well as for utilization of treated sewage.
- vi. Since, natural drainage pattern is seen in/around the proposed project site, it is important to have a detailed hydro geological study on the catchment area of the drainage system within core zone and atleast 5km perimeter of the project area.
- vii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the activities proposed by the project proponent, based on the commitment made in the public hearing shall be incorporated in the Environmental Management Plan along with the cost estimates and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory Aforestation etc, envisaged by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report, shall be detailed out along with the cost estimates and become part of EMP. Focus should also be kept for local floral and fauna biodiversity.
- viii. Adequate buffer provision and green belt be made around streams and waterbodies and accordingly showed in the layout of industrial estate
- ix. Plan for afforestation should be such that it is free from pesticides with flowering plants of native species for attracting bees and insects which in turn is beneficial to the agriculture. Farmers around the project site shall be involved in developing such an afforestation Plan.

Agenda No. 3.17

Development of Sarathi – Kurubarahalli Industrial Area (Phase-II) over an extent of 136.03 Ha at Villages Sarathi and Kurubarahalli, Taluk Harihar, District Davanagare, Karnataka by M/s Karnataka Industrial Areas Development Board – Terms of Reference

Proposal No. IA/KA/INFRA1/418016/2023 and File No. 10/11/2023-IA.III

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3.17.1. The project proponent along with the EIA consult M/s Aditya Environmental Services Pvt. Ltd made a presentation through Video Conferencing and provided the following information:-

3.17.2. Karnataka Industrial Areas Development Board (KIADB) proposes to establish an Industrial area in the name of Sarathi - Kurubarahalli Industrial Area Phase-II in an area of 136.03 Ha (336Acres-5 Guntas) at Sarathi and Kurubarahalli villages, Harihar Taluk, Davanagare District, Karnataka State by M/s Karnataka Industrial Areas Development Board.

3.17.3. Geo-coordinates of project site: 14°35'28.39"N; 75°49'49.53"E

3.17.4. The proposed project falls under 7(C)-Industrial Park, Category A as general conditions applicable to the proposed site due to Ranebennur Blackbuck Sanctuary Core Boundary ~3.98 Km (W) and appraisal in MoEF&CC.

3.17.5. Landuse/Landcover of project site:

S.No.	Landuse/Landcover	Area (ha)	%	Remarks, if any
1	Industrial Plot	214.59	63.84%	-
2	Commercial	2.74	0.82%	-
3	Utilities	10.68	3.18%	-
4	Amenities	6.36	1.89%	-
5	Parking	16.81	5.0%	-
6	Parks/ Buffer Zone	43.97	13.08%	-
7	Roads	40.97	12.19%	-
	TOTAL	336.12	100%	-

3.17.6. List to industries to be housed with the proposed project site:

(i) Engineering and Fabrication industries, (ii) Glue manufacturing industries, (iii) Paint blending industries, (iv) Soaps, detergents and cosmetics manufacturing industries, (v) Textile manufacturing industries, (vi) Reprocessing of waste plastics, (vii) Food Industry, (viii) Ceramics and refractories, (ix) Fertilizers formulation and bio fertilizers manufacturing, (x) Electrical and electronics items assembling industries, (xi) Electrical lams, lenses manufacturing.

3.17.7. Terrain and topographical features: The district Davanagere is characterized by vast stretches of undulating places interspersed by low ranges of hilly rocks. The district is comprised of middle and upper Tungabhadra valley, Chikka Hagari Valley, Davanagere and Channagiri plateaus and uplands of Jagalur and Harapanahalli. The general elevation above the mean sea level varies between 500 and 1000 meters.

3.17.8. Details of water bodies, impact on drainage: Two water bodies namely Duggavatti Halla and Karala Halla are adjacent to the site towards the North & south of project site. ZLD is proposed. So there will not be any impact on the drainage.

3.17.9. Water requirements: During construction phase 100 KLD water will be required and the requirement will be met from the treatment plants and tankers. During Operational Phase water requirement will be met from the Tungabhadra river through pipelines. No groundwater abstraction is proposed.

3.17.10. Diversion of forest land: the proposed project doesn't having the forest land and no forest diversion is involved. Ranabennur Blackbuck Sanctuary Core Boundary is 3.98 Km (W).

3.17.11. Solid waste management: Primary treatment to the effluents will be provided by the industries and discharged to CSTP. STP of 500 KLD will be provided. Treated water will be utilized for process, landscape and utilities.

3.17.12. Land acquisition and R&R issues: the proposed doesn't having R & R issue is involved.

3.17.13. Employment potential: Permanent: 2000; Contractual:250.

3.17.14. Benefits of the project: There will be an opportunity for job at different cadres and work force. This project will have positive impact on the socio economic status of the surrounding human environment and increased inflow of revenue to the Karnataka Government. Proposed Industrial Area will help in revenue generation for the State as well as to the Country.

3.17.15. Details of Court cases: No court case is pending against the proposed project.

3.16.16. The EAC, taking into account the submission made by the project proponent, had a detailed deliberation in its 322nd meeting during 21st-22nd March, 2023 and **recommended** the proposal for grant of Term of reference with specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects.

- i. The planning of Industrial Estate should be based on the criteria mentioned in this Ministry's Technical EIA Guidance Manual for Industrial Estate (2009) as well as CPCB's Zoning Atlas Guidelines for siting industries.
- ii. Detailed air quality study for each point source to be conducted along with the Micro metallurgical data.
- iii. Wherever possible, plantations around the periphery of the industrial area/SEZ/park, in the downwind direction and along the road sides shall be provided for containment of pollution and for formation of a screen between the industrial area and the outer civil area. The choice of plants should include shrubs of height 1 to 1.5 m and tree of 3 to 5 m height. The intermixing of trees and shrubs should be such that the foliage area density in vertical is almost uniform. The layout plan shall be submitted accordingly.
- iv. The study conducted on impact assessment on wildlife habitat focus on Critically Endangered species by nationally reputed institute and improvement and mitigation plan shall prepare with due consideration of the state forest department.

- v. No ground water shall be used in any case. Proponent is required to obtain permission from competent authority to use water from river or other surface water sources. Consent to Operate shall not be issued without obtaining permission competent authority for use of surface water.
- vi. Adequate buffer provision and green belt be made around streams and waterbodies and accordingly showed in the layout of industrial estate.
- vii. Provide detailed water balance statement a scheme to achieve ZLD by each industrial unit as well as for utilization of treated sewage.
- viii. Since, natural drainage pattern is seen in/around the proposed project site, it is important to have a detailed hydro geological study on the catchment area of the drainage system within core zone and atleast 5km perimeter of the project area.
- ix. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the activities proposed by the project proponent, based on the commitment made in the public hearing shall be incorporated in the Environmental Management Plan along with the cost estimates and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory Aforestation etc, envisaged by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report, shall be detailed out along with the cost estimates and become part of EMP. Focus should also be kept for local floral and fauna biodiversity.
- x. Plan for afforestation should be such that it is free from pesticides with flowering plants of native species for attracting bees and insects which in turn is beneficial to the agriculture. Farmers around the project site shall be involved in developing such an afforestation Plan.

Agenda No. 3.18

Development of Deep Green Field Captive Port at Suvali Village, Surat District, Gujarat by M/s Arcelor Mittal Nippon Steel India Limited – Further consideration for Terms of Reference Proposal No. IA/GJ/INFRA1/402971/2022 and File No. 10/42/2022-IA.III.

“The EAC noted that the Project Proponent and the consultant have given in the application and enclosures are true to the best of their knowledge and belief and no information has been suppressed in EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and ToR/Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.”

3.18.1. The above mentioned proposal was earlier considered in the 314th Meetings of Expert Appraisal Committee (EAC) held during 18th November, 2022. The proposal was

deferred for want of requisite information/documents.

3.18.2. At this instance, the aforementioned proposal was further placed before the EAC in its 322nd meeting during 21st-22nd March, 2023. The project proponent along with the EIA consultant M/s Cholamandalam MS Risk Services Limited has made a presentation through Video Conferencing and provided the following information-

S.no	Information sought during 314 th Meetings of Expert Appraisal Committee (EAC) held during 18 th November, 2022.	Reply given by PP during 322 nd meeting during 21 st -22 nd March, 2023.
1	Port notification for the proposed project area shall be submitted	<p>The proposed project area falls within the limit of Magdalla port as per Notification no. L2/RNP/G/GNR-84 dated 20.09.2022. the proposed development was approved by the Government of Gujarat and a Memorandum of Understanding (MoU) between AMNS, and the Government of Gujarat has been signed on 27th January 2022 for the development of Captive Port facility at Suvali.</p> <p>Also AMNS has received permission vide no GMB/N/PVT-1/2101/564/3256 dated 20.05.2022 from Gujarat Maritime Board to conduct technical studies such as surveys, and investigation for the proposed development.</p> <p>Gujarat Maritime Board(GMB) Magdalla Port confirmed that the proposed Suvali project comes under their limit and the AMNS will operate under the GMB, Magdalla port as per the prevailing GMB Rules and Guidelines.</p>
2	A layout map of the project boundaries superimposing CRZ boundaries, rivers and creeks, other ecologically sensitive areas (turtle	As part of the pre-feasibility study the project components of the proposed development were superimposed on the approved CZMP of Gujarat

	<p>nesting, migratory bird areas etc) may be prepared and submitted</p>	<p>(prepared by NCSCM). As per the GCZMP there is no sensitive areas such as turtle nesting, migratory bird areas in the proposed area.</p> <p>AMNS also submitted that Anna University MoEFCC authorized agency is engaged for preparing the CRZ map for the proposed development and final map with the study report will submit along with EIA report.</p>
<p>3</p>	<p>The proposed project is located to very close to the proposed Kalpasar project as well as existing Hazira port including its expansion plans area and the impacts on the creek and other ecologically sensitive areas (migratory bird areas) etc.</p>	<p>The proposed development is located approximately at a distance of 73km from the Kalpasar project.</p> <p>The existing operational ports such as Bhavnagar port, Alang Shipyard and Dahej port are situated at a distance of 20 km, 50km, 17.6km respectively from the Kalpasar project. Kalpasar project that the development of new ports on the downstream side of the Kalpasar project is envisaged.</p> <p>Baseline hydrodynamics of Hazira region was considered as it is the nearest tidal station to the proposed project site. From the baseline, it was observed that the tidal fluctuation ranges between 2m to 7.5m. Also the existing port in the Tapi estuary side is operating under the tidal fluctuations of -1.0m to 8m.</p> <p>Hazira Private Limited-Adani (HPPL), Hazari is an operational project located at a distance of 80km from Kalpasar project in south ward direction and in located around 8m from our proposed Suvali project.</p> <p>The navigational channel for the existing HPPL and ANMS proposed port are fa away and will not have any</p>

		<p>navigational issues. HPPL is operating in Gulf of Khambhat open area and our proposed port in Gulf of Khambhat entry area.</p> <p>AMNS is completely captive port for our steel plant and it will not affect the HPPL operations.</p>
4	<p>Proposed project also aims to removing the vegetation spread over an area of 48.5ha(of which Mangroves constitute 12 ha and 36.5 ha of <i>Prosopis juliflora</i>). Detailed layout needs to be submitted.</p>	<p>AMNS has revised the proposed development avoiding an area of 25ha (this includes a mangrove area of 12ha). The modified layout and summary of changes in the revised layout is submitted.</p> <p>Further, 36.5 ha of <i>Prosopis juliflora</i> present on the northern side of the proposed project area will be removed for the proposed development. This area does not fall under the Reserve Forest category. Layout indicating the vegetation (<i>Prosopis juliflora</i>) present within the proposed project development area is presented</p>
5	<p>A site visit by the sub-committee shall be conducted once the above information is submitted.</p>	<p>EAC sub-committee a site visit was conducted on 19th October, 2022. Placed at Annexure-B and the proposal was further placed before EAC in its 322nd EAC Meeting on 21st-22nd March, 2023. The report of the subcommittee has been presented to the before the Committee which is placed at Annexure-B. On the request of the PP and approval of Chairman, EAC, the report was discussed in the EAC. The Committee recommended the proposal for grant of Terms of References subject to the conditions prescribed in the report of the EAC Sub-Committee as enclosed at Annexure-B; in addition to all standard conditions applicable for such projects.</p>

3.18.3. The EAC, taking into account the submission made by the project proponent, report

presented by the EAC Sub-committee had a detailed deliberation in 322nd meeting during 21st -22nd March, 2023 and **recommended** the proposal for grant of Terms of References with specific conditions, as mentioned below, in addition to all standard conditions applicable for such projects:

- i. The proposed desalination plant backup area was planned adjacent to the creek rerouting area. The existing creek is found to be seasonal and proposed creek diversion to be examined with modelling studies.
- ii. The findings of the EIA studies for interlinked project of augmentation of existing steel plant shall be incorporated in the EIA study of Jetty project so that comprehensive assessment can be made.
- iii. To explore and submit that how many such kind of jetties are present around 10-15km of the proposed site.
- iv. The ecologically fragile area including CRZ 1A area etc. shall be demarcated and superimposed on the revised layout plan and submitted.
- v. Remove mangrove areas in the revised layout as recommended by EAC Sub-Committee (Annexure B)
- vi. Risk analysis and its management plan for handling different types of cargos shall be conducted and submitted.
- vii. Detailed hydrodynamic modeling on current and wave simulations shall be conducted during the detailed engineering and environmental impact assessment study.
- viii. Detailed modelling studies to understand whether the selected site can withstand severe cyclones and develop design in accordance to due safety measures.
- ix. A cumulative environmental impact assessment and risk assessment of all the jetties to be carried out in the EIA/EMP report.
- x. Erosion and accretion study at the mouth of the creek which is adjacent to the proposed site be carried out and submitted.
- xi. Importance and benefits of the project.
- xii. Submit superimposing of latest CZMP as per CRZ Notification (2011) on the CRZ map. And also submit a copy of layout superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scales.
- xiii. Recommendation of the Gujarat CZMA shall be obtained and submitted.
- xiv. Submit a complete set of documents required as per para 4.2 (i) of CRZ Notification, 2011.
- xv. The modified layout and summary of changes after excluding 25ha (includes a mangrove area of 12ha) shall be superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scales and submit.

- xvi. Hydrodynamics study on impact of dredging on flow characteristics shall be carried out.
- xvii. A detailed study on the impact of proposed activity on marine ecology and marine biodiversity with specific focus on the mangroves and mud flats in the proximity of the site should be prepared along with mitigation plan by a nationally reputed institute such as GUIDE.
- xviii. A management plan for the area under which mangroves are or likely to be removed and compensatory mangrove plantation plan be submitted by a nationally reputed institute such as GUIDE and endorsed by state forest department.
- xix. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).
- xx. A certificate from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
- xxi. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project.
- xxii. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- xxiii. An assessment of the cumulative impact of all development and increased inhabitation being carried out or proposed to be carried out by the project or other agencies in the core area, shall be made for traffic densities and parking capabilities in a 05 kms radius from the site. A detailed traffic management and a traffic decongestion plan drawn up through an organization of repute and specializing in Transport Planning shall be submitted with the EIA.
- xxiv. Disaster Management Plan for the project shall be prepared and submitted.
- xxv. Details and status of court case pending against the project, if any.
- xxvi. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- xxvii. A tabular chart with index for point-wise compliance of above ToRs. The specific ToRs as recommended above are in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006.
- xxviii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent, based on the commitments made during the public hearing, specific studies as stated in xiv and xv shall include all the activities

required to be taken to fulfill these commitments in the Environment Management Plan along with cost estimates of these activities, in addition to the activities proposed as per recommendations of EIA Studies and the same shall be submitted to the ministry as part of the EIA Report. The EMP shall be implemented at the project cost or any other funding source available with the project proponent.

- xxix. In pursuance of Ministry's OM F. No. 22-65/2017-IA.III dated 30th September, 2020 the project proponent shall add one more annexure in the EIA Report indicating all the commitments made by the PP to the public during public hearing and submit it to the Ministry and the EAC.

Annexure-A

Following members were present during the 322nd EAC (Infra-1) meeting held on 21st – 22nd March, 2023.

S. No.	Name	Designation	21.03.2023	22.03.2023
1.	Dr. Deepak Arun Apte	Chairman	Present	Present
2.	Sh. S. Jeyakrishnan	Member	Present	Present
3.	Sh. Manmohan Singh Negi	Member	Present	Present
4.	Sh. Sham Wagh	Member	Present	Present
5.	Dr. Mukesh Khare	Member	Present	Present
6.	Dr. Ashok Kumar Pachauri	Member	Present	Present
7.	Dr. V. K Jain	Member	Present	Present
8.	Dr. Manoranjan Hota	Member	Present	Present
9.	Representative of CPCB	Member	Absent	Absent
10.	Representative of CGWA	Member	Absent	Absent
11.	Dr. M. V Ramana Murthy	Member	Present	Present
12.	Dr. Nirmalendu Kumar	Member	Absent	Absent
13.	Dr. Niraj Sharma	Member	Present	Present
14.	Sh. Amardeep Raju	Scientist 'E' & MS - EAC (Infra-1)	Present	Present

Annexure-B

A site visit report EAC(Infra-I) sub-committee, Ministry of Environment, Forest & Climate Change, New Delhi for a proposed project of “Development of Deep Green Field Captive Port at Suvali Village, Surat District, Gujarat by M/s Arcelor Mittal Nippon Steel India Limited Proposal No.IA/GJ/INFRA1/402971/2022 and File No. File No. 10/42/2022-IA.III.”

1.0 Background of the Proposal.

1.1 The proposed project is for to set up a Deep draught Captive Port development at Suvali for the AMNS Hazira Steel Plant to handling capacity of 65 MMTPA (Bulk/break Bulk Cargo & Finished Goods-60MMTPA + LNG-5MMTPA) with total 8no of berths (7nos Capesize Vessel (1,80,000 DWT)-B1,B2&B3, Supermax Vessel(55000 DWT)-B4,B5,B6,B7 and 1no LNG Berth in an area of 364 ha Located at Suvali Village, Surat District, Gujarat. The proposed project is to develop an area of 300 ha and an about 185 ha for cargo storage of various types. The various cargos that are proposed to be handled are bulk cargo (Limestone, dolomite, and iron ore) and finished goods (flat products, slab, pipes and other steel products). The details are as follows:

1) Proposed area of Development

S.no	Cargo Type	Proposed Area	Cargo to be Stored
1	Break Bulk	95ha	Limestone, Dolomite, Iron Ore, Scrap
2	Finished Goods and Secondary products	25ha	flat products, slab, pipes and other steel products.
3	LNG Storage and Regasification	65ha	LNG
Total		185ha	

ii) Proposed Development of breakwater and dredging.

S.No	Description	Proposed	Remark
1	North Breakwater	2400m	Rubble Mound Breakwater
2	South Breakwater	2700m	Rubble Mound Breakwater
3	Capital Dredge Disposal	3M.cu.m	To be disposed at

			location identified and approved by GMB
4	Desalination Plant	300MLD	
5	Utility corridor	1.5Km	Conveyor, Road, Rail line, Waterline, LNG Line, Electric Cable and Other utilities.

1.2 The proposal was heard by 314th meeting during 18th November, 2022 EAC for Terms of References (ToR), the committee sought following information/clarification:

- i. Port notification for the proposed project area shall be submitted.
- ii. A layout map of the project boundaries superimposing CRZ boundaries, rivers and creeks, other ecologically sensitive areas (turtle nesting, migratory bird areas etc) etc may be prepared and submitted.
- iii. The proposed project is located to very close to the proposed Kalpasar project as well as existing Hazira port including its expansion plans area and the impacts on the creek and other ecologically sensitive areas (migratory bird areas) etc.
- iv. Proposed project also aims to removing the vegetation spread over an area of 48.5 Ha (of which Mangroves constitute 12 Ha & 36.5 Ha of Prosopis-juliflora). Detailed layout needs to be submitted.
- v. A site visit by the sub-committee shall be conducted once the above information is submitted

2.0 Site Visit and Brief of Project.

A site visit by the sub-committee was conducted on 25th February, 2023 for the proposed project. M/s Arcelor Mittal Nippon Steel India Limited inter-alia presented a brief on the project to the sub-committee as following:

- i. As per the instructions of the Expert Appraisal Committee (EAC) meeting, AMNSI has revised layout of the proposed development by reducing the mangrove area.
- ii. The reduction in plant backup area with creek diversion to ensure good tidal fluctuation and to be incorporated in the layout. The overall port development area is reduced to 331 Ha.
- iii. The summary of changes in the revised layout is as under
 - a. Mangrove area (12 Ha), port area from 364 ha to 331 ha and reduction in south breakwater from 2700 to 2300 m.
 - b. Minimum area has been considered for Desalination Intake well (1 Ha).

3.0 Observations of the Sub-Committee.

3.1 During the site visit, the Sub-Committee reviewed the proposed Development of Deep

Green Field Captive Port at Suvali Village, Surat District, Gujarat by M/s Arcelor Mittal Nippon Steel India Limited and observed following for placing before EAC for issue of ToR:

- i. Proposed site was approached from the Northern side and visited the mangrove area and creek area that was present in the project site.
- ii. Sparse mangroves are observed in the proposed area and mostly *Prosopis juliflora* was present at the project site.
- iii. Adjacent to the project site Reliance SPM is located approx. 530m on the North side and Adani Hazira Port limit are located at approximately 365m on the Southern Side. The reliance submarine pipeline passing adjacent to project site.
- iv. Villages are located away from the project site. No access roads are present within the project site.
- v. The proposed desalination plant backup area was planned adjacent to the creek rerouting area. The existing creek is found be seasonal and proposed creek diversion to be examined with modelling studies.
- vi. Utility corridor proposed in stilt area was visited and it is passing through sparse mangroves and *Prosopis juliflora*.
- vii. All the documents related to port limit was examined and it was suggested to submit the same to EAC.

An EAC sub-committee of MoEF&CC, New Delhi members participated in the site visit Development of Deep Green Field Captive Port at Suvali Village, Surat District, Gujarat by M/s Arcelor Mittal Nippon Steel India Limited.

S.No.	Name	Designation
1	Dr. M.V. Ramana Murthy	Member, EAC (Infra 1)
2	Shri Sham Wagh	Member, EAC (Infra 1)
3	Dr. Ramesh, A.	RO, MoEF&CC

The following are the members from M/s Arcelor Mittal Nippon Steel India Limited, and consultants side were present:

S.No.	Name	Designation
1	Captain Raghuvansi Rituparn	Head – Ports, Hazira
2	Captain Anuj Kaushik	Harbor Master, Hazira
3	Mr. Sankar Subramaniam	Head – Environment, AMNSI
4	Mr Abinash Yadav	Environment Delhi, AMNSI
5	Mr. Jaya Prakash	Environment, AMNSI
6	Mr. V. S. Bhaskar	Sr.GM- Chola MS (EIA Consultant)

Photo graphs of the Field Visit.





Annexure-C

List of Structures proposed for construction for safe movement of wild life in Pkg-4 of Varanasi Kolkata Project							
S. No.	Chainages	Design Chainage (Km)	Structure Type	Span Length (m)	Vertical Clearance (m)	Openings Ratio	Forest Division
1	185.15	185+150	MINOR BRIDGE	20	Mnimum 7 m	4	Chatra North
2	188.88	188+880	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimum 7 m	4	Chatra North
3	189.93	189+930	MINOR BRIDGE	20	Mnimum 7 m	4	Chatra North
4	192.1	192+100	MINOR BRIDGE	20	Mnimum 7 m	4	Chatra North
5	192.55	192+545	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimum 7 m	6	Chatra North
6	193.59	193+590	MINOR BRIDGE	15	Mnimum 7 m	3	Chatra North
7	194.8	194+800	MINOR BRIDGE	30	Mnimum 7 m	6	Chatra North
8	195.31	195+310	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimum 7 m	4	Chatra North
9	195.47	195+465	MINOR BRIDGE	15	Mnimum 7 m	3	Chatra North
10	196	196+000	MINOR BRIDGE	30	Mnimum 7 m	6	Chatra North
11	196.2	196+200	MINOR BRIDGE	20	Mnimum 7 m	4	Chatra North
12	196.97	196+974	MINOR BRIDGE	30	Mnimum 7 m	6	Chatra North
13	197.54	197+540	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimum 7 m	4	Chatra North
14	197.95	197+950	MINOR BRIDGE	15	Mnimum 7 m	3	Chatra North
15	198.5	198+500	MINOR BRIDGE	15	Mnimum 7 m	3	Chatra North
16	198.68	198+675	MINOR BRIDGE	20	Mnimum 7 m	4	Chatra North
17	198.8	198+800	MINOR BRIDGE	10	Mnimum 7 m	2	Chatra North
18	199.28	199+280	MINOR BRIDGE	15	Mnimum 7 m	3	Chatra North
19	199.84	199+840	MINOR BRIDGE	15	Mnimum 7 m	3	Chatra North
20	200.26	200+260	MINOR BRIDGE	10	Mnimum 7 m	2	Chatra North
21	200.49	200+490	MINOR BRIDGE	15	Mnimum 7 m	3	Chatra North
22	201.25	201+250	MINOR BRIDGE	15	Mnimum 7 m	3	Chatra North

23	201.77	201+765	MINOR BRIDGE	30	Mnimum 7 m	6	Chatra North
24	202.12	202+120	MINOR BRIDGE	15	Mnimum 7 m	3	
25	202.82	202+820	MAJOR BRIDGE CUM WILDLIFE UNDERPASS	90	Mnimum 7 m	18	
26	204.31	204+310	MINOR BRIDGE	8	Mnimum 7 m	1.6	
27	204.42	204+420	MINOR BRIDGE	20	Mnimum 7 m	4	
28	204.5	204+500	MINOR BRIDGE	15	Mnimum 7 m	3	
29	205.05	205+050	MINOR BRIDGE	10	Mnimum 7 m	2	
30	205.44	205+440	MINOR BRIDGE	20	Mnimum 7 m	4	
31	205.95	205+947	MINOR BRIDGE	20	Mnimum 7 m	4	
32	207.53	207+530	MAJOR BRIDGE	180	Mnimum 7 m	36	
33	208.8	208+800	MINOR BRIDGE	30	Mnimum 7 m	6	Chatra South
34	209.5	209+500	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimum 7 m	4	
35	209.77	209+770	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimum 7 m	4	
36	210.9	210+900	MINOR BRIDGE	10	Mnimum 7 m	2	
37	211.61	211+610	MINOR BRIDGE	30	Mnimum 7 m	6	
38	212.27	212+270	ELEVATED STRUCTURES/VIADUCTS	600	Minimum 7 m	120	
39	212.82	212+820	ELEVATED STRUCTURES/VIADUCTS	30	Minimum 7 m	6	
40	213.18	213+175	ELEVATED STRUCTURES/VIADUCTS	270	Minimum 7 m	54	
41	214.6	214+600	MINOR BRIDGE	15	Mnimum 7 m	3	
42	215.12	215+115	ELEVATED STRUCTURES/VIADUCTS	210	Minimum 7 m	42	
43	215.94	215+940	WOP	60			
44	216.55	216+550	WOP	60			
45	218.05	218+045	MINOR BRIDGE	30	Mnimum 7 m	6	
46	219.4	219+400	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimum 7 m	4	
47	219.55	219+550	MINOR BRIDGE	8	Mnimum 7 m	1.6	
48	221.4	221+400	MINOR BRIDGE	10	Mnimum 7 m	2	

49	223.52	223+520	WILDLIFE UNDERPASS	30	Mnimum 7 m	6.00	Chatra South
50	223.84	223+840	WILDLIFE UNDERPASS	20	Mnimum 7 m	4.00	
51	224.08	224+077	MINOR BRIDGE	10	Mnimum 7 m	2	
52	224.82	224+820	WILDLIFE UNDERPASS	20	Mnimum 7 m	4.00	
53	225.15	225+150	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimum 7 m	6	
54	226.6	226+600	MAJOR BRIDGE CUM WILDLIFE UNDERPASS	210	Mnimum 7 m	42	
55	227.56	227+560	WILDLIFE UNDERPASS	30	Mnimum 7 m	6.00	
56	228.14	228+140	WILDLIFE UNDERPASS	20	Mnimum 7 m	4.00	
57	229.66	229+660	WILDLIFE UNDERPASS	20	Mnimum 7 m	4.00	
58	230.03	230+030	WILDLIFE UNDERPASS	20	Mnimum 7 m	4.00	
59	231.26	231+260	MINOR BRIDGE CUM UNDERPASS	20	Mnimum 7 m	4	
60	233.86	233+860	WILDLIFE UNDERPASS	20	Mnimum 7 m	4.00	
61	236.84	236+835	MINOR BRIDGE	12	Mnimum 7 m	2.4	
62	238.03	238+025	MINOR BRIDGE CUM WILDLIFE UNDERPASS	40	Mnimum 7 m	8	
63	238.8	238+800	WILDLIFE UNDERPASS	20	Mnimum 7 m	4.00	
64	239.66	239+660	WILDLIFE UNDERPASS	30	Mnimum 7 m	6.00	
65	241.11	241+110	RAILWAY OVER BRIDGES (ROBS)	105	Minimum 7 m	21	
66	242.77	From 242+770 to 243+100	MAJOR BRIDGE CUM WILDLIFE UNDERPASS	330	Mnimum 7 m	66	
67	243.39	243+390	MINOR BRIDGE	10	Mnimum 7 m	2	
68	244.14	244+135	MINOR BRIDGE	10	Mnimum 7 m	2	
69	246.03	246+030	MINOR BRIDGE	30	Mnimum 7 m	6	
70	248.12	From 248+120 to 248+360	MAJOR BRIDGE CUM WILDLIFE UNDERPASS	240	Mnimum 7 m	48	
71	248.56	248+560	MINOR BRIDGE CUM WILDLIFE UNDERPASS	40	Mnimum 7 m	8	
72	253.22	253+220	MINOR BRIDGE	15	Mnimum 7 m	3	
73	254.68	254+680 to 254+980	ELEVATED STRUCTURES/VIADUCTS	300	Minimum 7 m	60	
74	256.51	256+510	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimum 7 m	6	
75	257.31	257+310	WILDLIFE UNDERPASS	20	Mnimum 7 m	4.00	

7 6	257.7 7	257+770	MINOR BRIDGE CUM WILDLIFE UNDERPASS	25	Mnimu m 7 m	5	Chatra South
7 7	258.7 5	258+750	MAJOR BRIDGE	210	Mnimu m 7 m	42	Chatra South
7 8	261.3 4	261+340	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimu m 7 m	6	Chatra South
7 9	262.0 5	262+045	MINOR BRIDGE	20	Mnimu m 7 m	4	Chatra South
8 0	262.0 5	262+045	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimu m 7 m	4	Chatra South
8 1	263.0 3	263+030	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimu m 7 m	4	Chatra South
8 2	263.6	263+600 to 263+690	ELEVATED STRUCTURES/VIADUCTS	90	Minimu m 7 m	18	Chatra South
8 3	267.6 4	267+640	MINOR BRIDGE	15	Mnimu m 7 m	3	Chatra South
8 4	268.8 9	268+890	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimu m 7 m	6	Chatra South
8 5	269.6 8	269+680	MINOR BRIDGE CUM WILDLIFE UNDERPASS	25	Mnimu m 7 m	5	Chatra South
8 6	272.4 7	272+470	MINOR BRIDGE CUM WILDLIFE UNDERPASS	40	Mnimu m 7 m	8	Hazariba gh West
8 7	273.2 6	273+260	MINOR BRIDGE	20	Mnimu m 7 m	4	Hazariba gh West
8 8	274.2 1	274+210	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimu m 7 m	4	Hazariba gh West
8 9	274.6 8	274+680	MINOR BRIDGE	20	Mnimu m 7 m	4	Hazariba gh West
9 0	275.7 4	275+740 to 275+830	ELEVATED STRUCTURES/VIADUCTS	90	Minimu m 7 m	18	Hazariba gh West
9 1	276.7 6	276+760	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimu m 7 m	4	Hazariba gh West
9 2	277.1 8	277+180	MINOR BRIDGE	15	Mnimu m 7 m	3	Hazariba gh West
9 3	277.4	277+400	MINOR BRIDGE	15	Mnimu m 7 m	3	Hazariba gh West
9 4	277.6 9	277+690	MINOR BRIDGE	20	Mnimu m 7 m	4	Hazariba gh West
9 5	281.1 9	281+190	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimu m 7 m	4	Hazariba gh West
9 6	281.9 5	281+950	MAJOR BRIDGE CUM Underpass	90	Mnimu m 7 m	18	Hazariba gh West
9 7	284.6 4	284+640	RAILWAY OVER BRIDGES (ROBS)	234	Minimu m 7 m	46.8	Hazariba gh West
9 8	286.5 8	286+580	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimu m 7 m	6	Hazariba gh West
9 9	287.5 2	287+520 to 287+820	ELEVATED STRUCTURES/VIADUCTS	300	Minimu m 7 m	60	Hazariba gh West
1 0 0	288.5 4	288+540	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimu m 7 m	6	Hazariba gh West
1 0 1	289.8 8	289+875	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimu m 7 m	6	Hazariba gh West

102	290.08	290+080	MINOR BRIDGE	25	Mnimum 7 m	5	Hazaribagh West
103	291.32	291+320 to 291+530	ELEVATED STRUCTURES/VIADUCTS	210	Minimu m 7 m	42	Hazaribagh West
104	293.3	293+300 to 294+200	ELEVATED STRUCTURES/VIADUCTS	900	Minimu m 7 m	180	Hazaribagh West
105	294.82	294+815	MAJOR BRIDGE	90	Mnimum 7 m	18	Hazaribagh West
106	296.41	296+410	MINOR BRIDGE	15	Mnimum 7 m	3	Ramgarh
107	296.57	296+570	MINOR BRIDGE	15	Mnimum 7 m	3	Ramgarh
108	297.16	297+160	MINOR BRIDGE CUM WILDLIFE UNDERPASS	60	Mnimum 7 m	12	Ramgarh
109	298.12	298+120 to 298+600	ELEVATED STRUCTURES/VIADUCTS	480	Minimu m 7 m	96	Ramgarh
110	298.85	298+850	RAILWAY OVER BRIDGES (ROBS)	111	Minimu m 7 m	22.2	Ramgarh
111	302.37	302+370	MINOR BRIDGE CUM UNDERPASS	40	Mnimum 7 m	8	Ramgarh
112	303.9	303+900	ELEVATED STRUCTURES/VIADUCTS	240	Minimu m 7 m	48	Ramgarh
113	304.8	304+800	WOP	60			Ramgarh
114	305.44	305+440	MINOR BRIDGE CUM WILDLIFE UNDERPASS	40	Mnimum 7 m	8	Ramgarh
115	306.64	306+640	ELEVATED STRUCTURES/VIADUCTS	60	Minimu m 7 m	12	Ramgarh
116	307.58	307+580	MINOR BRIDGE	20	Mnimum 7 m	4	Ramgarh
117	308.72	308+720	ELEVATED STRUCTURES/VIADUCTS	330	Minimu m 7 m	66	Ramgarh
118	309.14	309+140 to 309+380	ELEVATED STRUCTURES/VIADUCTS	240	Minimu m 7 m	48	Ramgarh
119	310.08	310+080	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimum 7 m	4	Ramgarh

1 2 0	310.5	310+500	ELEVATED STRUCTURES/VIADUCTS	540	Minimu m 7 m	108	Ramgarh
1 2 1	314.7 7	314+765	MINOR BRIDGE	25	Mnimu m 7 m	5	Ramgarh
1 2 2	316.6	316+600	MINOR BRIDGE	20	Mnimu m 7 m	4	Ramgarh
1 2 3	318.0 9	318+090	MINOR BRIDGE CUM WILDLIFE UNDERPASS	20	Mnimu m 7 m	4	Ramgarh
1 2 4	318.4	318+400	WILDLIFE UNDERPASS	20	Mnimu m 7 m	4.00	Ramgarh
1 2 5	318.8 8	318+880	WILDLIFE UNDERPASS	20	Mnimu m 7 m	4.00	Ramgarh
1 2 6	319.2 2	319+220	WILDLIFE UNDERPASS	20	Mnimu m 7 m	4.00	Ramgarh
1 2 7	319.3 8	319+380	WILDLIFE UNDERPASS	20	Mnimu m 7 m	4.00	Ramgarh
1 2 8	320.1 3	320+130	WILDLIFE UNDERPASS	20	Mnimu m 7 m	4.00	Ramgarh
1 2 9	321.8 4	321+835	RAILWAY OVER BRIDGES (ROBS)	256	Minimu m 7 m	51.2	Ramgarh
1 3 0	322.1 6	322+160	MINOR BRIDGE	30	Mnimu m 7 m	6	Ramgarh
1 3 1	326.7	326+700 TO 327+180	ELEVATED STRUCTURES/VIADUCTS	480	Minimu m 7 m	96	Ramgarh
1 3 2	327.7 6	327+760	WILDLIFE UNDERPASS	20	Mnimu m 7 m	4.00	Ramgarh
1 3 3	328.1	328+100	MAJOR BRIDGE CUM WILDLIFE UNDERPASS	90	Mnimu m 7 m	18	Ramgarh
1 3 4	329.0 3	329+025	WILDLIFE UNDERPASS	20	Mnimu m 7 m	4.00	Ramgarh
1 3 5	333.6 5	333+650	MINOR BRIDGE	25	Mnimu m 7 m	5	Ramgarh
1 3 6	333.9 4	333+940	MINOR BRIDGE	10	Mnimu m 7 m	2	Ramgarh
1 3 7	334.2 5	334+250	MINOR BRIDGE	10	Mnimu m 7 m	2	Ramgarh

1 3 8	334.4 8	334+480	MINOR BRIDGE	10	Mnimu m 7 m	2	Ramgarh
1 3 9	334.7 8	334+780	MINOR BRIDGE CUM WILDLIFE UNDERPASS	60	Mnimu m 7 m	12	Ramgarh
1 4 0	336	336+000	WOP	70			Bokaro
1 4 1	337.1 1	337+110	WILDLIFE UNDERPASS	20	Mnimu m 7 m	4.00	Bokaro
1 4 2	337.3 2	337+320	WILDLIFE UNDERPASS	20	Mnimu m 7 m	4.00	Bokaro
1 4 3	338.1	338+100	MINOR BRIDGE	20	Mnimu m 7 m	4	Bokaro
1 4 4	338.3 6	338+360	MINOR BRIDGE	25	Mnimu m 7 m	5	Bokaro
1 4 5	338.9 6	338+960	MINOR BRIDGE CUM WILDLIFE UNDERPASS	60	Mnimu m 7 m	12	Bokaro
1 4 6	339.9	339+900 to 339+990	ELEVATED STRUCTURES/VIADUCTS	90	Minimu m 7 m	18	Bokaro
1 4 7	340.3 9	340+390	WILDLIFE UNDERPASS	30	Mnimu m 7 m	6.00	Bokaro
1 4 8	340.9	340+900	MINOR BRIDGE CUM WILDLIFE UNDERPASS	40	Mnimu m 7 m	8	Bokaro
1 4 9	342.5 6	342+560	WILDLIFE UNDERPASS	30	Mnimu m 7 m	6.00	Bokaro
1 5 0	343.3 7	343+370	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimu m 7 m	6	Bokaro
1 5 1	344.0 4	344+040	WOP	70			Bokaro
1 5 2	345.8	345+800	MINOR BRIDGE	10	Mnimu m 7 m	2	Bokaro
1 5 3	346.7 8	346+780	MINOR BRIDGE	10	Mnimu m 7 m	2	Bokaro
1 5 4	347.4 6	347+460	MINOR BRIDGE	10	Mnimu m 7 m	2	Bokaro
1 5 5	347.8 7	347+870	MINOR BRIDGE	10	Mnimu m 7 m	2	Bokaro

1 5 6	348.9 8	348+980	WILDLIFE UNDERPASS	20	Mnimum 7 m	4.00	Bokaro
1 5 7	349.3 1	349+312	MAJOR BRIDGE	385	Mnimum 7 m	77	Bokaro
1 5 8	349.8 4	349+840	MAJOR BRIDGE	120	Mnimum 7 m	24	Ramgarh
1 5 9	350.2	350+200	MINOR BRIDGE	10	Mnimum 7 m	2	Ramgarh
1 6 0	351.4 8	351+480	MINOR BRIDGE	10	Mnimum 7 m	2	Ramgarh
1 6 1	353.0 6	353+060	MINOR BRIDGE	10	Mnimum 7 m	2	Ramgarh
1 6 2	354.8 3	354+825	MAJOR BRIDGE	70	Mnimum 7 m	14	Bokaro
1 6 3	355.4	355+400	MINOR BRIDGE	30	Mnimum 7 m	6	Bokaro
1 6 4	357.6 8	357+680	MINOR BRIDGE	10	Mnimum 7 m	2	Bokaro
1 6 5	358.9 8	358+980	MINOR BRIDGE	40	Mnimum 7 m	8	Bokaro
1 6 6	359.8	359+800	MINOR BRIDGE	25	Mnimum 7 m	5	Bokaro
1 6 7	360.2 4	360+240	MINOR BRIDGE	35	Mnimum 7 m	7	Bokaro
1 6 8	362.4 4	362+435	STRUCTURE OVER GAS PIPE LINES	42	Minimu m 5.5	8.4	Bokaro
1 6 9	363.4 7	363+465	MINOR BRIDGE	15	Mnimum 7 m	3	Bokaro
1 7 0	364.6 2	364+620	MINOR BRIDGE	15	Mnimum 7 m	3	Bokaro
1 7 1	366.1 2	366+120	MINOR BRIDGE	10	Mnimum 7 m	2	Bokaro
1 7 2	369.0 2	369+020	MAJOR BRIDGE CUM WILDLIFE UNDERPASS	100	Mnimum 7 m	20	Bokaro
1 7 3	370.9 2	370+920	MINOR BRIDGE	15	Mnimum 7 m	3	Bokaro

1 7 4	374.2 5	374+250	MINOR BRIDGE CUM WILDLIFE UNDERPASS	30	Mnimu m 7 m	6	Bokaro
1 7 5	377.1 1	377+110 to 377+350	ELEVATED STRUCTURES/VIADUCTS	240	Minimu m 7 m	48	Bokaro
1 7 6	378.2	378+200	MINOR BRIDGE	50	Mnimu m 7 m	10	Bokaro
1 7 7	380.6 1	380+610	MINOR BRIDGE	12	Mnimu m 7 m	2.4	Bokaro
1 7 8	381.7	381+700	MINOR BRIDGE	10	Mnimu m 7 m	2	Bokaro
1 7 9	382.8 9	382+885 to 383+035	ELEVATED STRUCTURES/VIADUCTS	150	Minimu m 7 m	30	Bokaro
1 8 0	383.6 5	383+650	MINOR BRIDGE	10	Mnimu m 7 m	2	Bokaro
1 8 1	384.5 5	384+550	MINOR BRIDGE	60	Mnimu m 7 m	12	Bokaro
1 8 2	385.7 8	385+780	MINOR BRIDGE	10	Mnimu m 7 m	2	Bokaro
1 8 3	387.0 6	387+060	MINOR BRIDGE	40	Mnimu m 7 m	8	Bokaro