

F. No. 10-9/2015 - IA III

**Government of India  
Ministry of Environment, Forest & Climate Change  
(I.A. Division)**

Indira Paryavaran Bhawan  
Aliganj, Jorbagh Road,  
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**Telefax: 011: 24695398**  
Dated: 9<sup>th</sup> November, 2016

To,

**Shri A N Neelakandhan,  
General Manager (Technical),  
M/s Cochin Shipyard Ltd.,  
Administrative Building,  
Perumanoor PO,  
Kochi-682015**

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**Subject: New Dry Dock Facility at Cochin Shipyard Ltd, Kochi, Kerala by M/s Cochin Shipyard Ltd –Environmental and CRZ Clearance reg.**

**Ref.: Your online proposal no. IA/KL/MIS/27087/2015 dated 19<sup>th</sup> August, 2016.**

Sir,

This has reference to your online proposal no. IA/KL/MIS/27087/2015 dated 19<sup>th</sup> August, 2016 alongwith project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report regarding above mentioned project.

2.0 The Ministry of Environment, Forest and Climate Change has examined the application. It is noted that the proposal is to build a new dry dock in the existing premises of M/s Cochin Shipyard Limited (CSL) along the Ernakulam Channel in Kochi City, Kerala. Total plot area of CSL is 170 acres, of which, 140 acres is occupied by the existing facilities comprising of two existing dry docks of sizes 270 x 45 x 12 m and 255 x 43 x 9 m. The remaining 30 acres was left for future development out of which, 15 acres is now proposed to be developed into a new dry dock facility. Cost of proposed project is Rs. 1700 Crore. Configuration of the proposed project is as given below:

S.N.	Items	Details
New Dry Dock by Cochin Shipyard Limited, Kerala		
1	Dock Dimension	310 metres x 75 metres x 13 metres
2	Dock Draught	13 m with 2.0 m free board (depth)
3	Offshore Structure	Dock Projection is 20 m and Crane Track Projection is 45 m
4	Excavation and Capital Dredging Quantity Total: Approx.	400,000 m <sup>3</sup>
5	Land based Excavation:	Approx. 350,000 m <sup>3</sup>
6	Water Channel based Dredging:	Approx. 50,000 m <sup>3</sup>
7	Design Excavation/ Dredge Level	Excavation Level: - 15 m to - 16 m bgl

		Dredge Level: (-) 10 m CD
8	Dock Load Parameter The following maximum vessel dimensions are proposed for the dock floor:	Liquid Natural Gas Tanker (LNGT): <ul style="list-style-type: none"> <li>○ LOA: 300 m</li> <li>○ Beam (B): 52.0 m</li> <li>○ draught ballast: 8.0 m</li> </ul> Aircraft Carrier (ACC): <ul style="list-style-type: none"> <li>● LOA: 300 m</li> <li>● Beam (B): 40.0 m at waterline, 70 m at flight deck</li> <li>● Draught up to 8.30 m</li> </ul> Oil & Gas Rigs <ul style="list-style-type: none"> <li>● Overall dimensions: 70x110 m.</li> <li>● Depth: up to 8.3 m.</li> </ul>

It is reported that Mangalavanam Bird Sanctuary (Approx. 3.30 km – North-North-West) is located at a distance of 3.30 km. Naval Base is situated at a distance of (1.4 Km, South West).

3.0 The proposed new dry dock development by Cochin Shipyard Limited along the Ernakulam Channel/ Creek will involve capital dredging to some extent due to the civil construction work proposed to be projected on the sea front. The total quantity of excavated & dredged material is expected to be around 400,000 cubic metre. Annual maintenance shall be carried out at the project site. The offshore existing dump sites of the dredged material is located at North (10° 00'N, 76°05'E) and South (9° 55'N, 76° 06'E), which is 22.4 km away from the project site. It is reported that the design capacity of the existing dump site is 50,000,000 m<sup>3</sup>. Only, 600,000 m<sup>3</sup> capacity is being utilized. Hence existing dumping ground has enough available capacity to cater the dredge materials generated from the proposed dredging.

4.0 During excavation of dry dock area, the bulk amount of the water will be removed from the flooded dock by the Dewatering System (main dewatering pumps) while any residual amount or any subsequent under dock floor water rising from the subsurface will be taken care of by the Drainage Pumping System (stripping pumps). The pumps along with the drainage system are designed to dewater the dock within three to four hours. This extracted water will be released into the sea after necessary treatment.

5.0 During construction phase, water requirement for drinking and sanitation purposes of the workers at site will be 31 m<sup>3</sup>/day. The total water requirement in the construction phase will be sourced from the local authority. During operation phase, the potable water requirement will be 14 m<sup>3</sup>/day while the industrial water requirement will be met through dedicated line to CSL water supply. Sea water will be used for ballasting (1000 m<sup>3</sup>/hr.) and vessel cooling operation (150 m<sup>3</sup>/day). Sewage will be treated in the STP.

6.0 A contaminated water treatment plant (CWTP) having capacity of 500 m<sup>3</sup>/day will be installed to treat the contaminated dock floor wastewater, ship washing water, bilge water, ballast water etc. It will be set up in the North of the new dry dock, in the Ernakulam Channel side and adjacent to one of the sub-stations (power source).

7.0 Used oil, waste containing oil, battery waste, E-waste, used Zinc anode etc will be sent to authorized recycler/processor. The grit/ steel blasting operations for cleaning vessels will be carried out using copper slag. Used copper slag, paint sludge, sludge from CWTP, Asbestos etc will be sent to CTSDF. Recovered refrigerant will be sent to authorized

recycler/reclaimer or authorized facility for destruction. ). Greenbelt has been developed in 6.5 acre. For the proposed project, CSL will develop greenbelt in 17.5 % area in phased manner. Out of which, 10 % plantation will be done by year 2018 and remaining 7.5 % will be carried out in the year 2019.

8.0 Public hearing was conducted on 24.06.2016.

9.0 Kerala Coastal Zone Management Authority vide letter no. 4232/A2/16/KCZMA/S&TD dated 18<sup>th</sup> August, 2016 has recommended the proposed facilities to MoEF&CC under the provisions of the CRZ Notification, 2011. It is reported that the construction of dry dock falls in CRZ II and CRZ I ( between LTL & HTL) and CRZ IV area.

10.0 All the projects related to capital dredging and break water are listed at 7(e) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

11.0 The proposal was considered by the Expert Appraisal Committee (Infrastructure-2) in its meetings held during 19<sup>th</sup>-21<sup>st</sup> May, 2015 and 21<sup>st</sup> – 22<sup>nd</sup> September, 2016 respectively. Project Proponent and the EIA Consultant namely M/s Asian Consulting Engineers Pvt. Ltd., New Delhi, have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be adequate and in full consonance with the presented TORs. The Committee recommended the proposal for environmental and CRZ clearance.

12.0 As per the recommendations of EAC, the Ministry of Environment, Forest & Climate Change hereby accords Environmental and CRZ Clearance for the above-mentioned project "New Dry Dock Facility at Cochin Shipyard Ltd, Kochi, Kerala by M/s Cochin Shipyard Ltd, under the provisions of the Environment Impact Assessment Notification, 2006 & Coastal Regulation Zone (CRZ) Notification, 2011 and amendments thereto and Circulars issued thereon and subject to the compliance of the following specific conditions, in addition to the general conditions mentioned below:

#### A. SPECIFIC CONDITIONS:

- (i) 'Consent for Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- (ii) Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- (iii) The environmental clearance is subject to obtaining prior clearance for Wildlife from the Standing Committee of the National Board for Wildlife.
- (iv) *All the recommendations and conditions specified by Kerala Coastal Zone Management Authority vide letter no. 4232/A2/16/KCZMA/S&TD dated 18<sup>th</sup> August, 2016 shall be complied with.*
- (v) The project proponent shall ensure that there shall be no damage to the existing mangroves patches near site and also ensure the free flow of water to avoid damage to the mangroves.
- (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.

- (vii) 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.
- (viii) Since Ernakulam Channel ultimately meets the sea and the discharge is planned to conform to marine quality standards, the project proponent shall get a marine biodiversity management plan prepared from the NIOS or any other marine biology specialist institution and implement the same. The plan should safeguard the biodiversity of the channel as also the biodiversity impacts as a result of confluence with the sea.
- (ix) The ground water shall not be tapped within the CRZ areas by the PP to meet with the water requirement in any case.
- (x) Well designed drainage system shall be provided to dewater the dock while excavation. As proposed, extracted water will be released into the sea after necessary treatment. CGWB permission shall be obtained for dewatering the dock during construction.
- (xi) Shrouding shall be carried out in the work site enclosing the dock area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.
- (xii) Dust collectors shall be deployed in all areas where blasting (surface cleaning) and painting operations are to be carried out, supplemented by stacks for effective dispersion.
- (xiii) The work space shall be maintained as per international standards for occupational health and safety with provision of fresh air respirators, blowers, and fans to prevent any accumulation and inhalation of undesirable levels of pollutants including VOCs.
- (xiv) The diesel generators (of capacity 250 KVA) shall be used as back-up power supply and shall be run only during power cuts. Low sulphur content fuel will be used for the generators and will be subjected to periodical maintenance and servicing. This will cut down on emission volume to a considerable extent. Also, the DG sets will be provided with mufflers for pollutant emission control.
- (xv) Necessary arrangements for the treatment of the effluents and solid wastes must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986.
- (xvi) All measures shall be taken during the excavation activity as deemed necessary from the geotechnical investigation of the soil and ground water profile.
- (xvii) Construction activity related wastes (C & D waste) shall be disposed off as per Solid waste management rule, 2016.
- (xviii) All such solid and hazardous wastes including onboard wastes (while ships dock at the site) will be handled as per the Hazardous and other Waste (Management & Transboundary Movement) Rules, 2016.

- (xix) Silt curtains shall be used to contain the spreading of suspended sediment during dredging within the dredging area.
- (xx) The dredging schedule shall be so planned that the turbidity developed is dispersed soon enough to prevent any stress on the fish population.
- (xxi) Earth protection work shall be carried out to avoid erosion of soil from the shoreline/boundary line from the land area into the marine water body.
- (xxii) No ships docking at the proposed project site will discharge its on-board waste water untreated in to the estuary/ channel. All such wastewater load will be diverted to the proposed Contaminated Water Treatment Plant of the project site.
- (xxiii) All effluent generated in the dry dock shall be drained in to the proposed on-site contaminated water treatment plant (CWTP) having capacity 500 KLD and equipped to treat the effluent into dischargeable standards. The oil-water separator of the CWTP shall remove any unwanted oil & grease content from the effluent. The CWTP shall be equipped to treat such effluent including the bilge water and other ship discharges to meet the general standards for discharge of effluent in marine coastal areas before disposal in to the channel. Ballast water from ships shall be stored at the facility and will be used in refilling of same before release of ships back into water. Sewage shall be treated in the STP.
- (xxiv) Though the proposed project will not use TBT containing paints yet the ships docking for repair may have existing TBT paint layer. So blasting operations (surface cleaning) shall be extremely controlled and contained within the work site ensuring all accumulated solid waste and effluent are given standard treatments. The effluent/ dock flow shall be drained to the CWTP while the solid/ hazardous wastes shall be contained temporarily in site and timely disposed off through the CTSDF.
- (xxv) Workers shall be strictly enforced to wear personal protective equipments like dust mask, ear muffs or ear plugs, whenever and wherever necessary/ required. Special visco-elastic gloves will be used by labour exposed to hazards from vibration.
- (xxvi) In case of repair of any old vessels, excessive care shall be taken while handling Asbestos & Freon gas. Besides, fully enclosed covering should be provided for the temporary storage of asbestos materials at site before disposal to CTSDF.
- (xxvii) Safety training shall be given to all workers specific to their work area and every worker and employee will be engaged in fire hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational hazard measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents.
- (xxviii) The commitments made during the Public Hearing and recorded in the Minutes shall be complied with letter and spirit. A hard copy of the action taken shall be submitted to the Ministry.
- (xxix) The Project Proponent shall take up and earmark adequate fund for socio-economic development and welfare measures as proposed under the CSR Programme. This shall be taken up on priority.

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- (xxx) The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- (xxxii) The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.
- (xxxiii) The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.
- (xxxiiii) Company shall prepare operating manual in respect of all activities. It shall cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual shall be made available at the project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office.
- (xxxv) Corporate Social Responsibility:
  - a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
  - b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/ deviation/violation of the environmental or forest norms/ conditions.
  - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
  - d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

**B. GENERAL CONDITIONS:**

- (i) Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.
- (ii) Full support shall be extended to the officers of this Ministry/ Regional Office at Bhopal by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.
- (iii) A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bhopal regarding the implementation of the stipulated conditions.
- (iv) Ministry of Environment, Forest and Climate Change or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.
- (v) The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.

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- (vi) In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment, Forest and Climate Change.
- (vii) The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.
- (viii) A copy of the clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal..
- (ix) A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.

13.0 These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.

14.0 All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

15.0 The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental and CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest and Climate Change at <http://www.envfor.nic.in>. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bhopal.

16.0 This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

17.0 Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.

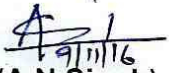
18.0 Any appeal against this Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

19.0 A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZillaParisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

20.0 The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It

shall simultaneously be sent to the Regional Office of MoEFCC, the respective Zonal Office of CPCB and the SPCB.

21.0 The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEFCC by e-mail.

  
(A N Singh)  
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Copy to :-

1. The Secretary, Department of Environment, Government of Kerala, Thiruvananthapuram, Kerala.
2. Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forests and Climate Change, Regional Office (SZ), Kendriya Sadan, 4th Floor, E&F Wing, 17th Main Road, Koramangala II Block, Bangalore - 34
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
1. The Chairman, Kerala State Pollution Control Board, Palamoodu Junction, Pattom Place, P.O. Thiruvananthapuram - 04
4. Monitoring Cell, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhavan, *Jor bagh Road*, New Delhi.
5. Guard File/Monitoring File/Record File.

  
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