

F. No. 21-258/2017-IA-III
Government of India
Ministry of Environment, Forest and Climate Change
(IA.III Section)

Indira Paryavaran Bhawan,
Jor Bagh Road, New Delhi - 3

Date: 31st May, 2018

To,

M/s Wadhwa Construction & Infrastructures Pvt Ltd
3rd Floor, Platina, Plot C-59, G- Block, BKC, Bandra (East)
Mumbai - 400051 (Maharashtra)
Email: gurudatta.deshmukh@thewadhwagroup.com

Subject: Proposed Wadhwa Panvel Integrated Township at Village Vardoli of Panvel, Raigad, Maharashtra by M/s Wadhwa Construction and Infrastructure Pvt Ltd - Environmental Clearance - reg.

Sir,

This has reference to your online proposal No. IA/MH/MIS/64748/2017 dated 13th June, 2017, submitted to this Ministry for grant of Environmental Clearance (EC) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986.

2. The proposal for grant of environmental clearance to the project 'Proposed Wadhwa Panvel Integrated Township at Village Vardoli of Panvel, Raigad, Maharashtra by M/s Wadhwa Construction and Infrastructure Pvt Ltd, was considered by the Expert Appraisal Committee (Infra-2) in its 21st meeting held on 21-24 August, 2017 and 23rd meeting held on 13th October, 2017. The details of the project, as per the documents submitted by the project proponent, and also as informed during the above meeting, are as under:-

- (i) The project is located at 18°57' 27.87" N; Latitude and 73°11'30.84" E. The project is new and no construction initiated on site.
- (ii) The project was considered for ToR by SEAC, Maharashtra in its 34th meeting held on 20-23 July, 2016 and ToR was prescribed vide dated 23.07.2016.
- (iii) The total plot area is 8,46,129.39 sqm, FSI area is 3,46,230.86 sqm and total construction (built-up) area of 4,25,117.93 sqm. The project will initially comprise of 23 Buildings (Phase-I). Total 5564 flats shall be developed. Maximum height of the building is 75.4m.
- (iv) During construction phase, total water requirement is expected to be 59 KLD which will be met by MJP. During the construction phase, soak pits and septic tanks will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labor force.
- (v) During operational phase, total water demand of the project is expected to be 11713 KLD and the same will be met by the MJP (5634 KLD)/ Recycled Water. Wastewater generated (7743 KLD) uses will be treated in STP of total 7743 KLD capacity. 6079 KLD of treated wastewater will be recycled (2954 KLD for flushing, 3125 KLD for gardening). About 845 KLD will be disposed in to municipal drain.

- (vi) About 16 TPD solid wastes will be generated in the project. The biodegradable waste (9.7 TPD) will be processed in OWC and the non-biodegradable waste generated (6.3 TPD) will be handed over to authorized local vendor.
- (vii) The total power requirement during construction phase is 5 MVA and will be met from MSEDCL and total power requirement will be met from MSEDCL is as follows:

	Connected Load	Max Demand	DG set capacity
Special Township	72299 kVA	50963 kVA	At individual plot levels.
Road	300 kVA	300 kVA	180 kVA
Total	72599 kVA	51263 kVA	--

- (viii) Rain water harvesting is carried out by providing Recharge pits. Surface RWH Unit - Grease Cum De-silting Chamber + Recharging Pit 385 Nos. Recharge pit: 3.0MLX3.0MLX3.0ML Depth.
- (ix) Parking facility for 3538 four wheelers and 326 two wheelers is proposed to be provided against the requirement of 3516 four wheelers and 321 two wheelers respectively (according to local norms).
- (x) There is no court case pending against the project.
- (xi) Investment Cost of the project is Rs. 750 Crore.
- (xii) Employment potential: Project works would require approx.1000 Masons, 715 Plumbers, 1100 carpenters, 700 Electricians, 800 security personnel & 1000 maintenance personnel.
- (xiii) Benefits of the project: The project will help in developing remote & underdeveloped areas and shall also assist out-migration from overcrowded centres in long run. As no R & R is envisaged, the project will bring about several economic benefits to local people & integrate locals seamlessly.

3. The project/activity is covered under item 8(b) 'Townships and Area Development Projects' of the Schedule to the EIA Notification, 2006.

4. The EAC, in its meeting held on 13th October, 2017, after detailed deliberations on the proposal, has recommended for grant of Environmental Clearance to the project. As per recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance to the project 'Proposed Wadhwa Panvel Integrated Township at Village Vardoli of Panvel, Raigad, Maharashtra by M/s Wadhwa Construction and Infrastructure Pvt Ltd, under the provisions of the EIA Notification, 2006 and amendments/circulars issued thereon, and subject to the specific and general conditions as under:-

PART A – SPECIFIC CONDITIONS:

- (i) The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of

work. All the construction shall be done in accordance with the local building byelaws.

- (ii) 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.
- (iii) The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc as per National Building Code including protection measures from lightening etc.
- (iv) The project proponent shall obtain necessary clearance/ permission from concerned authority before felling any tree.

Topography and natural Drainage

- (v) The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.

Water requirement, Conservation, rain water Harvesting, and Ground Water Recharge

- (vi) As proposed, fresh water requirement from MJP/CIDCO Water Supply shall not exceed 5634 KLD.
- (vii) A certified report on the sources and availability of water from the local body supplying water along with the permission received by them for the same shall be submitted. This report shall specify the total annual water availability with the organization (local body), the quantity of water already committed to other development projects, the quantity of water committed for this project and the balance water available for distribution. This should be specified separately for ground water and surface water sources.
- (viii) At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
- (ix) Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
- (x) Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.
- (xi) Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
- (xii) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

- (xiii) The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. As proposed, 385 nos. of rain water harvesting recharge pits in addition to one rain water harvesting tank shall be provided as per CGWB guidelines.
- (xiv) As proposed, no ground water shall be used during construction/ operation phase of the project.
- (xv) Approval of the CGWA require before any dewatering for basements.
- (xvi) The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.

Solid Waste Management

- (xvii) The provisions of the Solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
- (xviii) Disposal of muck during construction phase shall not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- (xix) Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. As proposed 100 sqm space shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.
- (xx) Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

Sewage Treatment Plant

- (xxi) Sewage shall be treated in the STP based on MBBR Technology with tertiary treatment i.e. Ultra Filtration. The treated effluent from STP shall be recycled/re-used for flushing and irrigation. Excess treated water shall be discharged into municipal drain.
- (xxii) No sewage or untreated effluent water would be discharged through storm water drains.
- (xxiii) The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
- (xxiv) Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development,

Energy

- (xxv) Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
- (xxvi) Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.
- (xxvii) Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.
- (xxviii) Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.
- (xxix) Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environment friendly materials. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.

Air Quality and Noise

- (xxx) Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3 meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murrum, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding

and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.

- (xxxix) All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
- (xxxixii) The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
- (xxxixiii) The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
- (xxxixiv) For indoor air quality the ventilation provisions as per National Building Code of India.
- (xxxixv) Ambient noise levels shall conform to residential standards both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

Green Cover

- (xxxixvi) A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species. Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e. planting of 3 trees for every 1 tree that is cut) shall be done and maintained. As proposed 36,576 sqm (32.32%) area shall be provided for green belt development.

Top Soil preservation and Reuse

- (xxxixvii) Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

Transport

- (xxxixviii) A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.

- Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.

- Traffic calming measures
- Proper design of entry and exit points.
- Parking norms as per local regulation

(xxxix) A detailed traffic management and a traffic decongestion plan, to ensure that the current level of service of the roads within a 05 kms radius of the project site is maintained and improved upon, shall be drawn up through an organisation of repute and specialising in Transport Planning. This should be based on 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 this 05 kms radius from the site under different scenarios of space and time and shall be implemented to the satisfaction of the State Urban Development and Transport Departments with the consent of all the concerned implementing agencies.

(xl) Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

Environment management Plan

(xli) An environmental management plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.

Others

(xlii) Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

(xliii) A First Aid Room shall be provided in the project both during construction and operations of the project.

(xliv) The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.

(xlv) As per the Ministry's Office Memorandum F.No. 22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) plan. As per the said OM, funds @1.0% of the total project cost shall be earmarked for the activities proposed under CER. The activities proposed under CER shall be restricted to the affected area around the project.

PART B - GENERAL CONDITIONS

- (i) 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.
- (ii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.
- (iii) Officials from the Regional Office of MoEF&CC, Nagpur who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF&CC shall be forwarded to the APCCF, Regional Office of MoEF&CC, Nagpur.
- (iv) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.
- (v) The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
- (vi) All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
- (vii) These stipulations would be enforced among others under the provisions of the 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 the EIA Notification, 2006.
- (viii) 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 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 shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of this Ministry at Nagpur.
- (ix) 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.
- (x) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/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.

- (xi) 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 MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- (xii) The environmental statement for each financial year ending 31st 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 MoEF&CC by e-mail.
5. This issues with the approval of Competent Authority.


(Kushal Vashist)
Director

Copy to:

- 1) The Principal Secretary, Environment Department, Government of Maharashtra, 15th Floor, New Administrative Building, Mantralaya, Mumbai - 400 032.
- 2) The APCCF (C), MoEF&CC, Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur - 440001.
- 3) The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
- 4) The Chairman, Maharashtra Pollution Control Board, Kalpataru Point, 3rd and 4th floor, Opp. Cine Planet, Sion Circle, Mumbai - 400 022.
- 5) Monitoring Cell, MoEF&CC, Indira Paryavaran Bhavan, New Delhi.
- 6) Guard File/ Record File/ Notice Board.
- 7) MoEF&CC website.


(Kushal Vashist)
Director