

F.No. 21-163/2014-IA.III

Government of India
Ministry of Environment, Forests & Climate Change
(IA.III Section)

Indira Paryavaran Bhawan,
Jor Bagh Road,
New Delhi - 110 003

Dated: 18th June, 2015

To

The Managing Director,

M/s Indroyal Property Developers Pvt. Ltd.,
T.C. 2/2465 (5,6) M. G. Road, Royal Plaza, Pattom,
Thiruvananthapuram - 695 004, Kerala.

Subject: Proposed construction of residential project at Sy. Nos. 2413/B1, 2414/1, 2415, 2413/B, 2413/A, 2414 of Vanchiyur Village, Trivandrum Municipal Corporation, Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala by M/s Indroyal Property Developers Pvt. Ltd. - Environmental Clearance - Reg.

Sir,

This has reference to your application Nil dated Nil seeking prior Environmental Clearance on the above-mentioned subject.

2. The Ministry of Environment, Forests & Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance for **Proposed construction of residential project at Sy. Nos. 2413/B1, 2414/1, 2415, 2413/B, 2413/A, 2414 of Vanchiyur Village, Trivandrum Municipal Corporation, Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala by M/s Indroyal Property Developers Pvt. Ltd.** The proposal was considered by the EAC in its meeting held on 28th - 30th January, 2015. The proponent has informed that:

- i. The proposal involves construction of residential project at Sy. Nos. 2413/B1, 2414/1, 2415, 2413/B, 2413/A, 2414 of Vanchiyur Village, Trivandrum Municipal Corporation, Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala by M/s Indroyal Property Developers Pvt. Ltd. The project is located at 80° 30'19.22" N Latitude and 76° 56'15.03" E Longitude. The project site is located within the Municipal Corporation Limit of Thiruvananthapuram Municipal Corporation and Lakshadweep Sea is about 4.50 km (aerial distance) away from the project site.
- ii. The total plot area is 9,429.51 sqm. FSI area is 34,900 sqm. and total construction area of 47,630.74 sqm. The project will comprise of two residential blocks with 208 residential units buildings. Total 208 flats shall be developed. Maximum height of the building will be 44 m.
- iii. During construction phase, total water requirement is expected to be 29 KLD (14 KL domestic + 15 KL construction demand) which will be met by Kerala Water Authority supply, Open well existing at site & Stored rain water. Portable toilets with mobile STP for disposal of waste water proposed to be provided. Temporary sanitary toilets will be provided for labor force.

- iv. During operational phase, total water demand of the project is expected to be about 144.90 KLD which will be met by 71.30 Recycled Water. Wastewater generated (115.92 KLD) will be treated in STP of total 140 KLD capacity. 71.30 KLD of treated wastewater will be recycled (48.30 KLD for flushing & 23 KLD for gardening). About 32.70 KLD will be disposed in to municipal drain.
 - v. About 0.416 TPD solid wastes will be generated in the project. The biodegradable waste (249.60 Kg/Day) will be processed Bio-gas generation plant and the non-biodegradable waste generated (166.40 Kg/Day) will be handed over to authorized local vendor.
 - vi. The total power requirement during construction phase is 40 kVA and will be met from Kerala State Electricity Board and 62.50 kVA capacity D.G. Set is proposed to be installed. The total power requirement during operation phase is 1,300 kWh which will be met from Kerala State Electricity Board and D.G. Sets having capacity of 200 kVA x 1 + 380 kVA x 1 proposed to be installed as standby.
 - vii. Rooftop rainwater of buildings will be collected in RCC RWH tanks of total about 100 KL capacity for harvesting after filtration.
 - viii. Parking facility for 247 Cars and 104 two wheelers is proposed to be provided against the requirement of 247 Cars and 104 Two-wheelers respectively (according to local norms).
 - ix. Proposed energy saving measures would save about 23.92 % of power.
 - x. The cost of the project is Rs.85 crores.
 - xi. **Wildlife issues:** There is no Eco-Sensitive area located within 10 km radius of the proposed project site.
 - xii. **Forest land:** No forest land involved in the project.
 - xiii. There is no **court cases/violation** pending with the project proponent.
3. The proposal was considered by the Expert Appraisal Committee (EAC) and recommended in its 144th EAC meeting held on 28th - 30th January, 2015 for granting Environmental Clearance. The Ministry of Environment, Forests & Climate Change hereby accords Environmental Clearance for the above-mentioned **Proposed construction of residential project at Sy. Nos. 2413/B1, 2414/1, 2415, 2413/B, 2413/A, 2414 of Vanchiyur Village, Trivandrum Municipal Corporation, Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala by M/s Indroyal Property Developers Pvt. Ltd.** under the provisions of the Environment Impact Assessment Notification, 2006 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:

PART A – SPECIFIC CONDITIONS

I. Construction Phase

- (i) The Project Proponent shall insure that the guidelines issued vide this Ministry's OM No. 19-2/2013-IA.III dated 09.06.2015, to be followed for building and construction projects to ensure sustainable environmental management in pursuance of Notification No. 3252 (E) dated 22.12.2014 under the EIA Notification, 2006, as applicable, are followed in this project.
- (ii) The Project Proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work.

- (iii) "Consent for Establishment" shall be obtained from State Pollution Control Board under Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Act, 1974.
- (iv) The total plot area is 9,429.51 sqm. FSI area shall be 34,900 sqm. and total construction area shall be 47,630.74 sqm. The project will comprise of two residential blocks with 208 residential units buildings. Total 208 flats shall be developed. Maximum height of the building shall be 44 m.
- (v) During construction phase, total water requirement is 29 KLD (14 KL domestic + 15 KL construction demand) which shall be met by Kerala Water Authority supply, Open well existing at site & Stored rain water. Portable toilets with mobile STP for disposal of waste water shall be provided. Temporary sanitary toilets shall be provided for labor force.
- (vi) During operational phase, total water demand of the project is 144.90 KLD which shall be met by 71.30 Recycled Water. Wastewater generated (115.92 KLD) shall be treated in STP of total 140 KLD capacity. 71.30 KLD of treated wastewater shall be recycled (48.30 KLD for flushing & 23 KLD for gardening). About 32.70 KLD shall be disposed in to municipal drain.
- (vii) About 0.416 TPD solid wastes will be generated in the project. The biodegradable waste (249.60 Kg/Day) shall be processed Bio-gas generation plant and the non-biodegradable waste generated (166.40 Kg/Day) shall be handed over to authorized local vendor.
- (viii) The total power requirement during construction phase is 40 kVA and shall be met from Kerala State Electricity Board and 62.50 kVA capacity D.G. Set shall be installed. The total power requirement during operation phase is 1,300 kWH which shall be met from Kerala State Electricity Board and D.G. Sets having capacity of 200 kVA x 1 + 380 kVA x 1 shall be installed as standby. D.G sets shall be at least 6 m away from the boundary.
- (ix) Rooftop rainwater of buildings shall be collected in RCC RWH tanks of total about 100 KL capacity for harvesting after filtration.
- (x) Parking facility for 247 cars and 104 two-wheelers shall be provided against the requirement of 247 cars and 104 two-wheelers respectively (according to local norms).
- (xi) The project proponent shall comply with the conditions of NOC/Clearance obtained from Fire Department.
- (xii) All the construction shall be in accordance with the local building byelaws. The Project Proponent shall obtain all necessary clearances.
- (xiii) The project proponent shall put in place a credible enforcement mechanism for compliance of energy conservation measures with its allottees, as projected, in perpetuity. This would be monitored by the designed Energy Conservation/ efficiency Authority in the State.



- (xiv) Temporary toilets will be provided for all construction labour.
- (xv) Suitable toilet fixtures for water conservation shall be provided.
- (xvi) Proponent shall obtain permission for ground water withdrawal from State Ground Water Authority.
- (xvii) The rainwater harvesting plan should be incorporated by the CGWA.
- (xviii) Provision 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (xix) A First Aid Room will be provided in the project both during construction and operation of the project.
- (xx) All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
- (xxi) Disposal of muck during construction phase should not create any adverse effect on the neighbouring 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.
- (xxii) Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
- (xxiii) Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.
- (xxiv) Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
- (xxv) The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.
- (xxvi) The diesel required for operating DG sets shall be stored in underground tanks and clearance from Chief Controller of Explosives shall be taken, as applicable.
- (xxvii) 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 and should be operated only during non-peak hours.
- (xxviii) Ambient noise levels should conform to residential standards both during day and night as per Noise Pollution (Control and Regulation)

quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/ SPCB.

- (xxix) Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003.
- (xxx) Ready mixed concrete must be used in building construction.
- (xxxi) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xxxii) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xxxiii) Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- (xxxiv) Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.
- (xxxv) Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
- (xxxvi) Use of glass may be reduced by up-to 40% to reduce the electricity consumption and load on air-conditioning. If necessary, use high quality double glass with special reflective coating in windows.
- (xxxvii) Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.
- (xxxviii) Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.

II. Operation Phase

- (i) 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.
- (ii) The treated wastewater of 71.30 KLD shall be recycled and reused for flushing (48.30 KLD) and gardening (23 KLD) to reduce the demand of fresh water as committed.
- (iii) Solid waste management shall be collected, treated disposed in accordance with the Municipal Solid Waste (Management & Handling)

Rules, 2000. No municipal waste should be disposed off outside the premises.

- (iv) The Operation and Maintenance of STP shall be made in the MoU with STP supplier. Project Proponent shall ensure regular operation and maintenance of the STP.
- (v) Parking facility with 6 m clear driveway shall be provided as committed.
- (vi) The Project Proponent shall explore the possibilities of reusing the treated wastewater from nearby projects.
- (vii) The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Treated affluent emanating from STP shall be recycled/reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Discharge of unused treated affluent shall conform to the norms and standards of the State Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.
- (viii) The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/ inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.
- (ix) Diesel power generating sets proposed as source of back-up power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- (x) Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- (xi) The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.
- (xii) Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 5 mts. above the highest ground water table.
- (xiii) Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for

authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.

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.
4. Officials from the Regional Office of MoEF&CC, Bangalore 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 should be forwarded to the CCF, Regional office of MoEF&CC, Bangalore.
 5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.
 6. 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.
 7. 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.
 8. 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, 2006.
 9. The project proponent should 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, Forests & 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 Bangalore.
 10. This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation v/s. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

11. 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.

12. 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.

13. 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.

14. 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.

Yours faithfully,



**(Dr. R. Warriér)
Director**

Copy to:

- 1) The Secretary, Department of Environment, Government of Kerala, Thiruvananthapuram.
- 2) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110 032.
- 3) The Member Secretary, Kerala State Pollution Control Board, Palamoodu Junction, Pattom Place, P.O. Thiruvananthapuram - 695 004.
- 4) 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 - 560034.
- 5) IA - Division, Monitoring Cell, MoEF, New Delhi - 110003.
- 6) Guard file.



**(Dr. R. Warriér)
Director**