

F.No.21-48/2018-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: 7<sup>th</sup> June, 2019

To,

**M/s Dragonstone Realty Private Limited**  
9, Belhaven Gardens, Kowdiar  
Thiruvananthapuram - 695003 (Kerala)  
Email: [binu@synergyind.com](mailto:binu@synergyind.com)

**Subject: Proposed Commercial cum Office Complex project at Technopark Phase-3 Campus in (Non-SEZ plot) Sy. Nos. 290/2(part), 290/3(part) & others, Village Attipra, Taluk & District Thiruvananthapuram, Kerala by M/s Dragonstone Realty Private Limited - Environmental Clearance - reg.**

Sir,

This has reference to your online proposal No. IA/KL/NCP/74702/2018 dated 21<sup>st</sup> April, 2018, 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 Commercial cum Office Complex project at Technopark Phase-3 Campus in (Non-SEZ plot) Sy. Nos. 290/2(part), 290/3(part) & others, Village Attipra, Taluk & District Thiruvananthapuram, Kerala promoted by M/s Dragonstone Realty Private Limited was considered by the Expert Appraisal Committee (Infra-2) in its 32<sup>nd</sup> meeting held on 2-4 July, 2018. 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 08°32'57.39"N (Latitude) and 76°52'48.84" (Longitude).
- (ii) The project is fresh project for construction of commercial cum Office complex project. The total plot area is 3.9375 ha, FSI area is 1,24,353 sqm and total construction (built-up) area of 1,33,491 sqm. The project will comprise of Commercial retail shops and Offices with supporting infrastructure facilities shall be developed. Maximum height of the building is 90.25 m.
- (iii) During construction phase, total water requirement is expected to be 41 KLD which will be met by stored rain water in pond/tanks water for construction and KWA/Techno park supply for meeting the domestic water requirement. During the construction phase, mobile STP will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labor force.
- (iv) During operational phase, total water requirement will be 405 KLD. Total domestic water demand of the project is expected to be 320 KLD (which includes fresh water requirement of 174 KLD from Kerala Water

Authority/Rain water and recycled water. Wastewater generated (256 KLD) uses will be treated in STP of total 308 KLD capacity. 231 KLD of treated wastewater will be recycled (213 KLD for flushing, 5 KLD for gardening and 13 KLD for makeup water required for cooling towers attached with HVAC system. No treated water will be disposed in to drain.

- (v) About 1,612 kg/day solid waste will be generated in the project. The biodegradable waste (967 kg/day) will be processed in bio-gas generation unit / bio bin system and the non-biodegradable waste generated (645 kg/day) will be handed over to authorized local vendor.
- (vi) The total power requirement during operation phase is 8,493 kW and will be met from Kerala State Electricity Board & DG Sets (standby) and total power requirement during construction phase is 500 KVA and will be met from Kerala State Electricity Board & DG Sets (standby).
- (vii) Rooftop rainwater of buildings will be collected in RWH tanks with appropriate capacity for harvesting after filtration.
- (viii) Parking facility for 1,217 Cars + 1,521 two wheelers is proposed to be provided against the requirement of 1,217 Cars + 1,521 Two wheelers respectively (according to local norms).
- (ix) Proposed energy saving measures would save about 23% of power.
- (x) No Eco Sensitive areas are located within 10 km radius.
- (xi) There is no court case pending against the project.
- (xii) Investment cost of the project is Rs. 540 Crores.
- (xiii) Employment potential about 3,500 jobs.
- (xiv) Benefits of the project: The project would provide better offices facilities with commercial retail shopping area with supporting infrastructure facilities and amenities to the people. Direct and indirect employment opportunities. The potential for employment and access to new services may draw people to the area around the project. There will be an increase in economic activity and employment for the local community, local skills development. Employment opportunities generation and Revenue to the State.

3. The project/activity is covered under item 8(a) 'Building and Construction Projects' of the Schedule to the EIA Notification, 2006 and its amendments, and requires appraisal at State level. However, due to non-existence of SEIAA/SEAC in Kerala, the proposal is appraised at Central Level by sectoral EAC.

4. The EAC, in its 32<sup>nd</sup> meeting held on 2-4 July, 2018, after detailed deliberations on the proposal and submission made by the project proponent, 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 Commercial cum Office Complex project at Technopark Phase-3 Campus in (Non-SEZ plot) Sy. Nos. 290/2(part), 290/3(part) & others, Village Attipra, Taluk & District Thiruvananthapuram, Kerala promoted by M/s Dragonstone Realty Private Limited, 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.

**Topography and natural Drainage**

- (iv) 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**

- (v) As proposed, fresh water requirement from Kerala Water Authority/Rain water shall not exceed 174 KLD.
- (vi) A certificate shall be obtained 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.
- (vii) 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.
- (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. Adequate no. of rain water harvesting tanks shall be provided for harvesting after filtration.
- (xiv) As proposed, no ground water shall be used during construction/ operation phase of the project.
- (xv) Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.

#### **Solid Waste Management**

- (xvi) The provisions of the Solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
- (xvii) 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.
- (xviii) 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 Bio gas generation plant/ bio bin system. As proposed 500 sqm area 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.
- (xix) 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.
- (xx) 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 shall be obtained.

#### **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, gardening, HVAC Cooling. As proposed, no treated water shall be discharged to Municipal drain.

- (xxii) The project/activity shall be dove tailed with the sewerage collection and disposal facilities to be created by the Municipal Corporation/Competent State Authorities so that all sewage generated in the construction and operation phases is disposed accordingly. Necessary permission from the Municipal Authority shall be obtained.
- (xxiii) No sewage or untreated effluent water would be discharged through storm water drains.
- (xxiv) 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.
- (xxv) Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

## **Energy**

- (xxvi) 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.
- (xxvii) 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.
- (xxviii) 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. Follow super ECBC requirement of ECBC 2017 and provide compliance report.
- (xxix) 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.

- (xxx) 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 27<sup>th</sup> August, 2003 and 25<sup>th</sup> January, 2016. Ready mixed concrete must be used in building construction.
- (xxxi) A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.

### **Air Quality and Noise**

- (xxxii) 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.
- (xxxiii) 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.
- (xxxiv) 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.
- (xxxv) 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.
- (xxxvi) For indoor air quality the ventilation provisions as per National Building Code of India.
- (xxxvii) Ambient noise levels shall conform to Commercial Standard 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.

(xxxviii) A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.

### **Green Cover**

(xxxix) No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the Tree Authority constituted as per the Kerala Preservation of Trees Act, 1986 (Act 35 of 1986). Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).

(xl) 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. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. Where the trees need to be cut 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) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). As proposed 5,906 sqm area shall be provided for green area development.

### **Top Soil preservation and Reuse**

(xli) 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**

(xlii) 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

(xliii) A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 02 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 02 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the

P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

- (xlv) 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**

- (xlv) An environmental management plan (EMP) as prepared and submitted along with the Form-1/1A shall be 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**

- (xlvii) 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.
- (xlviii) A First Aid Room shall be provided in the project both during construction and operations of the project.
- (xlviii) The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
- (xlix) As per the Ministry's Office Memorandum F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, and proposed by the project proponent, an amount of Rs. 5.4 Crore (@1.0% of project Cost) shall be earmarked under Corporate Environment Responsibility (CER) for the activities such as Waste Management, Promotion of Education, Healthcare, Water Conservation, Infrastructural Development etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

#### **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 concerned Regional Office of MoEF&CC 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 concerned APCCF, Regional Office of MoEF&CC.
- (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 concerned Regional Office of this Ministry.
- (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, SO<sub>2</sub>, NO<sub>x</sub> (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 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 MoEF&CC by e-mail.
5. This clearance is subject to orders/final outcome of the Hon'ble NGT in the Original Application No. 875 of 2018 in the matter of Thomas Lawrence Vs State of Kerala and in Original Application No. 71 of 2019 in the matter of Sanjeev S J, President Environmental Protection and Research Council Vs State of Kerala.
6. This issues with the approval of the Competent Authority.

  
(Kushal Vashist)  
Director

**Copy to:**

- 1) The Secretary, Department of Environment, Government of Kerala, Thiruvananthapuram.
- 2) The Chief Conservator of Forests and Member Secretary, Kerala CZMA, Science & Technology (A) Department, Sasthra Bhavan, Pattom, Thiruvananthapuram - 4.
- 3) The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
- 4) The Member Secretary, Kerala State Pollution Control Board, Pattom P.O., Thiruvananthapuram - 695 004, Kerala.
- 5) The Addl. Principal Chief Conservator of Forests (Central), Ministry of Environment, Forests and Climate Change, Regional Office (SZ), Kendriya Sadan, 4<sup>th</sup> Floor, E&F Wing, II Block Koramangala, Bengaluru - 560034.
- 6) Guard File, Monitoring File.
- 7) MoEF&CC website.

  
(Kushal Vashist)  
Director