

Government of Maharashtra

FileNo.: SEAC- 2010/CR.280/TC.2

Environment department,

Room No. 217, 2nd floor,

Mantralaya Annexe,

Mumbai 400 032

Date: 8th September, 2010

To,
M/s. Shivam Developers,
208, Western Tower,
Western Express Highway,
Near Bislery, Andheri (East),
Mumbai, Maharashtra.

Subject: Slum Rehabilitation Project at village Akurli, Hanuman Nagar, Kandivali (E) by M/s. Shivam Developers.- Environmental clearance regarding.

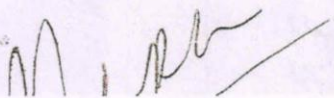
Sir,

This has reference to your communication dated 3rd October, 2009 on the above mentioned subject. The proposal was considered as per the EIA Notification - 2006, by the State Level Expert Appraisal Committee, Maharashtra in its 26th meetings and decided to recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 25th meeting held on 7th August, 2010. Project proponent has submitted EIA report.

2. It is noted that the proposal is for grant of Environmental Clearance for Slum Rehabilitation Project at village Akurli, Hanuman Nagar, Kandivali (E) by M/s. Shivam Developers. SEAC considered the project under screening category is 8(b) as per EIA Notification 2006.

Project information from documents submitted by you & considered by SEAC & SEIAA is summarized as below-

Name of the Project	: Proposed Slum Rehabilitation Project
Project Proponent	: M/s. Shivam Developers.
Location of the project	: Plot bearing CTS No. : 163 - A (pt) of village Akurli, at Hanuman Nagar, Kandivali (E), Mumbai
Type of Project	: Construction Project
Total Plot Area	: 38637.81 sq. m.
Proposed Total built up area	: <ul style="list-style-type: none">• Built up area as per FSI: 1,08,487.37 sq. m.• Built up area as per Non FSI: 58,959.36 sq. m.• Total Built up area: 1,67,446.73 sq. m.
Estimated cost of the project	: ₹ 388.5 Cr
No. of Buildings	: 8 buildings compromises following : <ol style="list-style-type: none">1. Residential Flats: 1377 nos.2. Shops: 117 Nos.3. R/C: 24 Nos.4. Amenities: 51 Nos.5. PAP: 166 Nos.



Reservation: Secondary School : 157.92 Sq. m.
Primary School : 378.90 Sq. m.

Sale component: 6 buildings with 1202 nos. of flats & shops with
BUA : 1845 Sq. m.

Water Requirement: Total: 1859 m3/day
1. Fresh water: 1205 m3/day from MCGM
2. Recycled water: 654 m3/day from STP

Wastewater generated: 1592 m3/day; Wastewater will be treated in 2 STPs having

Capacity of STP for Sale building: 725 m3 /day

Capacity of STP for Rehab building: 950 CMD recycled water will be used for flushing, gardening excess 779 m3/day treated water will be drained to sewer line.

Rain water Harvesting:

1. Rain water from terrace area will be collected in Rain water Harvesting Tank and will be used for domestic purpose after treatment. 6 RWH tanks of total 345 m3 will be provided.
2. Rainwater from the landscape area and hardscape area will be used to recharge the ground water sources. 12 recharge pits will be provided.
3. Ground Water Authority / Board shall be consulted for finalization of appropriate rainwater harvesting technology.

Solid Waste Generation:

- a) Dry garbage: 1922 kg/day
- b) Wet garbage : 4359 kg/day
- c) STP Sludge : 239 kg/day

Disposal:

- Biodegradable waste will be treated by organic waste converter
- Non biodegradable waste will be disposed through authorized contractor
- STP Sludge would be used as manure.

Energy:

Power Requirements during construction phase: 100 KW and during operation phase: connected load: 22743 KW & Max. Demand: 14820 KW Source: Local Authority
DG sets of 600 kVA capacity will be provided.

Energy Conservation:

1. Use of CFL/ T5 tubes and bulbs will be used whenever possible.
2. Timer for switching on/ off of common area lights for sale building.
3. Alternate circuit for common area light (through timer) for sale building
4. Use of solar energy for area lighting.
5. Under deck insulation will be used on the roof to reduce heat gain through roof for sale building.
6. Use of building management system (BMS) to have effective control to save energy.
7. PP cement will be used which contain 15% ash.

Green Belt Development: area for green belt: 5869.88 sq. m, Nos. of new trees to be planted: 616 trees + 112 existing trees

Traffic Management: parking area: 14775.18 sq. m. 4 - wheeler : 801 & 2- wheeler : 97 nos, will be provided.

Environmental Management Plan:

Construction phase: ₹ 22.1 Lakhs & during Operation Phase: Total capital cost for EMP shall be ₹ 424.54 Lakhs and O & M for EMP shall be ₹ 108.64 lakhs.

Budgetary Allocation for EMP:**Construction phase:**

Sr. No.	Parameter	Total cost (in lakhs)
1	Water For Dust Suppression	0.72
2	Site Sanitation	0.50
3	Environmental Monitoring	1.08
4	Disinfection	1.80
5	Health Check Up	18
6	Total Cost	22.1

Operation Phase:

Sr. No.	Parameter	Set up cost (In lakhs)	Operational And Maintenance Cost (In Lakhs/Annum)
1	STP Cost	183	75.54
2	Rain Water Harvesting recharging pits	3.6	0.18
3	Rain Water Harvesting Tanks	24.15	1.21
4	Environmental Monitoring	Outside MoEF approved agency for monitoring	20.36
5	Solar lights	7.5	0.15
6	Solar	134	0.03
7	Gardening	32.28	5.17
8	Solid waste Management	40	6.0
	Total	424.54	108.64

Environmental Management Plan shall be implemented as follows:

Component	During construction phase	During operation phase
Air & Noise Environment	<ul style="list-style-type: none"> • Use of RMC • Dust control: water sprinkling, cover on trucks • Barricades provided along the periphery of the site. • Ear plugs for laborers. • Vehicle trips : PUC , Night trips, smooth flow. • No noise pollution work during night trips, smooth flow • DG: as per CPCB norms, Proper Maintenance, LSD fuel use, proper and safe storage of fuel. 	<ul style="list-style-type: none"> ▪ Use of CFC free refrigerators ▪ Use of DG [Standby Backup] as per CPCB norms and LSD fuel shall be used ▪ Acoustical Enclosures for DG sets ▪ Providing trees on the Site ▪ Adequate Parking provision. ▪ Smooth traffic flow and regulation : PUC shall be checked
Water	<ul style="list-style-type: none"> • Drinking water check up. 	<ul style="list-style-type: none"> ▪ Rain water harvesting

Environment	<ul style="list-style-type: none"> • Provision of temporary toilets • Construction water will be channelised properly before disposal into municipal drain. • Use of tanker water for construction. No burden on municipal water supply. 	<ul style="list-style-type: none"> ▪ Recycling of water through STP ▪ Storm water drainage will be properly maintained.
Land Environment	<ul style="list-style-type: none"> • Separate storage of Construction material and debris • Usage of Oil trays wherever oil spillage is expected. • Most use of electrically operated machinery instead of diesel • Disposal of debris to authorized contractor. • Segregation of garbage. • Top soil will be stock piled and maintained for green belt development. 	<ul style="list-style-type: none"> ▪ Segregation at source for all solid waste streams ▪ Proper disposal of waste through well managed Solid waste management team ▪ Dry waste will be recycled. ▪ Wet garbage shall be composted and will be used as manure. ▪ Use of paver blocks instead of fully impermeable pavement to control run off.
Biological Environment	<ul style="list-style-type: none"> • Plantation of trees for operational phase will start in mid of construction phase • Regulation of vehicular trips and proper maintenance of machinery 	<ul style="list-style-type: none"> • Landscaping, avenue plantation • Plant species selected based on adaptability to geographic conditions and • keeping in view the local species and their benefits to site. • Providing trees on the site
Socio economic Environment	<ul style="list-style-type: none"> • Adequate drinking water, toilet and bathing facilities. • Personal protective and safety equipments will be provided. • First aid facility. • Regular health check up • Regular pest control will be done. • Educational and awareness programme for safety measures. 	<ul style="list-style-type: none"> • Environmental awareness programme for surrounding area. • Emergency preparedness plan will be explained with the help of local NGO's

Environmental Monitoring Plan:

All parameters shall be monitored by MOEF approved lab.

During Construction Phase:

Item	Parameters	Frequency	Location
Ambient Air Quality	SPM,RSPM,SO2 NOX ,HC & CO	Quarterly	At major construction area. (total 4 stations)
Noise Level	Equivalent noise Level dB(A)	Daily	At major construction area.
Water Analysis	Physical,	Monthly	Municipal water supply

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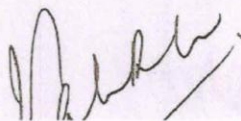
	chemical and Biological parameters		
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During Operation Phase:

Item	Parameters	Frequency	Location
Ambient Air Quality	SPM,RSPM,SO ₂ , NOX,HC & CO	Quarterly	Total 4 Stations around periphery of the site.
Noise Level	Equivalent noise level	Quarterly	Near DG sets, Near STP, Near parking area.
Exhaust from DG Set	SPM, SO ₂	Quarterly	Stack of DG sets.
Water Analysis	Physical, chemical and Biological parameters	Weekly during rainy season	Harvested water stored in tank(After treatment)
Wastewater Analysis	pH, BOD, COD, TSS TDS, O & G	Daily	Before & after treatment from STP.

3. The proposal has been considered by SEIAA in its 25th meetings & decided to accord environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions :-

- (i) The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. ULB should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.
- (ii) "Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.
- (iii) All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.
- (iv) A First Aid Room will be provided in the project both during construction and operation of the project.
- (v) 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.
- (vi) Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
- (vii) Arrangement shall be made that waste water and storm water do not get mixed.
- (viii) All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.
- (ix) Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.



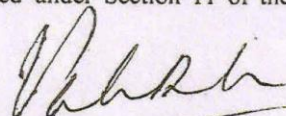
- (x) Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.
- (xi) Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- (xii) 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.
- (xiii) Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.
- (xiv) Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.
- (xv) The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.
- (xvi) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.
- (xvii) 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.
- (xviii) Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise 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/MPCB.
- (xix) 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. (The above condition is applicable only if the project site is located within the 100Km of Thermal Power Stations).
- (xx) Ready mixed concrete must be used in building construction.
- (xxi) The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of fire fighting equipments etc. as per National Building Code including measures from lighting.
- (xxii) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xxiii) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xxiv) The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.
- (xxv) 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 effluent emanating from STP shall be recycled/refused to the maximum extent possible. Treatment of 100% gray water by decentralized treatment should be done. Discharge of unused treated affluent shall conform to the norms and standards of the Maharashtra Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.

- (xxvi) Project proponent shall ensure completion of STP, MSW disposal facility prior to occupation of the buildings and should obtain completion certification for these systems/aspects from MPCB.
- (xxvii) Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.
- (xxviii) Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- (xxix) Separation of gray and black water should be done by the use of dual plumbing line for separation of gray and black water.
- (xxx) 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.
- (xxxi) 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
- (xxxii) Use of glass may be reduced up to 40% to reduce the electricity consumption and load on airconditioning. If necessary, use high quality double glass with special reflective coating in windows.
- (xxxiii) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement
- (xxxiv) 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 recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible like installing solar street lights, common solar water heaters system. Project proponent should install, after checking feasibility, solar plus hybrid non conventional energy source as source of energy.
- (xxxv) 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 Maharashtra Pollution Control Board.
- (xxxvi) Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- (xxxvii) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.
- (xxxviii) Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfill requirement
- (xxxix) The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation
- (xl) 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.
- (xli) 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.
- (xlii) Six monthly monitoring reports should be submitted to the Department and MPCB.



- (xliii) A complete set of all the documents submitted to Department should be forwarded to the MPCB
 - (xliv) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.
 - (xlv) No land development / construction work preliminary or otherwise relating to the project shall be taken up without obtaining due clearance from respective authorities.
 - (xlvi) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
 - (xlvii) Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department.
 - (xlviii) The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at <http://envis.maharashtra.gov.in>.
 - (xlix) Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1st June & 1st December of each calendar year.
 - (i) A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation 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.
 - (ii) 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, 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.
 - (iii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
 - (lii) 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 by e-mail.
 - (liv) The environmental clearance is being issued without prejudice to the court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him.
4. Project proponent should submit exactly same documents for approval of building plans to the concern authority as per the documents submitted to the SEIAA for prior Environmental Clearance

5. Project proponent shall not make any change in Layout Plan/ Master Plan submitted to the Authority without its prior permission and shall submit approved layout plan to Department before commencement of construction work.
6. In case of submission of false document and non compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environmental Clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.
7. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.
8. **Validity of Environment Clearance:** The environmental clearance accorded shall be valid for a period of 5 years.
9. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
10. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.
11. Any appeal against this environmental clearance shall lie with the National Environmental Appellate Authority, if preferred, within 30days as prescribed under Section 11 of the National Environmental Appellate Act, 1997.


 (Valsa R Nair Singh)
 Secretary, Environment
 department & MS, SEIAA

Copy to:

1. Shri. Ashok Basak, IAS (Retd.), Chairman, SEIAA, 502, Charleville, 'A' Road, Church gate, Mumbai- 400 020, Maharashtra.
2. Shri. P.M.A Hakeem, IAS (Retd.), Chairman, SEAC, 'Jugnu' Kottaram Road, Calicut- 673 006 Kerla.
3. Additional Secretary, MOEF, 'Paryavaran Bhawan' CGO Complex, Lodhi Road, New Delhi - 110510
4. Member Secretary, Maharashtra Pollution Control Board, with request to display a copy of the clearance.

5. The CCF, Regional Office, Ministry of Environment and Forest (Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No- 3, E-5, Ravi-Shankar Nagar, Bhopal- 462 016). (MP).
6. Regional Office, MPCB, Mumbai.
7. Collector, Mumbai.
8. Commissioner, Brihan Mumbai Municipal Corporation.
9. IA- Division, Monitoring Cell, MoEF, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-110003.
10. Director (TC-1), Dy. Secretary (TC-2), Scientist-1, Environment Department.
11. Select file (TC-3).