STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

Pranisampad Bhavan, Block 'LB'-2, 5th Floor, Sector – III, Salt Lake, Kolkata – 700 106

Telefax No. 033 2335 5246

Website: www.environmentwb.gov.in

No.

352 /EN/ T-II-1/033/2017

Date: 21 / 02 /2019

To

M/s. Belmont Devcon Pvt. Ltd. 69, Ganesh Chandra Avenue Kolkata – 700 013

SUB.: Environmental Clearance for proposed residential complex at 271, Sodepur Road(E), Madhyamgram, North 24 Parganas, West Bengal by M/s. Belmont Devcon Pvt. Ltd.
Sir.

This has a reference to your application dated 22/05/2017 and subsequent communications for Environmental Clearance for the proposed residential complex at 271 Sodepur Road(E), Madhyamgram, North 24 Parganas, West Bengal.

The proposal has been examined and processed in accordance with the EIA Notification, 2006. The proposed project is for construction of a residential complex consisting of: Tower 1 - B+G+XI, Tower 2 - B+G+XI storied. Total no. of flats: 254. Total built up area of the project is 26491.5 sq. m.

It is noted that the salient features of the project, for which Environmental clearance has been considered are as follows:

Salient Features	Proposed project		
Land area	6474.97sqm		
Block Details	Residential Complex: Tower 1- B+G+XI, Tower 2-B+G+XI storied		
Nos. of flats	254Nos.		
Expected Population	Total-1635 persons (Permanent-1145 persons, Temporary-490 persons)		
Total Water requirement	208KLD		
Fresh Water requirement	134KLD (Madhyamgram Municipality supply)		
Wastewater generated	149KLD		
Wastewater recycled	74 KLD (Landscaping-12 KLD, Dual Flushing -52 KLD, Car Washing -10 KLD)		
Wastewater discharged	75KLD		

Salient Features	Proposed project		
Solid Waste disposal	610 kg/day (operational phase), 45kg/day (constructional phase)		
Total Built-up Area	26491.5sqm		
Ground Coverage	3182.46 sqm (49.15%)		
Exclusive Tree Plantation Area	1307.43 sqm (20.19%)		
Total Paved Area	1040.25 sqm (16.07%)		
Total Green Area	1451.18 sqm (22.41%)		
Service Area	801.08 sqm (12.37%)		
No. of Solar Street lights proposed	12nos.		
Nos. of Parking spaces proposed	249 nos.		
No. of Trees proposed	95nos. (in addition existing 3 trees to be retained)		
Total Power requirement	740 KVA, CESC		
Use of solar power	At least 1% of total demand load to be met from solar power source.		
Backup Power	DG sets (1 no 500 KVA, 1 no 250 KVA & 1 no 150 KVA)		

State Level Environment Impact Assessment Authority (SEIAA), examined the proposal and also perused recommendations of the State Level Expert Appraisal Committee (SEAC). After due consideration of the project proposal, and after considering the recommendations of the State Level Expert Appraisal Committee (SEAC), the State Level Environment Impact Assessment Authority accords Environmental Clearance to the project as per provisions of the EIA notification no. S.O. 1533 (E) dt. 14th September, 2006 of Ministry of Environment & Forests, GOI, subject to strict compliance of terms and conditions as mentioned below.

Part A - SPECIFIC CONDITIONS

I. Construction Phase

(a) Steps to avoid disturbance during construction: -

i. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas and external services. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.

ironment Impact Assessment Author

- ii. All the topsoil excavated during construction activities should be under cover/stored by retaining walls for use in horticulture / landscape development within the project site. Adequate erosion and sediment control measures to be adopted before ensuing construction activities.
- iii. Prior permission should be obtained from the competent authority for demolition of the existing structure, if any. Waste recycling plans should be developed for prior to beginning of demolition and construction activity. The plans should identify wastes to be generated and designate handling, recycling and disposal method to be followed.
- iv. Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighbouring communities and disposed off taking the necessary precautions for general safety and health aspects.
- v. Diesel generator sets during construction phase should have acoustic enclosures and should conform to E(P) Rules prescribed for air and noise emission standards.
- vi. Vehicles / equipment deployed during construction phase should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peaking hours. Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
- vii. Ambient noise levels should conform to residential standards both during day and night. Fortnightly monitoring of ambient air quality (PM, SO₂ and NO_x) and equivalent noise levels should be ensured during construction phase.
- viii. Construction spoils including bituminous material and other hazardous materials including oil from construction equipments 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. If necessary, oil trap should be installed where there is deployment of heavy machineries.
- ix. 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.
- x. Regular supervision of the above and other measures should be in place all through the construction phase so as to avoid disturbance to the surroundings. Discomfort in the neighbourhood due to the proposed project activity should be minimized as far as practicable.
- xi. Loading and unloading operations should not be carried out in open areas and should be preferably done during day time, if there is any major settlement in the surrounding areas. The construction activities including Piling work, Operation of Ready Mix Plant and Vibrator etc. should not be carried out during the night time (10 P.M. to 6 A.M.). Only essential operations, if any, may be carried out for a limited period during nighttime.
- xii. The proponent must ensure that no driven piles shall be proposed for this project, if there is any major settlement in the surrounding areas.
- xiii. 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 3m height).
- xiv. Use of Ready-Mix concrete is recommended for this project.
- xv. Adequate measures to be adopted to avoid wastage of water for curing of concrete structures.

- xvi. Adequate mitigative measures should be adopted to control dust emissions, noise and vibrations from construction activities. Vehicles and construction machineries should be properly maintained. Vehicles should conform to Pollution under control (PUC) norms.
- xvii. Locally available materials with less transportation cost should be used preferably.
- xviii. Promotion of use of cleaner fuel and fuel quality improvement should be done. Excessive energy consumption and fuel usage should be avoided.
 - xix. Accumulation / stagnation of water should be avoided to ensure vector control.

(b) Selection of materials for better energy efficiency: -

- i. Use of energy efficient construction materials should be ensured to achieve the desired thermal comfort.
- ii. Design layout should ensure adequate solar access and ventilation. Proper planning and window design for daylight integration should be considered.
- iii. Fly Ash is to be used for construction as per Notification No. S.O. 763(E) dated 14.09.1999 amended vide Notification No. S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 03.11.2009 and S.O.254(E) dated 25.01.2016 of the Ministry of Environment & Forests, Govt. of India.
- iv. Construction should conform to the requirements of local seismic regulations. The project proponent should obtain permission for the plans and designs including structural design, standard and specifications from concerned authority.
- v. Construction technologies that require less material and possess high strength should be adopted. Materials with low embodied energy and high strength should be used preferably.
- vi. The building will be constructed and provisioned to use natural sunlight to the maximum during the day time, during use.
- vii. Use of alternate building materials and alternate construction techniques should be considered apart from the conventional materials and methods. Use of hollow unit masonry should be considered.
- viii. 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.
 - ix. Use of energy efficient lighting systems e.g. LED etc. should be promoted. Solar energy should be used for outdoor lighting. Adequate no. of solar lights should be installed for external lighting as per norms. All outdoor & common area lighting will be LED system.
 - x. Solar water heating arrangement will be provided to meet 20% of the hot water demand of the commercial and institutional building and as far as possible for residential buildings.
 - xi. 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.
 - xii. Proper insulation of roof should be provided to achieve desired thermal comfort. Use of light coloured, reflective roofs having an SRI (solar reflectance index) of 50% or more should be incorporated.
- xiii. Use of high albedo or reflective pavements to keep parking lots, pavements and inside roads cool should be incorporated.

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- xiv.Guidelines to the occupants should include usage efficiency measures such as energy efficient lighting and water efficient system.
- xv. Reduce hard paving-onsite (open area surrounding building premises) and/or provide shade on hard paved surfaces to minimize heat island effect and imperviousness of the site.
- xvi. Adequate open space, greenery and water bodies to be provided as per rules.
- xvii. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured.
- xviii. Any proposed building with air-conditioning facility should follow the norms proposed in the ECBC regulations framed by the Bureau of Energy Efficiency. Chillers should be CFC & HCFC free.
 - xix. Restrict the use of glazed surface as per National Building Code 2005 and as amended thereafter.
 - xx. Wall, window and roof u-values shall be as per ECBC specifications.
 - xxi. At least 1% of total demand load to be met from solar power source.

(c) Water Body Conservation: -

- i. Existing water body (if any) should not be lined and the embankment should not be cemented. The water body is to be kept in natural condition without disturbing the ecological habitat.
- ii. No construction is allowed on wetland and water bodies.

(d) Plantation Proposal: -

- i. The unit should strictly abide by The West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006 and subsequent rules. The proponent should undertake plantation of trees over at least 20% of the total area.
- ii. No tree can be felled without prior permission from the Tree Cutting Authority constituted as per the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006 and subsequent rules.
- iii. The proponent should plant at least 95 trees and retain existing 3 trees. Indicative list of species for plantation is given at Annexure I. 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.
- iv. Provision for Roof Top Gardening is mandatory.

(e) Water supply: -

 Water requirement during construction phase shall be met from Madhyamgram Municipality supply. Ground water should not be abstracted without prior permission from the competent authority as per the West Bengal Ground Water Resources (Management, Control and Regulation) Act, 2005.

(f) Sewage Treatment Plant: -

i. As per the proposal submitted by the proponent waste water shall be treated in septic tank to soak pit. Construction waste water to be collected in sedimentation trap with adequate retention time and to be reused.

(g) Storm water Management & Mitigation of Heat Island Effect: -

- i. Imperviousness of the site shall not exceed the NBC (National Building Code 2005 and as amended thereafter) standards for imperviousness factor applicable to different types of area.
- ii. At least 20% of the open spaces shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.

- iii. Total paved area of site under parking, roads, paths or any other use should not exceed 25% of the site area.
- iv. Adequate storm water drainage network to be designed for the project without disturbing the surrounding settlements. Storm water management plan should be implemented so as to prevent sudden discharge of excessive volumes of storm water to the receiving waters thus reducing the shock load on the drainage system and impact on receiving water body.
- 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.
- vi. Disruption to the natural hydrology of the site should be minimised by reducing impervious cover, increasing on site infiltration and managing storm water runoff.
- vii. Heat island effect should be minimized by use of shading or reflective surfaces, mainly the surfaces that contribute to the heat island effect i.e. streets, sidewalks, parking lots and buildings. White roofs should be provided in the buildings.

(h) Rain Water Harvesting Scheme: -

- i. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided.
- ii. The proponent must collect rainwater from roof-top catchments and reuse for various purposes after necessary cleaning. Adequate retention time and storage provisions should be provided for harvesting rainwater.
- iii. All recharge should be limited to shallow aquifer.

(i) Solid Waste Management: -

- i. Conform to the guidelines on Environment Management of Construction & Demolition Waste by CPCB, March 2017.
- ii. Adequate provision shall be made for storage and segregation of solid waste and adequate means of access shall be provided.
- iii. 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.

(j) Transport Management: -

- i. Internal traffic planning and management should be adequate to ensure uninterrupted traffic movement in the area during construction as well as operation phase.
- ii. Clarified Wastewater will be used for sprinkling water on the unpaved internal roads on a regular basis.

(k) Others: -

- i. Notification G.S.R. 94(E) dated 25.01.2018 issued by MoEF & CC, Government of India should be complied with.
- ii. Conform to the clause mentioned in the "Manual and standards for EC for large construction projects" published by MoEF & CC, Government of India.
- iii. All mandatory approvals and permission as required from Director of Explosives, Fire Department etc. should be obtained.
- iv. Efficient management of indoor air quality must be ensured for health and safety of the users.

- v. Adequate measures to be adopted for water conservation during construction and operation stage.
 Use of efficient irrigation equipment, evaporative cooling unit in air-conditioning system etc should be considered.
- vi. Rest room facilities should be provided for service population.

II Operation Phase

(a) Water supply: -

- i. Water requirement during construction phase shall be met from Madhyamgram Municipality supply. Ground water should not be abstracted without prior permission of the competent authority as per the West Bengal Ground Water Resources (Management, Control and Regulation) Act, 2005.
- ii. Use of water meter conforming to ISO standards should be installed at the inlet point of water uptake to monitor the daily water consumption. Use of water efficient devices / fixtures and appliances should be promoted..
- iii. The proponent must practice rainwater harvesting on regular basis.

(b) Sewage Treatment Plant: -

- i. As per the proposal submitted by the proponent, waste water shall be treated in STP. Treated waste water shall be partly reused for toilet flushing through dual plumbing, landscaping, internal road and pavement cleaning etc. Excess treated water shall be discharged as per CPCB norms.
- ii. Backup power for operation of STP should be kept during power failure.

(c) Emission from Diesel Generator Set: -

- i. Noise barriers will be provided at appropriate locations so as to ensure that the noise levels do not exceed the prescribed standards. Diesel generator sets should be provided with integral acoustic enclosure at the manufacturing stage itself as per CPCB norms.
- ii. The stack height and emissions from D.G. sets should conform to the norms of Central Pollution Control Board. The certification of space design for DG sets should be done by competent authority.

(d) Ensure Energy Efficiency: -

- i. Use of energy efficient construction materials to achieve the desired thermal comfort should be incorporated. The desired level of R and U factors must be achieved. U factor for the top roof should not exceed 0.4 Watt/sq.m/degree centigrade with appropriate modifications of specifications and building technologies. The provisions of National Building Code 2005 and as amended thereafter should be strictly followed.
- ii. Use of energy efficient electrical systems should be promoted. High efficiency lamps with electronic ballasts should be used.
- iii. Energy efficient Motors and properly rated Transformers should be installed. Manufacturer's certificate to this effect shall be obtained and kept on record. Backup power supply should be based on cleaner fuel.
- iv. The power cabling shall be adequately sized as to maintain the distribution losses not to exceed 1% of the total power usage. Record of transmission losses shall be maintained. The proponent shall install permanent electrical metering to record demand (kVA), energy (kWh) and total power factor.
- v. At least 1% of total demand load to be met from solar power source.

(e) Transport Management: -

i. Adequate parking space should be provided as per norms.

ii. Pathways should be covered or shadowed by tree canopy as far as practicable. Traffic within the project site should be restricted by regulation. Adequate vertical and horizontal clearances of overhead electric power and telecommunication lines should be provided.

(f) Solid Waste Management: -

- i. The proponent should abide by the Solid Waste Management Rules, 2016. The proponent must develop the Solid Waste Management and Disposal Scheme ensuring storage and segregation of biodegradable and non-biodegradable wastes. The solid waste is to be disposed off in consultation with concerned authority.
- ii. The proponent shall install onsite compost plant for treatment of biodegradable part of Municipal Solid Waste. Sufficient space for installation of onsite compost plant should be provided and operation of the compost plant considering full occupancy of the apartments i.e. the capacity of garbage disposal unit should be selected accordingly.
- iii. The handling agency should also take care of the recyclable wastes like plastic, paper board, glass etc. and also inert materials in case of respective municipal authorities want to avoid any kind of waste from the housing complex.
- iv. The proponent should have sufficient area for horticulture where the compost generated can be used as fertilizer and soil supplement and also have arrangement for sale of excess quantity of compost.
- v. Provision for treatment of leachate generated and odour control in on-site compost plant should be made.
- vi. Non-recyclable inorganics and rejects will be disposed off through concerned authority as proposed.
- vii. The proponent should provide different coloured bins for different categories of waste and ensure complete segregation of biodegradable and non-biodegradable wastes. The solid waste from different collection and storage bins should be finally collected at transfer stations. Further segregation will be done at transfer stations to collect recyclables such as plastic, polythene, glass, metals, textiles, rubbers, leathers, paper etc. Separate compartments shall be provided for each type of recyclables.
- viii. The proponent should abide by the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Collection and storage of hazardous wastes during Pre-construction and Post-construction activity should be planned properly. The expected hazardous wastes should be disposed off separately as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
- ix. Spent oil from DG Sets should be stored in HDPE drums in isolated covered facility and disposed off as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Spent oil from DG Sets should be disposed off through registered recyclers only.
- x. The provisions of the Solid Waste Management Rules, 2016 and the E-waste (Management) Rules, 2016 and the Plastic Waste Management (Amendment) Rules, 2018 shall be followed.

(g) Others: -

- i. The implementation of Environmental Management Plan should be carried out, as proposed. Regular monitoring should be carried out during construction and operation phases.
- ii. The project proponent should provide guidelines to the users to ensure conservation of energy and water. In-house environmental awareness campaigns should be carried out at regular intervals to ensure environmental protection.

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- iii. Firefighting systems should be designed in compliance with the WBFS and NBC norms. Preventive measures should be adopted for Risk & Disaster Management as per the provisions of the National Building Code 2005 and as amended thereafter.
- iv. The Enterprise Social Commitment (ESC) Plan with specific financial commitment should be implemented for the proposed project. At least 2.5% of the total project cost should be utilized for Corporate Social Responsibility programmes.
- v. The proponent should abide by the Direction issued by the Department of Environment, Government of West Bengal, vide No. EN/3170/T-IV-7/001/2009 dated 10.12.2009.
- vi. Environmental Management Information System shall be maintained properly.
- vii. The proponent should restrict the use of glazed surface as per National Building Code 2005 and as amended thereafter.
- viii. All the recommendation made in the EIA/EMP report should be complied with.

Part-B GENERAL CONDITIONS

- i. The environmental clearance accorded shall be valid for a period of 7 years for the proposed project.
- ii. Prior Consent-to-Establish (NOC) for the proposed project must be obtained from WBPCB by the proponent. All other statutory clearances should be obtained by project proponent from the competent authorities.
- iii. The proponent should maintain a display board at the site, providing detailed information on the salient features of the proposed project.
- iv. The environmental safeguards contained in the EIA/EMP report should be implemented in letter and spirit.
- v. All the conditions, liabilities and legal provisions contained in the EC shall be equally applicable to the successor management of the project in the event of the project proponent transferring the ownership, maintenance of management of the project to any other entity.
- vi. The project proponent should make financial provision in the total budget of the project for implementation of the suggested safeguard measures.
- vii. Six monthly monitoring reports should be submitted to the West Bengal Pollution Control Board, who would be monitoring the implementation of environmental safeguards and should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents should also be forwarded to the State Level Environment Impact Assessment Authority, West Bengal and the Regional office of MoEF&CC, Bhubaneshwar.
- viii. In case of any violation of the conditions laid down in this Environmental Clearance, Section 16 of The Environment (Protection) Act, 1986, will be applicable. In case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, West Bengal.
- ix. The State Level Environment Impact Assessment Authority, West Bengal 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.
- x. The Project Proponent should inform the public that the proposed project has been accorded environmental clearance by the SEIAA, West Bengal and copies of the clearance letter are available

with the State Pollution Control Board / Committee and may also be seen at website of the SEIAA, West Bengal (http://environmentwb.gov.in). This should be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned.

- xi. Provision for incorporation of appropriate conditions in the Sale Agreement / Deed, for ensuring sustained Operation and Maintenance (O&M) of the common facilities (STP, Rainwater harvesting system, Solid waste management system, Solar street lights etc.) even after transfer of ownership of the project, should be made in explicit and transparent manner.
- xii. The above stipulations would be enforced along with those under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, the Public Liability Insurance Act, 1991, the Environment Impact Assessment Notification 2006 and their amendments.

xiii. The contact details of the proponent and the name of the consultant are given below –

Name of the Contact person with Designation	Mr. Nandu K Belani, Director		
Address	69, Ganesh Chandra Avenue, Kolkata – 700013.		
Email	parimalmullick@belanis.com		
Telephone Number	(033) 40105656		
Name of the Environmental Consultant	M/s. ULTRA-TECH		

Yours faithfully,

(Niraj Singhal, IFS) Chief Environment Officer & Member Secretary, SEIAA

21 / 02 /2019

Date:

No. 352 /EN/ T-II-1/033/2017 /1(4)

Copy forwarded to:-

- 1. Secretary, SEAC & M.S. WBPCB
- 2. Officer-in-Charge, Regional Office (Eastern Zone), Ministry of Environment, Forests & Climate Change, Government of India, A-3, Chandrashekharpur, Bhubaneswar 751 023, Orissa.
- 3. Member Convener, Monitoring Committee for Environmental Celarance.
- 4. Guard file / Record file.

Sd/-Chief Environment Officer & Member Secretary, SEIAA

Annexure - I

LIST OF TREES PROPOSED FOR PLANTATION

Sl. No.	BOTANICAL NAME	COMMON NAME	QUANTITY
1,:	Mimusops elengi	Bakul	20
2.	Lagerstroemia speciosa	Jarul	15
3.	Alstonia scholaris	Chatim	15
4.	Azadirachta indica	Neem	5
6.	Bauhinia variegata	Kanchan	10
7.	Michelia champaca	Champa	5
11,	Polyalthia longifolia	Devdaru	25
		Total	95

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