COMPLIANCE REPORT

UDITI DWELLINGS PVT. LTD.
for Jutika Kuyar Mahanty
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HALF-YEARLY COMPLIANCE (SESSION: APRIL 2023 TO SEPTEMBER 2023) OF STIPULATED ENVIRONMENTAL CONDITIONS/ SAFEGUARDS IN THE ENVIRONMENTAL CLEARANCE

REF.LETTER NO.F.No. SIA/OR/MIN/306394/2023 dated 05th December 2023

EC LETTER NO. F.No. SIA/OR/MIN/306394/2023 dated 05th December 2023

FOR "Multi-Storied Residential Project" located at Mouza-RaghunathpurJali ,Tehsil-Bhubaneswar, District – Khordha,Odisha by M/s Uditi Dwellings Private Limited

Sl. No.	Conditions	Status of Compliance
GENERAL CONDITIONS of Clearence :-		
1	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.	**Agreed.** We comply by the same.
2	The project proponent shall ensure that the guidelines for building and construction projects issued vide MoEF& CC's OM No. 19-2/2013-IA III dated 9th June, 2015, are followed to ensure sustainable environmental management	**Agreed.** The guidelines for building and construction projects issued vide MoEF& CC's OM No. 19-2/2013-IA III dated 9th June, 2015, will be followed to ensure sustainable environmental management
3	The approval of the Competent Authority shall be obtained in regard to structural safety of buildings against earthquake, adequacy of fire fighting equipment as per National Building Code including	**Agreed.** The approval has been obtained for structural safety as per National Building Code and the same is attached as **Annexure-I**

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	protection measures from lightning.	
4	The project proponent shall obtain all necessary clearance/ permission from all concerned agencies including Bhubaneswar Development Authority before commencement of work.	**Agreed**.All necessary clearance/ permission from all concerned agencies including Bhubaneswar Development Authority has been taken before commencement of work. Copy of the same is enclosed as **Annexure-II**.copy of CTE No.**4038/IND-II-CTE-6482** dated on 17/03/2021.Copy of the same is enclosed as **Annexure –III.**Fir NOC enclosed as Annexure-VII.AAI NOC enclosed as **Annexure-VIII.**and Forest NOC enclosed as **Annexure IX.**
5	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board.	**Agreed.**Consent to Establish has been obtained from State Pollution Control Board Odisha under Air and Water Act vide CTE No.**4038/IND-II-CTE-6482** dated on 17/03/2021.Copy of the same is enclosed as **Annexure –III.**
6	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.	**Agreed.** Provisions will 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 will be in the form of temporary structures to be removed after the completion of the project. Drinking water Photograph attached as **Annexure-IV and**

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		Temporary structure photographs attached as **Annexure-V.**
7	A First Aid Room shall be provided in the project both during construction andoperations of the project.	**Agreed.** A First Aid Room will be provided in the project both during construction and operations of the project. First Aid Photographs attached as **Annexure-VI.**
8	The company shall draw up and implement corporate Social Responsibility planas per the Companies Act of 2013.	**Agreed.**The company will implement corporate social responsibility plan as per the Companies Act of 2013. CER Activity Underteking as**Annexure-XXV.**
9	As per the MoEF& CC, Govt. of India Office Memorandum F.No.22-65/2017IA. III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(11) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, skill development, cross drains, solid waste management facilities, rain water harvesting, soil moisture conservation works, avenue plantation, etc. The activities proposed under CER shall be restricted to the affected area around the project. The activities proposed under the	**Agreed.** CER Activity Underteking as **Annexure-XXV.**

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	CER 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	
10	A copy of this Environmental Clearance letter shall be displayed on the websiteof the Odisha 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.	**Agreed.** Environmental Clearance letter enclosed as **Annexure-XII (a).** Transfer of Encironmental Clearance vide file no. SIA/OR/MIN/306394/2023 dated 05th December 2023. Copy of the same is enclosed as **Annexure- XII(b).**
11	Officials from the Regional Office of MoEF& CC, Bhubaneswar/SPCB, Odisha 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.	**Agreed and complied.**
12	In the case of any change(s) in the scope of the project, the project wouldrequire a fresh appraisal by the SEIAA, Odisha	**Agreed.**
13	The SEIAA, Odisha reserves the right to add additional safeguard measuressubsequently, if found necessary, and to take action including revoking of the environmenta clearance under the provisions of the environmental	**Agreed.**

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	(protection)act,1986 to ensure effective implemention of the suggested safeguard measures in a time bound and satisfactory manner.	
14.	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, 1912 etc. sham be obtained, as applicable by project proponents from the respective competent authorities.	**Agreed**. All the other statutory clearances will be obtained in due course of time.The Fire Recomendation is attached as **Annexure-VII** and AAI NOC is attached as **Annexure-VIII**andForest NOC has been obtained and copy of the same is enclosed as **Annexure-IX.**
15.	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 SEIAA, Odisha. The advertisement shall be made within seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.	**Agreed**. Advertisement copy attached as **Annexure-X.**
16.	A copy of the clearance letter shall be sent by the proponent to concernedPanchayat,	**Agreed**.

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	ZillaParisad/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 puton the website of the company by the proponent.	
17.	The proponent shall submit/upload six monthly reports on the status ofcompliance of the stipulated Environmental Clearance 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. Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely: SPM, RSPM, SO2, NOx (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 thecompany in the public domain.	**Agreed.** The record will be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.Lab Report attached as **Annexure-XX.**
18.	The environmental statement for each financial year ending 31stMarch in Form-V as is mandated to be submitted by the project proponent to the Odisha State Pollution Control Board as prescribed under the Environment (Protection) Rules,	**Agreed.**

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	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 besent to the respective Regional Offices of MoEF& CC, Govt. of India by e-mail.	
	Specific Conditions :-	
19.	The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any EcoSensitive Zone of Wild Life Sanctuary.	**Agreed**.We have obtained wildlife NOC copy is attached as **Annexure – XI.**
20	The site is required to be revisited by the same sub-Committee of SEAC afterone year of issue of Environmental Clearance order by SEIAA, Odisha to assess the status of implementation of commitment by the project proponentand conditions of Environmental Clearance order.	**Agreed**.The project proponent has obtained the Environmental Clearance from SEIAA, Odisha. Copy of EC is enclosed as **Annexure –XII.**
21.	BDA to obtain status of implementation of conditions of Environmental Clearance from SEIAA, Odisha before issue of occupancy certificate.	**Agreed**. EC is enclosed as **Annexure – XII.**
22.	The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effectthe proponent has to give a legal	**Agreed**.

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	affidavit before going for construction activity.	
23.	The project site was found to be a very low lying area. So, the base shall be at a suitable level, above the public road in consultation with the architect to avoid water logging during monsoon.	**Agreed.**
	Topography and Natural Drainage:	
24.	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.	**Agreed,** Site plan has been enclosed as **Annexure-XIII.**
	Water Budget and Rain Water Harvesting:	
25.	No ground water shall be extracted for the project work at any stage during the construction phase without obtaining the permission from the Water Resources Department, Govt. of Odisha/ CGWB.	**Agreed.**
26	As proposed, fresh water requirement from ground water shall not exceed 75 m^3 per day.	**Agreed and complied.**
27.	A certificate shall be obtained from the local body supplying water, specifying the total	**Agreed.**We have obtained Ground water withdrawal permission from

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	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.	CGWB Reginol office.The Water NOC attached as **Annexure-XIV.**
28.	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 and SEIAA, Odisha along with six monthly Monitoring reports.	**Agreed,**The quantity of fresh water usage, water recycling and rainwater harvesting will be measured and recorded to monitor the water balance as projected by the project proponent. The record will be submitted to the Regional Office, MoEFCC along with six monthly Monitoring reports.Lab Report attached as **Annexure-XX.**
29.	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.	**Agreed.** 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. Dual Plumbing plan is attached as **Annexure-XV.**
30.	Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall	**Agreed and complied.**

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	be incorporated in the building plan.	
31.	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.	**Agreed**Separation of grey and black water will 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 will be done. Dual Plumbing plan is attached as **Annexure-XV.**
32.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	**Agreed and complied.**
33.	The local bye-law provisions on rain water harvesting should be followed. Iflocal 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. Rain water harvesting recharge pits of adequate nosshall be provided.	**Agreed.**The local bye-law provisions on rain water harvesting will be followed. If local byelaw provision is not available, adequate provision for storage and recharge will be followed as per the Ministry of Urban Development Model Building Byelaws, 2016.RWH plan is attached as **Annexure-XVI.**
34.	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. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawal of	**Agreed.** .We have obtained Ground water withdrawal permission from CGWB.The Water NOC attached as **Annexure-XIV.**

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	water.	
35.	The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.	**Agreed and complied.**
36.	A complete plan for rainwater harvesting at the proposed site shall be drawn upand implemented. Roof top rain water harvesting shall be adopted for the proposed Buildings. The complete rainwater harvesting plan shall be submitted to SEIAA within one month from this day. As proposed, rain water harvesting pits for artificial ground water recharge shall be installed as per CGWB guidelines	**Agreed:**RWH plan is attached as **Annexure-XVI.**
	Solid Waste Management:	
37.	The provisions of the Solid Waste (Management) Rules, 2016, E-Waste(Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.	**Agreed.**The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules,2016will be followed .Soild Waste management plans during construction and operational phase are enclosed as **Annexure XXVI**.
38.	Disposal of muck during construction phase shall not create any adverse effecton 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	**Agreed.** Disposal of muck during construction phase is not created any adverse effect on the neighboring communities and is being disposed taking the necessary precautions for general safety and health aspects of

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	authority.	people, only in approved sites with the approval of competent authority.
39.	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate 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	**Agreed.** Separate wet and dry bins will be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste will be segregated into wet garbage and inert materials. SoildWaste management plans during construction and operational phase are enclosed as **Annexure XXVI**.
40.	Any hazardous waste generated during construction phase, shall be disposedoff as per applicable rules and norms with necessary approvals of the State Pollution Control Board.	**Agreed.** Any hazardous waste generated during construction phase, will be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
41	A certificate from the competent authority handling municipal solid wastes,indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.	**Agreed.**
	Sewage Treatment Plant:	
42.	STP of capacity 110 KLD shall be installed before start of the operation phase of the building. Treatment of 100% grey water by decentralized treatment should be done.	**Agreed.** STP of capacity 110 KLD will be installed before start of the operation phase of the building. Treatment of 100% grey water by

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	Treated waste water from both the STP shall be recycled / reused to the maximum extent possible. Discharge of unused treated waste water shall conform to the norms and standards of the Odisha State Pollution Control Board. Necessary measures should be taken to mitigate the odour problem from STP. The sewage treatment plant shall be made functional before the completion of Building Complex.	decentralized treatment should be done. Treated waste water from both the STP will be recycled / reused to the maximum extent possible. Discharge of unused treated waste water shall conform to the norms and standards of the Odisha State Pollution Control Board. Necessary measures should be taken to mitigate the odour problem from STP. The sewage treatment plant will be made functional before the completion of Building Complex.
43.	Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the Sung grain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.	**Agreed.**
44.	A certificate from the competent authority shall be obtained for discharging treated effluent untreated effluents into the Public sewer/disposal/drainagesystems along with the final disposal point.	**Agreed .**
45.	Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt.	**Agreed.** Separate large recharge pits will be constructed inside the project area to accommodate the rainwater in case the housing project period and

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	does not synchronize with reference to construction of road and drain.	the CDP of the Govt. does not synchronize with reference to construction of road and drain.
46.	No sewage or untreated effluent water would be discharged through stormwater drains.	**Agreed.** We will follow the same.
47.	The sewerage disposal system of the project shall be kept in proper working condition at all times.	**Agreed.**
48.	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 SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measuresmshould be made to mitigate the odour problem from STP.	**Agreed.** The installation of the Sewage Treatment Plant (STP) will be certified by an independent expert and a report in this regard will be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage will be conducted. Necessary measures will be made to mitigate the odour problem from STP.
49.	Sludge from the onsite sewage treatment, including septic tanks, shall becollected, 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.	**Agreed,** Sludge from the onsite sewage treatment, including septic tanks, will 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.
50.	The proponent shall obtain permission from	**Agreed.**

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	the concerned authority to discharge the liquid waste to the "BudhiNala" through the existing drain i.e. the competent authority of the drain and "Nala" before commencement of any activity at the project site. An undertaking to be submitted in form of a legal affidavit before going for construction activity.	
	Energy Conservation :	
51.	Compliance with the Energy Conservation Building Code (ECBC) of Bureau ofEnergy 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.	**Agreed.**
52.	Energy conservation measures like installation of CFLs / LED for the lightingthe 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	**Agreed.**

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	off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination	
53.	Solar, wind or other Renewable Energy shall be installed to meet electricitygeneration equivalent to 5% 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.	**Agreed.** Solar, wind or other Renewable Energy will be installed to meet electricity generation equivalent to 1 % of the demand load or as per the state level/ local building bye-law's requirement, whichever is higher.
54.	Solar power shall be used for lighting in the apartment to reduce the power loadon 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	**Agreed.** Solar power will be used to reduce the power load on grid.
55.	Use of environment friendly materials in bricks, blocks and other constructionmaterials, 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	**Agreed and using Fly Ash bricks.**

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	as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.	
56.	A certificate of adequacy of available power from the agency supplying powerto the project along with the load allowed for the project shall be submitted.	**Agreed.** PP has received electricity permission from TPCODL. Permission Letter Enclosed in **Annexure-**
	Air Management and Noise Management:	
57.	Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall beprovided 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, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, 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.	**Agreed.** Construction site will be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures will be provided for the building as well as the site. These measures will 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 will 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. Sand, murram, loose soil, cement, stored on site will be covered adequately so as to prevent dust

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		pollution. Wet jet will be provided for grinding and stone cutting. Unpaved surfaces and loose soil willl be adequately sprinkled with water to suppress dust.Site Barricaded photo attached as **Annexure-XVII.&**Coverd Material Photo & Dust Supress photo attached as **Annexure-XVIII.**
58.	All construction and demolition debris shall be stored at the site (and notdumped 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.	**Agreed,**All construction and demolition debris will 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 will 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.
59.	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding MandatoryImplementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with	**Agreed** and will be complied with.

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60.	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.	**Agreed.**The gaseous emissions from DG set will be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure will be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel will be used. The location of the DG set and exhaust pipe height will be as per the provisions of the Central Pollution Control Board (CPCB) norms.DG Set Photograph attached as **Annexure-XIX.**
61.	For indoor air quality the ventilation provisions as per per National Building Code ofIndia shall be provided.	**Agreed,** For indoor air quality the ventilation provisions as per per National Building Code ofIndia will be provided.
62.	Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone 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.	**Agreed.**Lab Report attached as **Annexure-XX.**
	Greencover:	
63.	Green-belt & avenue plantation of trees over	**Agreed.**Landscape plan is attached as

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	the area of 1636.54 sqm (22.1 %of plot area) shall be done using native tree species/shrubs improving greenery & keeping in view aesthetics considerations in the whole complex. The species with heavy foliage, broad leaves and wide canopy cover are desirable, Professional landscape architects should be engaged to design the green layout to provide for multi-tier plantation and green fencing all around, mitigating various environmental pollutants like dust, noise, emissions etc. Atleast 100 numbers of trees shall be planted and maintained at the site	**Annexure-XXI.**
64.	Rainwater from open spaces shall be collected and reused for landscaping andother purposes. Roof top rain water harvesting shall be adopted for the proposed Buildings. Rainwater harvesting at the proposed site shall be implemented. Before recharging the surface runoff, pre-treatment must be doneto remove suspended matter, oil and grease.	**Agreed.** Rainwater from open spaces will be collected and reused for landscaping and other purposes. Roof top rain water harvesting willl be adopted for the proposed Buildings. Rainwater harvesting at the proposed site shall be implemented. Before recharging the surface runoff, pre-treatment must be done to remove suspended matter, oil and grease.RWH plan Attached as **Annexure XVI.**
	Top Soil Preservation and Reuse:	
65.	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	**Agreed,** Topsoil will be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved

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	stockpiled ppropriately in designated areas and reapplied during plantation of the proposed vegetation on site.	areas, and external services. It will be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site. Site Photographs attached as **Annexure-XXII.**
	Traffic & Transportation:	
66.	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. a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. b. Traffic calming measures. c. Proper design of entry and exit points. d. Parking norms as per local regulation.	**Agreed.**A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), will 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. a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. b. Traffic calming measures. c. Proper design of entry and exit points. d. Parking norms as per local regulation,The traffic circulation plan is attached as **Annexure-XXIII.**
67.	A detailed traffic management and traffic decongestion plan shall be drawn upto ensure that the current level of service of the roads	**Agreed.** Detailed traffic plan is attached as **Annexure- XXIII.**

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	within a 01 km 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 theproject or other agencies in this 01 km radius of the site	
68.	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 nonpeak hours.	**Agreed:**Vehicles hired for will be construction material to the site are in good condition and vehicles not having PUC are strictly prohibited from site.
69.	A dedicated entry/exit and parking shall be provided for commercial activities.	**Agreed.**This is Residential project.
70.	Barricades shall be provided around project boundary.	**Agreed.** Barricades have been provided around project boundary.
71.	Speed of the vehicles shall be restricted upto 15 kmph by erecting speedbumps at regular intervals at project site and proper signage shall be providedfor guided vehicular movement and speed restrictions.	**Agreed.**
72.	Parking shall be prohibited on the access road to the proposed project site.	**Agreed** and will be complied with.
73.	Footpath shall be seamless with sufficient width.	**Agreed** and will be complied with.
74.	No vehicles shall be allowed to stop and stand	**Agreed** and will be complied with.

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	in front of the gate on main access.	
75.	A buffer of minimum 10 m shall be maintained between the entrylerit gate and the road to avoid traffic congestion	**Agreed** and will be complied with.
76.	The Traffic Management Plan prepared by the proponent shall be duty validated and certified by the State Concerned Competent Authority and shal have also their consent before implementation. The Competent Authority for validation is BMC / Works Deptt of the Govt. of Odisha. To this effect they have to submit a legal affidavit before going for construction activity	**Agreed.** Detailed traffic plan is attached as **Annexure- XXIII.**
	Environment Management Plan:	
77.	An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Coll 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	**Agreed.** Environmental Management Plan is attached as **Annexure-XXIV.**

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	environment monitoring and those related to the environment infrastructure	
78.	Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and should be spend accordingly and not to be diverted for any other purpose. Year wise progress of implementation of action plan for EMP and expenditure shall be reported to the SEIAA, Odisha, Regional Office MoEF& CC, Govt. of India. Bhubaneswar, SPCB along with the half yearlycompliance report.	**Agreed.** Environmental Management Plan is attached as **Annexure-XXIV.**
79.	It shall be mandatory for the project management to submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA)Odisha, SPCB & Regional Office of the Ministry of Environment & Forest. Odisha in hard and soft copies on 1 June and 1 December of each calendar year and the compliance report shall also be uploaded in the website of the MoEF& CC.	**Agreed.**Compliance receving attached copy **Annexure-XXVII.**
80.	Any appeal against this clearance shall lie with	**Agreed**, There is no appeal against the

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	the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	environmental clearance granted for the project.

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Authorised Signatory

Annexure-I

INDIAN INSTITUTE OF TECHNOLOGY DELHI

Department of Civil Engineering

Dr. A.K. Jain
Professor

Add. : Hauz Khas, New Delhi-110016
Phone : 26591202 (O), 26591995 (R)
Fax : 26581117
E-mail : akjain@civil.iitd.ernet.in
Dated :

Ref: IITD/IRD/CWG/CE/AKJAIN-4/20-21 Date: 13.05.2020

CERTIFICATE

Structural drawings for "proposed Residential Building on Plot No. 317/2403, 318, 319, 320/2139, 322, 320, 321/2493, 325/1863, 326, 326/1851, Mouza - Raghunathpur Jali, Bhubaneswar, District - Khordha, Odisha for M/s KRJ Project LLP" were submitted to IIT Delhi for checking the structural drawings adequacy for **submission purposes** only.

The structural drawings have been checked and corrected for compliance with the provisions of relevant Indian Standards. Discussions were also held with the structural design consultant. Clarifications were given by the structural design consultant on all the queries and revisions carried out.

The revised structural drawings submitted to IIT Delhi are adequate in accordance with the provisions of relevant Indian Standard codes IS:456-2000, IS:875-2015, IS:1893-2016, NBC-2016. The drawings are approved for **submission purposes or documentation purposes only (these are not GFC, not for execution purposes)**.

The responsibility of the Indian Institute of Technology Delhi shall be limited to technical advice as above. All functional / architectural / FAR details and procedural / legal / operational / municipal matters will be the responsibility of the company.

13/5/2020

(A.K. Jain)

DR. A.K. JAIN
Professor
Department of Civil Engineering
Indian Institute of Technology Delhi
Hauz Khas, New Delhi-110016

Annexure-II

BHUBANESWAR DEVELOPMENT AUTHORITY

Form-II (Order for Grant of Permission)

Letter No. BNB/1283/2021, Bhubaneswar, Dated 12.03.2021
File No.-BNB190325

Permission Under Sub-Section (3) of the Section-16 of the Orissa Development Authorities Act'1982(Orissa Act,1982) is hereby granted in favour of **KRJ PROJECT LLP authorized representated by Sri Sachin Kumar Singh (Authorized signatory) and SRI HARI INFRACON PVT.LTD authorized Representative Binod Kumar Agrawalla.**

for construction of **Two Blocks of Basement+Ground+14 storeyed Residential Apartment Building & B+G+3 storeyed Community building** over **Plot No.317/2403, 318, 319, 320/2139, 322, 320, 321/2493, 325/1863, 326, 326/1851 pertaining to Khata No.511/3489, 511/3490, 511/3491, 511/3488, 511/3645, 729/412, 511/3662 in Mouza-Raghunathpurjali** in the Development Plan area of **Bhubaneswar** with the following parameters and conditions;

1. **Parameters:**

- **Total plot area: Ac1.830Dec. (7405.75Sqm.)**
- **CDP road affected area: 143.41Sqm.**
- **Net plot area: 7262.34Sqm.**
- **Abutting road width: 31.096 Mtr**

Covered area approved		Proposed use	No. of Dwelling Units
Tower-1 (B+G+14 Storied Building)			
Ground floor	748.62 Sqm	Parking + Service + Residential	04(Four) Nos.
First floor	699.00 Sqm	Residential	05 (Five) Nos.
Second floor	677.55 Sqm	Residential	05 (Five) Nos.
3rd Floor to 14th Floor	676.74 * 12 = 8120.88 Sqm	Residential	05*12 =60(Sixty) Nos.
Total FAR Area	**10,246.05 Sqm.**		**74Nos.**
Tower-2 (B+G+14 Storied Building)			
Ground floor	748.62 Sqm	Parking + Service + Residential	04 (Four) Nos.
First floor	699.00 Sqm	Residential	05 (Five) Nos.
Second floor	677.55 Sqm	Residential	05 (Five) Nos.

3rd Floor to 14th Floor	676.74 * 12 = 8120.88 Sqm	Residential	05*12 =60(Sixty) Nos.
Total FAR Area	**10,246.05 Sqm.**		**74Nos.**
Total no. of Dwelling Units – 148 Nos			
Community Building (B+G+3)			
Ground floor	276.09 Sqm		
First floor	258.47 Sqm		
Second floor	258.47 Sqm		
Third Floor	258.47 Sqm		
Total FAR Area	**1051.50 Sqm.**		
Basement Area (Envelope Basement Area)	5304.53 Sqm.	Parking Area =4787.55Sqm. Service Area=516.98 Sqm.	
No.of staircases	**5Nos.**	**5Nos.**	
No.of Lifts	**5Nos.**	**5Nos.(2nos.of 13 passenger stretcher lift speed 1.25-1.5Mps)**	
E-vehicle charging station(30%)	**30% of total car parks provided**	**45Nos.**	
Visitor parking(20% of required car parking)	**29.46Nos.**	**30 Nos.**	
Plantation(1no of tree per 80Sqm.)	**91Nos**	**93Nos.**	
Grand Total FAR Area - 21669.6Sqm.			
Grand Total BUA - 27,457.96Sqm.			
F.A.R.	6.00 (Max. Permissible) 2.00(Base FAR)	**ACHIEVED-2.984**(0.984 Purchasable FAR)	
Height	**44.7 Mtr**		
Parking (30%)	Basement-4787.55+ Stilt- 456.2 + Ground (Open Parking)-1554.2 **Total =6798.03Sqm**		

- **Set backs approved to be provided**

Item	Required(in Mtr)	Provided (in Mtr)
Front Set back	**11 & 4**	**12.80& 11**
Rear Set back	**11 & 3**	**13.00& 3.20**
Left side	**11 & 2.5**	**14.25& 3.0**
Right side	**11 & 2.5**	**16.8& 6.66**

NOCs/ Clearances submitted:

- **NOC from Airport Authority of India**
- **Environmental Clearance from SEIAA**
- **Fire recommendations from Fire Prevention Wing**
- **NOC from CGWA.**

1. The building shall be used exclusively for **MultistoriedResidential Apartment with Community building** purpose and the use shall not be changed to any other use without prior approval of this Authority.
2. The development shall be undertaken strictly according to plans enclosed with necessary permission endorsement.
3. Total Parking space measuring **6798.03Sqm (in Basement/ Ground and Open)** as shown in the approved plan shall be left for parking of vehicles and no part of it will be used for any other purpose.
4. The land over which construction is proposed is accessible by an approved means of access of **31.096 Mtr.(Thirty one point zero nine six meter**) in width.
5. The land in question must be in lawful ownership and peaceful possession of the applicant.
6. The applicant shall free gift **143.41sqm** wide strip of land to Bhubaneswar Development Authority/ULB for further widening of the road to the standard width as per **CDP-2010, BDA**.
7. The permission granted under these regulations shall remain valid upto **three years** from the date of issue.However the permission shall have to be revalidated before theexpiry of the above period on payment of such fee as may be prescribed under rules and such revalidation shall be valid for one year.
8. (i) Approval of plans and acceptance of any statement or document pertaining to such plan shall not exempt the owner or person or persons under whose supervision the building is constructed from their responsibilities imposed under ODA (Planning & Building Standards) Rules 2020, or under any other law for the time being in force.

   (ii) Approval of plan would mean granting of permission to construct under these regulations in force only and shall not mean among other things-

   (a) The title over the land or building
   (b) Easement rights
   (c) Variation in area from recorded area of a plot or a building
   (d) Structural stability
   (e) Workmanship and soundness of materials used in the construction of the buildings
   (f) Quality of building services and amenities in the construction of the building,
   (g) the site/area liable to flooding as a result of not taking proper drainage arrangement as per the natural lay of the land, etc and
   (h) Other requirements or licenses or clearances required to be obtained for the site /premises or activity under various other laws.

9. In case of any dispute arising out of land record or in respect of right, title, interest after this permission is granted, the permission so granted shall be treated as automatically cancelled during the period of dispute.
10. Neither granting of the permit nor the approval of the drawing and specifications, nor inspections made by the Authority during erection of the building shall in any way relieve the owner of such building from full responsibility for carrying out the work in accordance with the requirements of NBC 2005 and these regulations.

11. The owner /applicant shall;

(a) Permit the Authority to enter the building or premises, for which the permission has been granted at any reasonable time for the purpose of enforcing the regulations;

(b) Obtain, wherever applicable, from the competent Authority permissions/clearance required in connection with the proposed work;

(c) Give written notice to the Authority before commencement of work on building site in Form-V,periodic progress report in Form-VIII, notice of completion in Form-VI and notice in case of termination of services of Technical persons engaged by him.

(d) Obtain an Occupancy Certificate from the Authority prior to occupation of building in full or part.

12. The applicant shall abide by the provisions of Rule no.15 of ODA (P&BS)Rules, 2020 with regard to third party verification at plinth level, ground level & roof level. Any deviation to the above shall attract penalty as per the provision of the same.

13. (a) In case the full plot or part thereof on which permission is accorded is agricultural kisam, the same may be converted to non-agricultural kisam under section-8 of OLR Act before commencement of construction.

(b) The owner/applicant shall get the structural plan and design vetted by the institutions identified by the Authority for buildings more than 30 mtr height before commencement of construction.

14. Wherever tests of any material are made to ensure conformity of the requirements of the regulations in force,records of the test data shall be kept available for inspection during the construction of building and for such period thereafter as required by the Authority.

15. The persons to whom a permit is issued during construction shall keep pasted in a conspicuous place on the property in respect of which the permit was issued;

(a) A copy of the building permit; and

(b) A copy of approved drawings and specifications.

16. If the Authority finds at any stage that the construction is not being carried on according to the sanctioned plan or is in violations of any of the provisions of these regulations, it shall notify the owner and no further construction shall beallowed until necessary corrections in the plan are made and the corrected plan is approved.**The applicant during the course of construction and till issue of occupancy certificate shall place a display board on his site with details and declaration.**

17. **This permission is accorded on deposit /submission of the following;**

Details of Fees and Charges	Amount in Rupees	Payment Status
A. (i) Development Fees	**50,731**	**Paid**
A (ii) Fee for building operation	**2,61,068**	**Paid**
B. Sanction fees	**13,72,598**	**Paid**
C. Construction worker welfare Cess (CWWC)		
1st installment	17,23,709	**Paid**
2nd installment	17,23,709	**To be paid before one year of issue of permission letter**
3rd installment	17,23,709	**To be paid before two years of issue of permission letter**
Total Payable CWWC Fees	**51,71,126**	
D. Rates of Compounding Charges for Unauthorized Layouts	**5,82,270**	**Paid**
E. Shelter Fees for mandatory 10% EWS Housing (carpet area) @ 25% of construction cost of EWS housing		
1st installment	17,10,597	**Paid**
2nd installment	17,10,597	**To be paid before one year of issue of permission letter**
3rd installment	17,10,597	**To be paid before two years of issue of permission letter**
4th installment	17,10,597	**To be paid before three years of issue of permission letter**
Total Payable Shelter Fees	**68,42,390**	
F. Charges for Purchasable FAR Area		
1st installment	16,23,746	**Paid**
2nd installment	16,23,746	**To be paid At the time of Plinth level**
3rd installment	16,23,746	**To be paid At the time of Ground Floor Roof Casting**
4th installment	16,23,746	**To be paid At the time of application of occupancy certificate**
Total payable fees for purchasable FAR	**64,94,984**	
G. EIDP Fees		
1st installment	10,11,250	**Paid at At DRDA, Khurda**
2nd installment		**To be paid at At DRDA, Khurda At**

	10,11,250	**the time of Plinth level**
3rd installment	10,11,250	**To be paid at At DRDA, KhurdaAt the time of Ground Floor Roof Casting**
4th installment	10,11,250	**To be paid at At DRDA, Khurda At the time of application of occupancy certificate**
Total payable fees towards EIDP	40,45,000	
TOTAL FEES PAID AT BDA		**70,63,651**
TOTAL FEES PAID AT DRDA, KHURDA		**10,11,250**
Remaining Fees Payable at BDA as per above		**1,34,50,448**
Remaining Fees Payable at DRDA, Khurda as per above		**30,33,750**

If not paid within such time as mentioned above, then interest rate of SBI PLR shall be Imposed and occupancy certificate shall not be issued without realizing the total amount including interest.

18. Other conditions to be complied by the applicant are as per the following;

I. The owner/applicant/Technical Person shall strictly adhere to the terms and conditions imposed in the NOC/Clearances given by Fire Prevention officer/National Airport Authority/SEIAA, Ministry of Forest & Environment/PHED etc wherever applicable.

II. Storm water from the premises of roof top shall be conveyed and discharged to the rain water recharging pits as per Rule 47 of ODA (Planning & Building Standards) Rules 2020.

III. The space which is meant for parking shall not be changed to any other use and shall not be partitioned/ closed in any manner.

IV. 30% of the parking space in group housing/apartment building shall be exclusively earmarked for ambulance, fire tender, physically handicapped persons andoutside visitors withsignage as per norms under Rule 37 of ODA (Planning & Building Standards) Rules 2020.

V. Plantation for one tree per 80 sqm of plot area made by the applicant as per provision under Rule 30 of ODA (Planning & Building Standards) Rules 2020.

VI. If the construction / development are not as per the approved plan / deviated beyond permissible norms, the performance security shall be forfeited and action shall be initiated against the applicant/builder / developer as per the provisions of the ODA Act, 1982 Rules and Regulations made there under

VII. The Owner/ Applicant/Architect/Structural Engineer are fully and jointly responsible for any structural failure of building due to any structural/construction defects, Authority will be no way be held responsible for the same in what so ever manner.

VIII. The concerned Architect / Applicant / Developer are fully responsible for any deviations additions & alternations beyond approved plan/ defective construction etc.shall be liable for action as per the provisions of the Regulation.

IX. The applicant shall obtain infrastructural specification and subsequent clearance with regard to development of infrastructure from BMC/BDA before commencement of construction.

X. **All the stipulated conditions of the NOC/Clearances given by CE-Cum-Engineer Member, BDA& PHED shall be adhered to strictly. All the fire fighting installation etc are to be ensured and maintained by the applicant as per NBC 2016.**

XI. **No storm water/water shall be discharged to the public road/public premises and other adjoining plots.**

XII. **The applicant shall abide by the terms and conditions of the NOC given by CGWA, Airport Authority, SEIAA and Fire Safety Recommendations, EIDP vetting by CE-cum-EM, BDA as well as structural vetting.**

XIII. **Adhere to the provisions of BDA (Planning & Building Standards) Regulation strictly and conditions thereto.**

XIV. **All the passages around the building shall be developed with permeable pavers block for absorption of rain water and seepage in to the ground.**

XV. **Rain water harvesting structure and recharging pits of adequate capacity shall be developed to minimize the storm water runoff to the drain**

XVI. **The applicant shall make own arrangement of solid waste management through micro compost plant within the project premises**

XVII. **The applicant shall register this project before the ORERA as per affidavit submitted before commencement of work.**

XVIII. **The applicant shall install Rooftop P.V. system as per BDA Regulations.**

XIX. **The applicant shall free gift the road affected area to Government/BDA as and when required by the government for development of road.**

XX. **The Authority shall in no way be held responsible for any structural failure and damage due to earthquake/cyclone/any other natural disaster.**

XXI. **The number of dwelling units so approved shall not be changed in any manner.**

XXII. **Lift shall be provided as per the provision of NBCI, 2016 in pursuance with note(ii) of sub-rule (2) of Rule 42 of ODA Rules, 2020. If the same isn't provided by the applicant, appropriate action shall be taken as per law.**

BHUYAN GOURI SANKAR

Digitally signed by BHUYAN GOURI SANKAR
Date: 2021.03.15 13:18:57 +05'30'

PLANNING MEMBER
Bhubaneswar Development Authority.

Annexure-III

Tel : 2564033/2563924
EPABX : 2561909/2562847
E-mail: paribesh1@ospcboard.org
Web site : www.ospcboard.org

OFFICE OF THE
STATE POLLUTION CONTROL BOARD, ODISHA

Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII,
Bhubaneswar - 751 012

Through Online/
By Regd Post

No. 4038 /IND-II-CTE-6482 Date 17.03.2021 /

CONSENT TO ESTABLISH ORDER

In consideration of the online application no. **3134025** for obtaining Consent to Establish of **M/s KRJ Projects LLP,** the State Pollution Control Board is pleased to convey its Consent to Establish under Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and under Section 21 of Air (Prevention & Control of Pollution) Act, 1981 for **construction of Multi Storied Residential Project having total built up area of 27,636.66 m² along with installation of DG sets of capacity 500 kVA (2 x 250 kVA) with cost of the project of ₹ 55 Crores, measuring an area of Ac. 1.83 Dec. or 7405.75 m² over plot nos. 317/2403, 318, 319, 320/2139, 322, 320, 321/2493, 325/1863, 326, 326/1851), At Mouza - Raghunathpur Jali, Bhubaneswar** (Plot Nos. & Khata Nos. as mentioned in application form) in the district of **Khordha** with the following conditions:

GENERAL CONDITIONS:

1. This Consent to Establish is valid for the construction project as mentioned in the application form and for a period of five years from the date of issue of this letter. If the proponent fails to do substantial physical progress of the project within five years then a renewal of this Consent to Establish shall be sought by the proponent.
2. The Project has to apply for grant of Consent to Operate under section 25 / 26 of Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of Air (Prevention & Control of Pollution) Act, 1981 at least 3 (three) months before the occupancy and obtain Consent to Operate from this Board.
3. This Consent to Establish is subject to statutory and other clearances from Govt. of Odisha and / or Govt. of India, as and when applicable.

SPECIAL CONDITIONS:

A. GENERAL CONDITIONS:

1. The proponent shall carry out construction activity as per Environmental Clearance granted by SEIAA, Odisha vide No. 227/SEIAA, dated 01.02.2021.
2. **The proponent shall earmark the Greenbelt / Green area, Solid and other waste storage area, STP area etc. as per the approved building plan by putting display board at the time of construction work of the project to secure such land for environmental**

point of view without diverting the same for other purpose. Same shall be verified at the time of construction work by Regional Officer and/or Head Office of SPCB. Any violation of this condition shall attract legal action and/or withdrawl of Consent to Establish for the project.

3. **Construction work shall be restricted from 6 PM to 6 AM.**
4. The proponent shall obtain permission from concerned authority for discharge of excess treated water to nearby drain and the same shall be submitted to the Board at the time of application for grant of Consent to Operate.
5. The proponent shall submit Six Monthly Progress Report every year (i.e. June and December) of construction activity of the project to the Board (at Head Office and Regional Office) for record and verification.
6. The proponent shall obtain permission from Department of Water Resources, Govt. of Odisha for drawl of ground/ surface water.
7. The unit shall obtain NOC from CGWA if the unit will use ground water as prerequisite for getting Consent to Operate of State Pollution Control Board, Odisha.
8. The proponent shall implement the pollution control measures and safeguards as proposed in the Environment Management Plan (EMP) of Project Report.
9. Solar or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% of the demand load.
10. A green belt of adequate width and density preferably with local species along the periphery of the project area shall be raised so as to provide protection against particulates and noise. It must be ensured that at least 20% of the total land area shall be under permanent green cover. The proponent shall ensure the maintenance of green belt throughout the year and for all time to come. It is advised that they may engage professionals in this field for creation and maintenance of the green belt. An action plan for this purpose shall be prepared and shall be submitted accordingly.
11. Adequate drinking water and sanitary facilities shall be provided for construction workers at the site. Provision shall be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase shall be ensured.
12. All vehicles carrying construction materials to the site shall be covered to avoid spreading of dust. Vehicles hired for bringing construction material at site shall be in good condition and shall have valid Pollution Under Check (PUC) certificate and to conform to applicable air and noise emission standards and shall be operated only during non-peaking hours.
13. The project shall use fly ash bricks and other building materials made out of fly ash in construction.
14. The civil construction shall be carried out with the fly ash bricks. If the fly ash bricks are not available locally the civil construction may carried out with other bricks with prior intimation to the concerned Regional Office of SPC Board. A statement indicating use of fly ash bricks during construction period shall be submitted to the Board quarterly for record.

15. Use of glass shall be reduced by upto 40% to reduce the electricity consumption and load on air conditioning. If necessary, high quality double glass with special reflective coating in windows will be used.

16. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking shall be inside the campus and no public space shall be utilized.

17. Noise shall 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.

18. The proponent shall comply to the provisions of E-waste (Management) Rules, 2016 and shall handover E-waste to authorized collection centers / register dismantlers / recyclers for proper disposal of E-waste.

19. Separate collection bin shall be provided inside the building complex for collection of E-waste.

20. The construction and demolition wastes to be generated from the proposed project shall be disposed of in accordance with the provision under "Construction & Demolition Wastes Management Rules 2016".

21. All the plastic waste generated from the premises during construction and commissioning shall be collected and sent for co-processing to the nearby cement kilns.

22. Municipal Solid Waste shall be disposed off as per the Solid Waste Management Rules, 2016 and amendment thereafter.

23. The Board may impose further condition or modify the conditions are stipulated in this order during installation and / or at the time of obtaining consent to operate and may revoke this order in case the stipulated conditions are not implemented and / or information is found to have been suppressed / wrongly furnished in the application form.

B. WATER POLLUTION:

24. Water Sprinkling shall be carried out in stock piles and haulage roads in the construction area to suppress fugitive emission.

25. Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.

26. Fixtures for showers, toilet flushing and drinking shall be of low flow either by use of aerators or pressure reducing devices or sensor based control.

27. Rain water harvesting structure shall be developed inside premises and maximum efforts shall be made to reuse harvested rain water with a definite plan and programme to reduce drawl of fresh water from the local water bodies/ground water source as well as to recharge the ground water. Rain water harvesting structure shall be included from the construction stage itself. A scheme in this regard shall be submitted to the Board.

28. The domestic wastewater generated shall be treated in Sewage Treatment Plant of capacity 110 KLD to meet the following standards as notified by the MoEF&CC, Govt. of India vide

G.S.R. 1265 (E), dated 13.10.2017. The treated water shall be reused for flushing, gardening and plantation to the maximum possible extent.

Sl. No.	Parameters	Standards
1.	pH	6.5-9.0
2.	BOD (mg/l)	20
3.	TSS (mg/l)	<50
4.	Fecal Coliform (MPN/100ml)	< 1000

29. The project shall achieve Zero Liquid Discharge (ZLD) concept as proposed.

30. The safe disposal of wastewater and solid wastes generated from washing of painting equipments during the construction phase shall be ensured.

C. AIR POLLUTION:

31. **Low noise generating equipments shall be used during construction phase.**

32. The diesel generator sets to be used during construction phase shall be low Sulphur diesel type and shall conform to Environment (Protection) Rules prescribed for air and noise emission standards.

33. All vehicles carrying building materials to the site shall be covered to avoid spreading of dust.

34. Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operation phase shall be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets shall be equal to the height needed for the combined capacity of all proposed DG sets. Only low sulphur diesel will be used. The location of the DG sets may be decided in consultation with State Pollution Control Board.

35. The height of the stack attached to the D.G set shall confirm to the following:

$H = h + 0.2\sqrt{KVA}$ (Where, h = Height of the building where it is installed in meter KVA = Capacity of D.G Set and H = Height of the stack in meter above ground level).

36. The proponent shall take adequate measures to prevent noise during loading and unloading of the construction materials in night.

37. The proponent shall also take adequate measures during construction phase to prevent noise and dust pollution to surrounding area.

D. SOLID WASTE:

38. Intermediate storage area of adequate capacity for temporary storage of Municipal Solid Waste (MSW) shall be developed inside the premises before handing over the MSW to the approved agency for final disposal.

39. The proponent shall explore to establish Mechanized Waste Convertor having polycrack method and other similar method for processing of Municipal Solid Waste generated from the complex under covered shed to produce valuable products like oil, water, gas, carbon, metal, glass etc.

40. The solid waste generated from the complex shall be segregated as biodegradable and non-biodegradable. This shall be collected in separate coloured beans. Proper waste management practices shall be adopted during the collection, storing and disposal of the generated solid waste.

41. Bio-degradable solid waste shall be sent to the organic waste converter for preparation of manure. Non-biodegradable wastes like polythene bags, metal, ceramic Waste, glass etc. shall be stored in separate garbage bin and will be sent to approved agency for final disposal.

42. All required sanitary and hygienic measures shall be in place before starting construction activities and to be maintained throughout the construction phase.

43. All the top soil excavated during construction activities shall be stored for use in horticulture / landscape development within the project site.

44. Disposal of muck during construction phase shall 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.

45. 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 shall not leach into the ground water.

46. The Project proponent shall dispose off hazardous waste materials such as tarry products, lead containing products, paints & pigments residues, broken fluorescent and mercury lamps during construction and operational phase as per Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 and amended thereafter.

17/3/2021

Chief Env. Engineer

To

The Authorized Signatory,
M/s KRJ Projects LLP,
Mouza-Raghunathpur Jali, Bhubneshwar,
District - Khordha.

Memo No._____/Date_____/

Copy forwarded to:

1. The Collector & District Magistrate, Khordha.
2. The District Industries Centre, Khordha.
3. Consent to Operate Cell, SPC Board, Bhubaneswar.
4. Regional Officer, SPC Board, Bhubaneswar.
5. Copy to Guard file.

Sr. Env. Engineer-L-I

Annexure-IV


Dosing pump
installation
2023/06/02 16:44

Annexure-V

Annexure-VI

DIRECTORATE GENERAL
FIRE SERVICES, HOME GUARDS & CIVIL DEFENCE,
ODISHA

FORM-II
(See Rule-12 (5))

Fire Safety Recommendation

File No. C-560-2019

1.	Address of the proposed building/premises: -	Mouza-Raghunathpur Jali, Bhubaneswar, Dist.-Khurdha.
2.	Name and Address of the Applicant: -	Director/ Authorized Signatory, KRJ Projects LLP, Raja Subodh Mullick Square, 5th floor, FL-F2, Kolkata West Bengal 700013
3.	Date of Receipt of Application: -	18th & 20th February 2020
4.	Proposed occupancy (Type of building):-	As shown in the plan two numbers of Residential Tower i.e B+S+14 floors building are coming under "Residential building" as per Bhubaneswar Development Authority (Planning and Building Standards) Regulations, 2018 and Residential building, Group-A, Sub Division A-4 as per NBCI-2016. Besides one Community building of G+3 floors is coming under Incidental to main occupancy i.e Residential building.
5.	Area with Plot No and. Khata no: -	Plot area-7406.76 sqm, Plot Number-317/2403, 318 and others, Khata Number- 511/430, 511/599 & others.
6.	Date of Inspection:	20th February 2020

7. Recommendation: -

The Fire Safety Recommendation is as follows:-

A.	Floor wise area with occupancy	➢ Common Basement floor--------Area 5309.53 sqm- Parking ➢ Stilt Area---------- Area 456.28 sqm – Parking **02 Numbers of Residential Tower i.e B+G+14 floors** ➢ Ground floor ----------Area 719.25 sqm (each tower) Apartment houses ➢ 1st floor----------Area 699.00 sqm (each floor) Apartment houses ➢ 2nd floor ----------Area 677.55 sqm (each tower) Apartment houses ➢ 3rd to 14th floor ---------- Area 676.74 sqm- Apartment houses ➢ Terrace---------- Open to sky **Community Hall Building (Incidental to main occupancy i.e Residential building)** ➢ Ground floor ----------Area 290.89 sqm Shops ➢ 1st floor----------Area 272.07 sqm- Small Party room, Kids play room ➢ 2nd floor ----------Area 286.22 sqm- Table tennis room, Pool table room ➢ 3rd floor ----------Area 286.22 sqm- Gymnasium & Games room ➢ Terrace floor---------- Open to sky
B.	Height	➢ The height of the proposed residential B+G+14th floor buildings will be 44.575 mtrs from the internal road Ground level around and contagious to the said buildings. Besides the height of community hall building of G+3 floors will be 14.550 mtrs from the ground level. The height will be measured from average ground level for all time as per BDA (P&BS) Regulations, 2018.
C.	Parking	➢ Provision of parking area at Basement, stilt & open parking has been shown in the proposed plan. ➢ Provision of parking shall be made in accordance to Regulation-37 of BDA (P & BS) Regulations, 2018 ➢ The parking space to be provided shall be in addition to the minimum setbacks as required under Regulation-33 of BDA (P&BS) Regulations, 2018.
D.	Access to the building	➢ As per the inspection report the plot abuts on road of width 18 mtrs. ➢ However as shown in the plan there is provision of Nandankanan road as abutting road. ➢ The main entrance to the premises shall not be less than 06 (Six) meters in width in order to allow easy access to fire engine and the gate shall fold back against the compound wall of the premises, thus leaving the exterior access way, within the plot, free for the movement of fire service vehicles. If archway is provided over the main entrances, the height of the archway shall not be less than 5 (five) meters. ➢ The main gate shall fold back against the compound wall of the premises. Provision of main entrance gate shall be made in accordance to Regulation – 69 of BDA (P & BS) Regulations, 2018. ➢ Provisions for access to the building shall be made in accordance to

		Regulation-30 & 69 of BDA (P & BS) Regulations, 2018.
E.	Setbacks (in mtrs.)	➢ As per the plan provision of two towers has been proposed in a common basement floor. The required open spaces around the structure (Tower-1 & 2) is as follows: - Front- 11 mtrs, Rear- 13 mtrs, Left-13.740 mtrs, Right- 17.945 mtrs ➢ The open space around the community hall building is as follows: - Front- 11 mtrs, Rear- 12.050 mtrs, Left-6.950, Right- 03 mtrs ➢ Besides, an unbuilt open space of 11.090 mtrs and 7.5 mtrs of internal road have been proposed between individual residential towers for easy access of the fire tender. Further, in rear side of community hall building there is provision of a Swimming pool in the open space area. Hence, adequacy or contravention of the open space around the individual residential towers and around the community hall building as proposed in the plan shall be decided by BDA, Bhubaneswar. ➢ Provision of open space in the proposed plan shall be maintained as per Regulation-33 of BDA (P & BS) Regulations, 2018. ➢ The space set apart for providing access within the premises shall not be used as parking space or spaces for other amenities required for the building. ➢ Internal road of width 7.5 mtrs. with turning radius of 09 mtrs shall be provided around the Residential buildings. The internal road shall be made hard surface capable of taking the mass of fire tender, weighing 45 ton minimum and the same shall be kept un built. As shown in the plan, the roof of the basement extends beyond the plinth line into the internal road, hence roof of the basement shall have also load bearing capacity 45 ton minimum and load bearing capacity certificate from the competent authority shall be obtained to that effect. Besides, in case of community hall building the compulsory open spaces shall be kept clear and hard surfaced. ➢ The exterior open space around the residential buildings for a width of 7.5 meters shall be kept unbuilt for all time and it shall be constructed of hard surface capable of taking load of fire engine weighing up to 45 tonnes.
F.	Exits (Type, Number, Dimension & arrangement)	➢ As shown in the plan the provision of staircases in different types of towers are as follows:- <u>02 Number of Residential Tower of B+G+14 floors each</u> • Out of three staircases in both tower of width 1.25 mtrs each, two numbers of staircases are connecting from Ground to Terrace floor and another one is continuing form Basement to Ground floor <u>Community Hall Building</u> • Out of two staircases, one of width 1.5 mtrs connecting from ground to terrace floor and another one of width 150 mtrs is connecting from Ground to 1st floor • As per BDA (P & BS) Regulations 2018 minimum two staircases is required for community hall building But as proposed second staircase of community hall building has not been connected up to

terrace floor. Hence, the second staircase shall be made accordingly and connected up to terrace floor.

- The travel distance shall be less than 20 mtrs. on each floor residential buildings and 30 mtrs for community hall building, the provision of exits and staircases shall be made as per Regulation-71 and Annexure-XI of BDA (P & BS) Regulations, 2018.
- The exits/staircases must be placed as remote from each other as possible and also comply to other provisions i.e. permissible travel distance, dead end corridor length in exit access etc, as per the provisions of BDA, (P & BS) Regulations, 2018.
- All the exits required to be accessible from the entire floor area at all floor levels.
- The exit doorways must have clear width not less than 1 mtr. and minimum height must be 2.10 mtr
- The minimum number of exit and their width required on every floor of the buildings and their dimensions must be in accordance to clause-4.2.1 to 4.4.2.4.2 of Part-IV, NBCI-2016 and exit requirements & provision of doorways shall be accordance to Clause-71 and Annexure-XI of BDA (P & BS) Regulations, 2018.
- The use of glasses are not permitted in enclosures for exits & exit passage way.
- The escape routes should be well ventilated and provided with safety lighting and free from obstructions.
- Exits must be clearly visible and all routes to reach the exit have to be clearly marked and sign posted to guide the population of the floor concerned. Signages required to be illuminated and wired to an independent electrical circuit on an alternative source of supply.
- Exit signs and Floor exit plan must be provided such that no point in an exit access is more than 30 mtrs from a visible exit directional sign. Provision of escape lighting and exit signage needs to be made in accordance to Clause-3.4.7.1 to 3.4.7.4 of Part-4, NBCI-2016 & IS 9457:1980, IS 12349:1988, IS 12407:1988
- Access to exit staircase shall be trough a fire check door of a minimum 120 min. fire resistance rating.
- External exit door of staircase enclosure at ground level required to open directly to the open spaces or can be reached without passing through any door other than a door provided to drought lobby
- The illuminated exit signage with arrow indicating the way to the escape route must be provided at all conspicuous places.
- All landings of floor must have floor indication boards indicating the number of floors.
- The clear width of each staircase shall not be less than 1.25 mtrs in each residential tower and 2 mtrs in community hall building. The minimum width of treads without nosing shall be 25 cm for internal staircases of residential buildings and 30 CM for community hall building. The treads shall be constructed and maintained in a manner to prevent slipping. The maximum height of riser shall be 0.19 meter in the case of residential buildings and 0.15 mtrs in community hall building shall be limited to 15 risers per flight.

		➢ The internal staircases not with external wall of aforesaid residential buildings shall be pressurized and the internal staircases of constructed with external wall shall be cross ventilated or pressurized Besides, the internal staircases of constructed with external wall shall be naturally ventilated or pressurized in Community hall building. Wherever pressurized staircase is to be connected to unpressurized area, the two areas shall be segregated by 120 min fire resistant wall. Access to exit staircase shall be through a fire door of a minimum 120 min fire resistance rating. Pressurization of the staircases shall be done as per Clause-4.4.2.5, 4.6, 6.1.1.3 & Annexure-E of Part-4, NBCI-2016 ➢ In addition to above all other provisions for exits/doorways/stairways, means of escape and exit shall be made as per Clause 4.2 to 4.6.2 of NBCI-2016 and Annexure- XI of BDA (P & BS) Regulations, 2018.
6.	Basement	➢ Adequate ventilation shall be provided for the basement and the standard of ventilation shall be the same as required by the particular occupancy according to regulations: any deficiency may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans (one exhaust fan for 50 square meters of basement area), air conditioning system; ➢ The basement shall be used for designated purpose only. Adequate provision of exits and ramps shall be made in the basements as per Bhubaneswar Development Authority (Planning and Building Standards) Regulations, 2018 and NBCI-2016. The ramp providing access to basement shall be constructed leaving required open space around the building. Door openings leading from upper floors to basement shall need to be protected with fire doors with 120 min. fire rating except for exit discharge doors from the basements. Adequate arrangement shall be made, so that surface drainage does not enter the basement. The wall and floors of the basement shall be water-tight and be so designed that the effect of the surrounding soil and moisture, if any, are taken in to account in design and adequate damp proofing treatment is given. ➢ All floors of the buildings shall be compartmented / zoned with fire barrier or with water curtain nozzle (K-23) or with combination thereof having area of each compartment not more than 3000 m^2. The fire barrier of each compartment shall have fire resistance rating of 120 min. Automatic deluge system comprising deluge valve, piping nozzles, etc shall be used to zone the compartment in case of water curtain system. In case of water curtain, required additional provision of water with independent electric pump of adequate capacity shall be made. Compartmentation of floors in the building shall be done as per the provisions given in clause 4.5 and Annexure--I of Part-IV, NBCI-2016. ➢ Each basement shall be separately ventilated. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills or breakable stall board lights or pavement lights or by way of shafts. Alternatively, a system of mechanical ventilation shall be provided so as to permit 12 air changes per hour in case of fire or distress call. Ventilation system shall start automatically on actuation of detector provided in the basement area. All exit passageways (from exit to exit discharge) shall be pressurized or naturally ventilated. The mechanical pressurization system

		shall be automatic in action with manual controls in addition. Doors provided in such exit passageway shall be fire rated doors of 2 hrs rating. Smoke exhaust and pressurization of areas shall be done as per the provisions given in clause- 4.6 of part-4, NBCI-2016. ➢ The use and construction of the basement shall confirm to the provisions given in clause-41 of Bhubaneswar Development Authority (Planning & Building Standard) Regulations, 2018.
H.	Refuge Area	➢ Refuse area shall be provided in buildings of height more than 24 meters. Refuge area shall be approachable from the space they serve by an accessible means of egress. Refuge areas shall be provided at/or immediately above 24 mtrs and thereafter at every 15 mtrs or so. Refuge area shall be approachable from the space they serve by an accessible means of egress. Refuge area for apartment buildings of height above 60 mtrs and thereafter at balconies shall be provided at 60 mtrs and thereafter at every 30 mtrs. ➢ Refuse area shall be made as per Annexure-E-4 of Part-IV, NBCI-2016. ➢ Construction of podium shall be made as per Clause-4.6.1 of Part-3, NBCI-2016.
I.	Refuge Chutes	➢ Refuse chutes must be provided which shall have opening at least 1 m above roof level for venting purpose and they shall have an enclosure wall of non-combustible materiel with fire resistance of not less than 120 min. ➢ They shall not be located within the staircase enclosure or service shafts, or air conditioning shafts. Refuse chutes inspection panel and doors must be tight fitting with 60 min fire resistance. ➢ Sprinkler protection system must be provided for the refuse chutes. Refuse chutes must be at least 6 m away from exits.
J.	Fire Fighting Shaft (Fire Tower)	➢ One number of firefighting shafts is required in each tower of said residential apartment buildings. ➢ The protected area of the firefighting shaft shall have 120 min. fire resistance rating & comprising of protected lobby, staircase & fireman's lift. ➢ It shall have connectivity directly to exit discharge or through exit passageway with 120 min fire resistance walls at the level of exit discharge to exit discharge. ➢ The respective floors shall be approachable from it. It shall have provision of 120 min. fire doors. ➢ Besides, it shall have provision of fireman talk back, wet riser & landing valve in its lobby. Staircase & fire lift lobby of firefighting shaft shall be smoke controlled. ➢ Firefighting shaft (fire tower) shall be made as per Clause-2.24 of Part-IV, NBCI-2016
K.	Lifts	➢ As shown in the plan there is Provision of two numbers of lifts in each tower. Out of two lifts, one is connecting from basement to top floor and another one is continuing from ground floor to top floor. ➢ As least one number of Firemen lift is required in each tower of said Residential Apartment building. Which shall be made as per Clause 4.4.2.5 of part-4 and 'Building Services, Section 5 Installation of Lifts, Escalators and Moving Walks, Sub-Section 5 A Lifts of Part-8 of National Building Code of India, 2016.

		➢ The Lifts shall not open in staircase landing. Grounding switch (es) at ground floor level shall be provided to enable the fire service to ground the lifts. Besides, telephone / talk back communication facilities shall be provided Collapsible gates shall not be permitted for lifts and shall have solid doors with fire resistance of at least 1 hour. ➢ If the lift shaft and lobby is in the core of the building, a positive pressure between 25 and 30 Pa shall be maintained in the lobby and a positive pressure of 50 Pa shall be maintained in the lift shaft. The mechanism for pressurization shall act automatically with the fire alarm; it shall also be possible to operate this mechanically Lifts if communicating with the basement, the lift lobby of the basements shall be pressurized as suggested in Annexure-IV (Fire Protection and Fire Safety Requirements) with self-closing door with fire resistance rating. Telephone or other communication facilities shall be provided in lift cars and to be connected to fire control room for the building. ➢ In case of residential towers Lift and lift lobby shall be cross ventilated or pressurized as per Clause-4.4.2.5 of Part-IV, NBCI-2016. ➢ Construction and provisions of fire and life safety measures of lifts shall be in accordance with Bhubaneswar Development Authority Planning and Building Standards Regulations, 2018 and Clause 4.4.2.5 of part-4 and "Building Services, Section 5 Installation of Lifts, Escalators and Moving Walks, Sub-Section 5 A Lifts of Part-8 of National Building Code of India, 2016.
L.	Construction	➢ Non-combustible materials with appropriate fire resistance rating shall be used for construction of the buildings. During construction of the buildings the following fire protection measures shall be provided. a. Dry riser of minimum 100 mm diameter pipe with hydrant outlets on the floors. b. Drums of 2,000 liters capacity filled with water with 02 fire buckets on each f oor c. A water storage tank of minimum 20,000 ltrs. Capacity. ➢ Installation of chimney & heating apparatus shall be in accordance to relevant BIS specification. All kitchens should have one or more opening such as windows and ventilators opening directly to the external air or into an open veranda for the admission of light and air. All floors shall be compartmented / zoned with area of each compartment should be not more than 750 sqm. The fire barrier of such compartments shall have fire resistance rating of 120 min. a. Basement car parking- 3000 sqm b. Residential building- 750 sqm ➢ In addition, there shall be requirement of a minimum of two compartments if the floor plate size is equal or less than the areas mentioned above. However, such requirement of minimum two compartments shall not be required, if the floor plate is less than 750 sqm. ➢ Smoke exhaust system having make-up air and exhaust air system shall be planned for large lobbies and which have exit through staircase leading to exit discharge. All exit passageways (from exit to exit

		discharge) shall be pressurized or naturally ventilated. The mechanical pressurization system shall be automatic in action with manual controls in addition. Doors provided in such exit passageway shall be fire rated doors of 2 hrs rating. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills or breakable stall board lights or pavement lights or by way of shafts. Smoke exhaust and pressurization of areas shall be done as per the provisions given in clause- 4.6 of part-4, NBCI-2016.
M.	Building Services	<u>Electrical Services:</u> - - An independent, ventilated or air conditioned MV panel room must be provided on the ground level. This room required to be provided with access from outside. The MV panel room must be provided with fire resistant walls and doors of fire resistance of not less than 120 min. - A substation or a switch station with oil filled equipment must not be allowed to be functional inside the building. - All transformers must be protected by high velocity water spray systems or nitrogen injection system. As per the plan the placement of transformer has not been clearly shown. - The sub-station must not be located below the 1st basement and above the ground floor - A stand-by electric generator must be installed to supply power to staircase and corridor lighting circuits, fire lifts, the stand-by fire pumps, pressurization fans and blowers, smoke extraction and damper system in case of failure of normal electric supply. - The staircase and corridor lighting must be on separate service and must be independently connected so as it could be operated by one switch installation on the ground floor, easily accessible to firefighting staff at any time irrespective of the position of the individual control of the light points, if any. - Staircase and corridor lighting required to be connected to alternate supply from parallel high-tension supply or to the supply from the stand-by generator. All wires and other accessories used for emergency light must have fire retardant property. - The electric distribution cables or wiring shall be laid in separate duct which shall be sealed at every floor with non-combustible materials having the same fire resistance as that of the duct. Low and medium voltage wiring running in shaft and in false ceiling run in separate conduits. Water mains, telephone cables, intercom cables, gas pipes or any other service line need not be laid in the duct for electric cables. - Transformer if housed at stilt floor level required to be cut-off from the other portion of premises by Fire Resisting Walls of 4 hours rating. - All the transformers shall be protected with high velocity water spray system / Nitrogen Injection System Carbon Dioxide total flooding system in case of oil filled transformer. In addition to this, manual control of auto high velocity spray system for individual transformers shall be located outside the building at ground floor. - Electric substation transformer shall have clearance on all sides as per BBL/relevant electric rules.

- Electrical Installations in the building must be comply to the provisions given in Clause 3.4.6 to 3.4.7.4 of Part-4 NBCI-2016 and Annexure-XI of BDA (P & BS) Regulations, 2018.
- The electric substation shall have electric supply from alternate source for operation of vent System lighting arrangements.
- Cable trenches shall be filled with sand.
- Party walls shall be provided between two transformers as per the rules.
- Electric control panels shall be segregated.
- Exits from basement electric substation shall have self-closing fire smoke check doors of 2-hours fire rating near entry to ramp.
- Provision for lightning protection must be made in the proposed building as per IS/IEC 62305-4:2010.

Air Conditioning: -

- Air conditioning systems circulating air to more than one floor area should be provided with dampers designed to close automatically in case of fire and thereby prevent spread of fire or smoke.
- Escape routes like staircases, common corridors, lift lobbies must not be used as return air passage.
- Air ducts serving main floor areas, corridors, must not pass through the staircase enclosure.
- The air-handling units must be separate for each floor and air ducts for every floor must be separated and in no way inter-connected with the ducting of any other floor.
- Wherever the ducts pass through fire walls or floors, the opening around the ducts must be sealed with materials having fire resistance rating of the compartment. Such duct required to be provided with fire dampers at all fire walls and floors unless such ducts are required to perform for fire safety operation.
- The Air Conditioning required to be coupled with fire detection and alarm system.
- Metallic ducts must be used even for the return air instead of space above the false ceiling.
- The materials used for insulating the duct system (inside or outside) must be of non-combustible material.
- Air Conditioning & mechanical ventilation requirements of different rooms or areas of the building must be as per the provisions given in Part-8, NBCI-2016.

Service Ducts and Shafts: -

- Openings in walls or floors which are necessary to be provided to allow passages of all building services like cables, electrical wirings, telephone cables, plumbing pipes, etc. must be protected by enclosure in the form of ducts /shafts and such shaft and inspection doors fitted thereto must have fire resistance rating not less than as specified in Clause 3.4.5.4 of NBCI-2016 and Annexure-XI of BDA (P & BS) Regulations, 2018.

STANDBY SOURCE OF POWER SUPPLY: -

- There shall be provision for dedicated emergency power supply to fire pumps, lifts, fire alarm system, pressurization system, emergency lighting, escape route lighting, exit signage, public address system, lighting in fire command center, magnetic door hold open devices, etc. The power supply to

		the panel /distribution board of these fire and life safety systems shall be through fire proof enclosures or circuit integrity cables or tarough alternate route in the adjoining fire compartment to ensure supply of power is reliable to these systems and equipment. Cables for fire alarm and PA system shall be laid in metal conduits or armoured to provide physical segregation from the power cables. **LIGHTNING PROTECTION** - - Provision for lightning protection shall be made in the proposed building as per NBCI-2016 and in corporate to relevant BIS specifications. Routing down of conductors (Insulated or Un-Insulated) of lightning protection shall not be made through electrical or other service shafts.
N.	Fixed Fire Fighting Installations	**The following fixed firefighting installations are required to be provided in the residential towers and community hall buildings as per NBCI-2016 and relevant BIS specifications:** i. **Fire Extinguisher:** - Provision of fire extinguishers must be made in entire building as per BIS 2190:2010. ii. **First-aid Hose Reel**: - First-aid hose reel must be provided on each floor of the building in accordance with BIS 884:1985 & BIS 3844:1989. Adequate Hose reels so that Hose reel Hose available within 30 mtrs from any point at each floor level and the horizontal distance between any two adjacent points need not exceed 50 mtrs on each floor and Hose reels hose must be directly connected to Wet riser. iii. **Wet Riser** - The aforementioned proposed building required to be provided with risers adequately so that available within 30 mtrs. from any point at each floor level and horizontal distance between any two adjacent risers must not exceed 50mtr. All risers must have provision of hydrant outlet and hose reel on each floor landing. The rising mains must be connected to the fire pump. Fire Service inlets at ground level fitted with non-return valves must be provided to the rising main for charging it by Fire Service pump in case of failure of static fire pump over the underground static tank. The risers should be fully charged and automatic in operation with adequate pressure at all times. The internal diameter of the riser mains should be not less than 100 mm. Each hydrant should be preferably of single outlet and comprise of 63 mm. Gun metal landing valve fitted with 63 mm instantaneous coupling conforming to IS 901:1988. The landing valve on the hydrant at a height of between 1 to 1.2 mtr above the floor near each floor landing required to be provided at each floor level and on the roof. Sufficient length of rubber lined fire hoses subject to minimum two 15mtr length fitted with coupling together with branch pipe and nozzle conforming to IS 903:1984 & should be provided and kept adjacent to the respective hydrant in hose boxes. iv. **Automatic Sprinkler System**: - Automatic water sprinkler system with sprinkler heads shall be provided in basement floor of each tower. Sprinkled shall be fed water from both underground static water storage tank and terrace tank. v. **Manually Operated Electronic Fire Alarm System**. - Manual operated electronic fire alarm system at conspicuous places in each floor of the all buildings including basement shall be provided. **(IS/ISO 7240-11:2011)**

		vi. **Under Ground Static Water Storage Tank**: - Underground static water storage tank capacity of 75,000 ltrs is required for aforesaid proposed buildings. All static water storage tanks must entirely be accessible to fire appliances of the local Fire Service. Provision of suitable manhole shall be made available for inspection, repair and insertion of suction hose etc. The covering slab must be able to withstand the vehicular load of 45 tons. Underground Static water storage tank must be constructed in accordance to Clause-5.1.2.1 of Part-IV, NBCI-2016. vii. **Terrace Tank**: - Terrace Tank of 5,000 ltrs. Capacity must be provided at the top of each residential tower and 10000 ltrs capacity at community hall building for firefighting purpose. It should be ensured that water in the tank is not utilized for any other purpose other than firefighting. viii. **Terrace Pump** - Provision of terrace pump of 900 lpm capacity in community hall building having connectivity to terrace tank shall be made in the building. ix. **Fire Pumps**: - Pump house should preferably be installed at ground level. It shall be situated so as to be directly accessible from the surrounding ground level. When installed in the basement staircase with direct accessibility or through enclosed passageway with 120 min fire rating from the ground shall be provided. Required number of sets of pumps each consisting of one Electric & one Diesel pump (Stand by) of capacity 2280 LPM, & one electric pump of capacity 180 LPM shall be provided for entire building. The pumps are to be automatic in action. Installation of negative suction arrangement and submersible pumps shall not be allowed. One set of pumps shall be provided for each 100 hydrants or part thereof, with a maximum of two sets. In case of more than one pump set installation, both pump sets shall be interconnected at their delivery headers. Alternative to provision of additional set of pumps, the objective can be met by providing additional diesel pump of the same capacity and doubling the water tank capacity as required for one set of pumps.
O.	Fire Command Centre	➢ There must be a Fire Command Centre on entrance floor of the building having direct access. The Fire Command Centre must have the main fire alarm panel with communication system (suitable public-address system) All controls and monitoring of fire alarm systems, Detection system, pressurization systems, smoke management systems must happen from this room. Integrated building management system must be provided for Fire Command Centre. ➢ Fire Command Centre must have provisions in accordance with Clause-3.4.12 of Part-4, NBCI-2016. ➢ The owner/occupier shall provide any additional fire requirements in future if the recommendation is issued by this department. ➢ The site is suitable for construction of above proposed structure subject to condition that the owner/occupier shall provide any additional fire requirements in future if the recommendation is issued by this department.

After completion of the construction work including installation of fixed firefighting measures as suggested, the applicant shall be required to apply for Fire

Safety Certificate as per Rule-13 (1) of Odisha Fire Prevention and Fire Safety Rules, 2017 along with following documents: -

i. The applicant shall produce a certificate to be issued by the office/person concerned to the effect that all the provisions of Bye-laws / Regulations of Bhubaneswar Development Authority and Recommendations issued from Chief Fire Officer, Fire Prevention Wing, Cuttack have been incorporated in the building.

ii. The applicant shall produce a certificate of the Competent Authority concerned to the effect that electrical installations have been done as recommended and as per provisions given in Part-8 "Building Services, Section-2 Electrical and allied installations" of NBCI-2016 and Section-7 of National Electrical Code, 2011

iii. The Applicant shall produce a certificate of the agency concerned to the effect that installation of firefighting measures has been done as recommended and as per provisions given in Part-4 of National Building Code of India-2016 and relevant BIS specifications.

30.3.2020
(S. Sethi)
Chief Fire Officer,
Fire Prevention Wing
Date. 30-03.2020

Memo No 1163R /FPW

Copy to Director / Authorized Signatory, KRJ Projects LLP, Raja Subodh Mullick Square, 5th floor, FL-F2, Kolkata, West Bengal-700013 for information and necessary action.

30.3.2020
Chief Fire Officer,
Fire Prevention Wing
Date. -03.2020

Memo No._____/FPW

Copy to Station Officer, Chandrasekharpur Fire Station, Chandrasekharpur for information.

Chief Fire Officer,
Fire Prevention Wing
Date. -03.2020

Memo No._____/FPW

Copy to Planning Member, Bhubaneswar Development Authority Bhubaneswar for information and necessary action.

Chief Fire Officer,
Fire Prevention Wing

Address – 3rd Floor, Vigilance Building, Nuapatna, Buxibatar, Cuttack-753001
Tel. - 0671 2300317, Fax 0671 2300201,
E-mail : cfohomeguardsodisha@gmail.com, fireservicepnd.dg@gmail.com

Annexure-VIII

भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

KRJ Project LLP

Date: 21-02-2020

5 Raja Subodh Mullick Square,
5th Floor, FL-F2, Kolkatta,
West Bengal - 700013

System Generated Auto Assessment for Height Clearance

1. Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR 751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations has assessed the site data filled by the applicant.

2. Assessment details for Height Clearance:

NOC ID :	**BHUB/EAST/B/021220/449915**
Applicant Name*	**Ramphal Yadav**
Site Address*	**Plot No. 317/2403,318,319,320/2139,322,320,321/2493,325/1863,326,326/1851 Khata No. 511/599,511/430, 511/601, 511/630, 511/218, 729/412,511/204**
Site Coordinates*	**20 22 48.03N 85 49 27.32E, 20 22 49.31N 85 49 28.76E, 20 22 48.92N 85 49 29.09E, 20 22 45.52N 85 49 29.36E, 20 22 50.09N 85 49 30.18E, 20 22 49.87N 85 49 30.37E, 20 22 47.58N 85 49 30.45E, 20 22 48.04N 85 49 31.10E, 20 22 46.92N 85 49 31.26E, 20 22 47.52N 85 49**
Site Elevation in mtrs AMSL as submitted by Applicant*	**22.9 M**
Type Of Structure*	**Building**

*As provided by applicant

Your site is located at a distance 14846 mts from ARP and lies in the grid D13 of the published CCZM of Bhubaneshwar airport. The Permitted top elevation for this grid is 122 mts.

Since the requested top elevation 103.19 mts in AMSL is below CCZM permitted top elevation, the NOC for height clearance is not required from Airports Authority of India.

3. This assessment is subject to the terms and conditions as given below:

a. The site-elevation and site coordinates provided by the applicant are taken for calculation of the permissible top elevation for the proposed structure. If however, at any stage it is established that the actual data is different from the one provided by the applicant, this assessment will become invalid.

b. The Site coordinates as provided by the applicant in the NOC application has been plotted on the street view map and satellite map as shown in ANNEXURE. Applicant/Owner to ensure that the plotted coordinates corresponds to his/her site.In case of any discrepancy,this assessment shall be treated as null and void

c. Airport operator or his designated representative may visit the site (with prior coordination with applicant or owner) to ensure that assessment terms & conditions are complied with.

d. The assessment is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and any notifications issued there under from time to time including the Aircraft(Demolition of Obstruction caused by Buildings and Trees etc.) Rules,1994.

e. The applicant is responsible to obtain all other statutory clearances from the concerned authorities including the approval of building plans. This assessment for height is to ensure the safe and regular aircraft operations and shall not be used as document for any other purpose/claim whatsoever, including ownership of land etc.

f. Use of oil, electric or any other fuel which does not create smoke hazard for flight operations is obligatory, within 8 KM of the Aerodrome Reference Point.

g. This assessment has been issued w.r.t. the Civil Airports as notified in GSR 751(E). Applicant needs to seek separate NOC for Defence, if the site lies within jurisdiction of Defence Airport. Applicants also need to seek clearance from state Govt. as applicable, for sites which lies in the jurisdiction of unlicensed civil aerodrome as outlined in Rule 13 of GSR751 (E).

This assessment is system auto generated and thus does not require any signature

Designated Officer

Region Name: EAST

Address: General Manager Airports Authority of India, Regional Headquarter, Eastern Region, N.S.C.B.I Airport, Kolkata-700052

Email ID: gmatmer@aai.aero

Contact No: 033-25111293

ANNEXURE

Street View

February 12, 2020

1:3,600

Satellite View

February 12, 2020

1:3,600

By E-mail

OFFICE OF THE DIVISIONAL FOREST OFFICER & WILDLIFE WARDEN
CHANDAKA WILDLIFE DIVISION, GAJA VIHAR
BARAMUNDA BHUBANESWAR-751003

Annexure-IX

Ph. (0674) 2355400/ 2355885 (O),
Email - dfochandakawl.od@gov.in / chandakadampara@gmail.com

Letter No. 6720 /4F (F.C. Act & Lease) - 348/2019
Dated, Bhubaneswar the 17 **December, 2019**

To

The Authorized Signatory
M/s KRJ Project LLP & others
5, Raja Subodh Mullick Square
5th Floor, FL-F2, Kolkata - 700013
West Bengal

Sub: Online Application for seeking recommendation of Standing Committee of NBWL/SBWL - M/s KRJ Project LLP & Others a Multi Storied Residential Project at Mouza- Raghunathpur Jali, Bhubaneswar, District-Khordha

Dear Sir,

This is to informed you that the proposed project site in Mouza- Raghunathpur Jali under Bhubaneswar Tahasil is outside Chandaka- Damapara Wildlife Sanctuary and its Eco-Sensitive Zone. Further the Mouza- Raghunathpur Jali is not coming within the jurisdiction of Chandaka Wildlife Division, Bhubaneswar. The site may come under Eco-Sensitive Zone of Nanadankanan Sanctuary.

In view of the above; proposal for Wildlife Clearance can't be processed at the level of this office. You may contact Deputy Director, Nandankanan Zoological Park & Divisional Forest officer, City Forest Division for Wildlife Clearance & Forest Clearance respectively.

Yours faithfully

17/12/19
Divisional Forest Officer
Chandaka Wildlife Division
Bhubaneswar

Memo No. 6721 /Dtd. **17.12.2019**

Copy forwarded to the Deputy Director Nanadankanan Zoological Park / Divisional Forest officer, City Forest Division, Bhubaneswar for information and necessary action.

17/12/19
Divisional Forest Officer
Chandaka Wildlife Division
Bhubaneswar

Memo No. 6722 /dtd. **17.12.2019**

Copy forwarded to the Regional Chief Conservator of Forests, Bhubaneswar Circle, Bhubaneswar for favour of kind information and necessary action.

17/12/19

Divisional Forest Officer
Chandaka Wildlife Division
Bhubaneswar

Memo No. 6723 /dtd. **17.12.2019**

Copy forwarded to the Principal Chief Conservator of Forests (Forest Diversion & Nodal Officer, FC Act), O/o the Principal Chief Conservator of Forests & HoFF, Bhubaneswar for favour of kind information and necessary action.

17/12/19

Divisional Forest Officer
Chandaka Wildlife Division
Bhubaneswar

Memo No. 6724 /dtd. **17.12.2019**/

Copy forwarded to the Principal Chief Conservator of Forests (WL) & CWW, Bhubaneswar for favour of kind information and necessary action.

17/12/19

Divisional Forest Officer
Chandaka Wildlife Division
Bhubaneswar

Annexure-X

ପରେ ବିଦ୍ୟାର୍ଥୀ ବିଦ୍ୟାଳୟ ଗଲେ ପୁନର୍ବାର ପାଠପଢା ସହ ଯୋଡ଼ି ହେବେ ବୋଲି ଦଳ ପକ୍ଷରୁ କୁହାଯାଇଛି ।

PUBLIC NOTICE

M/S. KRJ PROJECT LLP & Others are pleased to inform that the Multy Storied Residential Project located on Nandankanan Road at Village : Raghunathpur Jali, Tahasil : Bhubaneswar, P.S. : Nandankanan, District : Khordha has been accorded Environmental Clearance from "Ministry of Environment, Forest & Climate Change" (Vide Letter No. : 8714/SEIAA, dated.17.09.2020). The Copy of the Environmental Clearance Letter is available with the "Ministry of Environment, Forest & Climate Change", New Delhi.

S/6109 **Director**

କାର୍ଯ୍ୟାଳୟ: ସମ୍ବଲପୁର,
ବାଲାଜୀ ମିଟ୍‌ଟାଉନ୍, ବୁଢ଼ାରାଜା,

Annexure-XI

OFFICE OF THE DEPUTY DIRECTOR
NANDANKANAN ZOOLOGICAL PARK
AT: NANDANKANAN, PO: BARANG
DIST: KHORDHA, ODISHA, PIN: 754005
TEL/ FAX: +91 674-266075 CELL: 09437022023
E-mail: deputydirector.kanan@gmail.com

NANDANKANAN

Web: www.nandankanan.org

No 1598 /3F
Dated 19th May,2020

To

The Member Secretary
State Expert Appraisal Committee (SEAC)
State Pollution Control Board,
17/118, Nilakantha Nagar
Unit – 8, Bhubaneswar - 12

Sub Regarding Wildlife Clearance of Multi Storied Residential Project at Khata No 511/599, Plot No 318,319,317/2403 & Others at Mouza – Raghunathpur jail, District – Khordha, Odisha by M/s KRJ Project LLP & Others

Dear Sir,

With reference to the Clause No 16(ii), the proceeding of the meeting of State Level Expert Appraisal Committee, Odisha held on 18th December, 2019 enclosed by KRJ Project LLP, 5,Raja Subodh Mullick Square 5th Floor, FL-F2,Kolkata – 700013 West Bengal it is to inform you that the said Clause has become obsolete at present Eco-sensitive Zone of Nandankanan Sanctuary has already been notified by the Ministry of Environment Forest And Climate Change vide their Notification No 3993 Dt 10 12 2019 and as per the said notification the proposed project shown in the maps enclosed with the proposal is not coming within the Eco-Sensitive Zone of Nandankanan Sanctuary

Yours faithfully,

19/5/2020

Deputy Director
Nandankanan Zoological Park

Memo No 1599 /Dt 19 05 2020
Copy forwarded to the KRJ Project LLP 5,Raja Subodh Mullick Square, 5th Floor FL-F2 Kolkata – 700013 West Bengal for information and necessary action

Deputy Director
Nandankanan Zoological Park

ANNEXURE-XII(a)

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, ODISHA, BHUBANESWAR

Ref. No. 8714/SEIAA

Date 17.08.2020

SEIAA File No. 122283/11-MIS/11-2019

To

Sri Rohit Raj Modi,
Authorized Signatory)
M/s KRJ Project LLP & Others
At-5, Raja Subodh Mullick Square,
Kolkata-700013

Sub: Proposal for Construction of Proposed "Multi Storied Residential Project" at Mouza- Raghunathpur Jali, Tahasil-Bhubaneswar, District-Khordha (Built-up area-27,636.66 Sqmt) of KRJ Project LLP & Others; Sri. Rohit Raj Modi. - Environmental Clearance reg.

Ref: Your online application dated 19.10.2019 for issue of EC vide File No: SIA/OR/MIS/122283/2019.

Sir,

This is to inform you that your proposal falls at item no. 8(a) of the schedule of EIA Notification, 2006 as amended from time to time, and is a B2 category project. The proposal has been duly appraised by SEAC, Odisha on the basis of the documents enclosed with the application, namely Form-1, Form-IA, Conceptual Plan (EMP), and clarifications furnished to SEAC in response to their observations.

The Project Proposal in nutshell

1. The proposal is for Environmental Clearance for KRJ Project LLP & Others for proposed Multi Storied Residential Project at Mouza – Raghunathpur Jali, Bhubaneswar, District – Khordha with total built-up area 27,636,.66 m^2.
2. The project falls under Category "B", Project or Activity 8 (a) as per schedule of EIA Notification dated 14th Sep, 2006, as amended from time to time.
3. The total project area is 7405.75 m^2 or 1.83 acres. The geographical coordinates of the project site are Latitude - 20°22'47.52"N and Longitude - 85°49'29.14"E. The Project is located at Plot No. 317/2403, 318, 319, 320/2139, 322, 320, 321/2493, 325/1863, 326, 326/1851, Mouza- Raghunathpur Jali, Bhubaneswar, District- Khordha, Odisha.
4. The project site is well connected by road, rail & air. Among main connecting links to the Project site, Nandan- Kanan Road is adjacent to project site. The

nearest railway station is Bhubaneshwar Railway Station which is approx. 1.12 km,E from the project site and Biju Patnaik International Airport is at a distance of approx. 14.5 km, SSW away from the project site. Nandankanan Wildlife Sanctuary lies at a distance of Approx. 0.72 km (NW) and Chandaka Dampara Wildlife Sanctuary lies at a distance of Approx. 2.65 km (NW).

5. The Detailed Area Statement of the project is mentioned below:

Sl. No.	Particulars		Area (M^2)
(a)	Total Plot area		7405.75
(b)	Permissible Ground coverage (@35%)		2592.0125
(c)	Proposed Ground coverage @ 19.5 % of plot area		1447.36
(d)	Permissible F.A.R @ 3		22,217.25
(e)	Proposed F.A.R @ 2.89		21,409.66
	a.	Residential F.A.R	20,264.66
	b.	Community building	1,145.60
(f)	Proposed Non F.A.R		6,227.00
(g)	a.	Basement non F.A.R area (Lobby, Maintenance room, UGT, STP etc.)	5,286.69
	b.	Tower's non F.A.R area (Meter room, fire command center, mumty, water tank etc.)	305.11
	c.	Others non F.A.R area (Stilt, Guard room, Panel room, Community building etc.)	635.2
(h)	Total Built-up Area		27,636.66
(i)	Maximum Height of the Building (B+G+14)		44.5 m
(j)	Landscape area (22.09 % of total plot area)		1636.54

6. Total power requirement for the proposed project will be 660kVA; Source: CESU, which will be sourced from Odisha Power Transmission Corporation Limited. 2 DG sets of rating 500 kVA (2 x 250 kVA) will be installed for backup power.
7. The total water requirement is approx.112 KLD, out of which total domestic water requirement is 107 KLD. The total fresh water requirement is approx. 75 KLD.
8. Wastewater Generation: The project will generate approx. 92 KLD of wastewater. The wastewater will be treated in an onsite STP of capacity 110 KLD. The total 73.5 KLD of wastewater treated will be recycled (32KLD for flushing, 5KLD for gardening, 36.5KLD will be discharged into nearby construction/ plantation purpose/into drain after getting sewer permission).
9. Solid waste Generation: The project will generate approx. 437.5 kg/day of solid waste which will be collected from household units as domestic waste in colored bins. The local vendors will be hired to provide separate colored bins for dry recyclable and Bio-Degradable waste. Litter bin will also be provided in open areas like parks etc. Biodegradable waste will be composted in organic waste converter and non-biodegradable waste generated will be disposed through Govt./CPCB approved vendors.
10. Adequate parking (7,105.24 m^2) provision will be kept for vehicles parking in the project. Besides this, internal road of adequate width within the project will

facilitate smooth traffic movement. The total proposed parking for the Multi-storied residential project is 248 ECS (Approx.).

11. Proposed energy saving measures would save about- Led lights, Solar panels, Energy Saving devices will be implemented. Solar based lightening will be done in common areas, Stair cases, landscape areas, signage, entry gates and boundary walls (5% from total power load).Total Energy saved – 132 KVA which will be 20 %.
12. A detailed traffic survey has been conducted following PCUs as per IRC – 106:1990 in the area to evaluate the impacts of the increased traffic due to the proposed activity.
13. 6 nos. of Rain water harvesting pits had been proposed under Rain water harvesting system.
14. Firefighting Installations will be installed as per recommendation of the Firefighting Officer, Odisha and as per the guideline of NBC (part-4). Fire NOC had been obtained.
15. The total estimated population of the project will be 1088 persons (including fixed + floating).
16. The total estimated cost of the project is approximately Rs. 55 Crores including land and construction.
17. The consultant M/s Grass Roots Research & Creation India (P) Ltd. Noida (UP) along with the proponent made a detailed presentation before the SEAC on the proposal on 18.12.2019.
18. The Sub-Committee of SEAC visited the site on 18.03.2020.
19. The project proponent furnished additional information / documents on the project to SEAC in compliance to their observation made during presentation & also compliance of the site visit observations on 14.02.2020 & 30.06.2020.
20. The SEAC considered the proposal for EC on 03.07.2020 and recommended for grant of Environmental Clearance for the project valid for a period of 7 years, stipulating various conditions.

The State Environment Impact Assessment Authority (SEIAA), Odisha after considering the appraisal report and recommendations of SEAC, hereby accords Environmental Clearance to the project valid for a period of 7 years under the provisions of EIA Notification 2006 and subsequent amendments thereto, subject to strict compliance of all conditions stipulated below.

Detailed half yearly compliance report of the following conditions has to be submitted by the project proponent to SEIAA on the 1st June and 1st December each year.

General Conditions of Clearance: -

1. 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

2. The project proponent shall ensure that the guidelines for building and construction projects issued vide MoEF & CC's OM No.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
3. The approval of the Competent Authority shall be obtained in regard to structural safety of buildings against earthquake, adequacy of fire fighting equipment as per National Building Code including protection measures from lightning.
4. The project proponent shall obtain all necessary clearance/ permission from all concerned agencies including Bhubaneswar Development Authority before commencement of work.
5. Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board.
6. 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.
7. A First Aid Room shall be provided in the project both during construction and operations of the project.
8. The company shall draw up and implement corporate social Responsibility plan as per the Companies Act of 2013.
9. As per the MoEF & CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, skill development, cross drains, solid waste management facilities, rain water harvesting, soil moisture conservation works, avenue plantation, etc. The activities proposed under CER shall be restricted to the affected area around the project. The activities proposed under the CER 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.
10. A copy of this Environmental Clearance letter shall be displayed on the website of the Odisha 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.
11. Officials from the Regional Office of MoEF & CC, Bhubaneswar/SPCB, Odisha 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.
12. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
13. The SEIAA, Odisha 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.

14. 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.
15. 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 SEIAA, Odisha. The advertisement shall be made within seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF & CC, Bhubaneswar.
16. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZillaParisad/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.
17. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance 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, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, 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.
18. 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 Odisha 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, Govt. of India by e-mail.

Specific Conditions:

19. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.
20. The site is required to be revisited by the same sub-Committee of SEAC after one year of issue of Environmental Clearance order by SEIAA, Odisha to assess the status of implementation of commitment by the project proponent and conditions of Environmental Clearance order.
21. BDA to obtain status of implementation of conditions of Environmental

Clearance from SEIAA, Odisha before issue of occupancy certificate.

22. The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
23. The project site was found to be a very low lying area. So, the base shall be at a suitable level, above the public road in consultation with the architect to avoid water logging during monsoon.

Topography and Natural Drainage:

24. 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 Budget and Rain Water Harvesting:

25. **No ground water shall be extracted for the project work at any stage during the construction phase** without obtaining the permission from the Water Resources Department, Govt. of Odisha/ CGWB.
26. As proposed, fresh water requirement from ground water shall not exceed 75 m^3 per day.
27. 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.
28. 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 and SEIAA, Odisha along with six monthly Monitoring reports.
29. 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.
30. 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.
31. 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 shall be done.
32. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
33. 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. Rain water harvesting recharge pits of adequate nos. shall be provided.

34. 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. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawal of water.
35. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.
36. A complete plan for rainwater harvesting at the proposed site shall be drawn up and implemented. Roof top rain water harvesting shall be adopted for the proposed Buildings. The complete rainwater harvesting plan shall be submitted to SEIAA within one month from this day. As proposed, rain water harvesting pits for artificial ground water recharge shall be installed as per CGWB guidelines.

Solid Waste Management:

37. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
38. Disposal of muck during construction phase shall 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.
39. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate 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.
40. 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.
41. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.

Sewage Treatment Plant:

42. STP of capacity 110 KLD shall be installed before start of the operation phase of the building. Treatment of 100% grey water by decentralized treatment should be done. Treated waste water from both the STP shall be recycled / reused to the maximum extent possible. Discharge of unused treated waste water shall conform to the norms and standards of the Odisha State Pollution Control Board. Necessary measures should be taken to mitigate the odour problem from STP. The sewage treatment plant shall be made functional before the completion of Building Complex.
43. Excess treated water shall be discharged to the drain only after getting the

permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.

44. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.
45. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
46. No sewage or untreated effluent water would be discharged through storm water drains.
47. The sewerage disposal system of the project shall be kept in proper working condition at all times.
48. 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 SEIAA, Odisha 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.
49. 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.
50. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to the "Budhi Nala" through the existing drain i.e. the competent authority of the drain and "Nala" before commencement of any activity at the project site. An undertaking to be submitted in form of a legal affidavit before going for construction activity.

Energy Conservation:

51. 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.
52. 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.
53. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% 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.

54. 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.
55. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.
56. 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 Management and Noise Management:

57. 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, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, 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.
58. 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.
59. Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
60. 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.

61. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.
62. Ambient noise levels shall conform to residential 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.

Greencover

63. Green-belt & avenue plantation of trees over the area of 1636.54 sqm (22.1 % of plot area) shall be done using native tree species/shrubs improving greenery & keeping in view aesthetics considerations in the whole complex. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Professional landscape architects should be engaged to design the green layout to provide for multi-tier plantation and green fencing all around, mitigating various environmental pollutants like dust, noise, emissions etc. At least 100 numbers of trees shall be planted and maintained at the site.
64. Rainwater from open spaces shall be collected and reused for landscaping and other purposes. Roof top rain water harvesting shall be adopted for the proposed Buildings. Rainwater harvesting at the proposed site shall be implemented. Before recharging the surface runoff, pre-treatment must be done to remove suspended matter, oil and grease.

Top Soil Preservation and Reuse:

65. 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.

Traffic & Transportation:

66. A comprehensive mobility plan, as per Ministry of Urban Development 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
67. 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 01 km 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 01 km radius of the site.
68. 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.

69. A dedicated entry/exit and parking shall be provided for commercial activities.
70. Barricades shall be provided around project boundary.
71. Speed of the vehicles shall be restricted upto 15 kmph by erecting speed bumps at regular intervals at project site and proper signage shall be provided for guided vehicular movement and speed restrictions.
72. Parking shall be prohibited on the access road to the proposed project site.
73. Footpath shall be seamless with sufficient width.
74. No vehicles shall be allowed to stop and stand in front of the gate on main access.
75. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
76. The Traffic Management Plan prepared by the proponent shall be duly validated and certified by the State Concerned Competent Authority and shall have also their consent before implementation. The Competent Authority for validation is BMC / Works Deptt. of the Govt. of Odisha. To this effect, they have to submit a legal affidavit before going for construction activity.

Environment Management Plan:

77. An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.
78. Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and should be spend accordingly and not to be diverted for any other purpose. Year wise progress of implementation of action plan for EMP and expenditure shall be reported to the SEIAA, Odisha, Regional Office, MoEF & CC, Govt. of India, Bhubaneswar, SPCB along with the half yearly compliance report.
79. It shall be mandatory for the project management to submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA),Odisha, SPCB & Regional Office of the Ministry of Environment & Forest, Odisha in hard and soft copies on 1st June and1st December of each calendar year and the compliance report shall also be uploaded in the website of the MoEF& CC.

80. 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.

Yours faithfully,

17.08.2020
Member Secretary

Memo No 8715/SEIAA/ Dt. 17.08.2020
Copy to

1. **Joint Secretary (Environment)**, Ministry of Environment, Forests and Climate Change Govt. of India, Indira Paryavaran Bhavan, Jor Bagh Road, Aliganj, New Delhi-110003 for information.
2. **Additional Chief Secretary**, Forests & Environment Dept., Government of Odisha for information.
3. **Member Secretary**, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information.
4. **Additional Principal Conservator** of Forests, Regional Office (EZ), Ministry of Environment & Forests, A-31, Chandrasekharpur, Bhubaneswar for information.
5. **Member Secretary**, CGWA, 18/11, Jamnagar House, ManSingh Road, New Delhi-110011 for information.
6. **Collector, District Magistrate**, Khordha, for kind information and necessary action.
7. **Secretary**, **SEAC**, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for kind information.
8. Guard file for record.

17.08.2020
Member Secretary

ANNEXURE-XII(b)

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, ODISHA

5RF-2/1, Unit-IX, Bhubaneswar-751022, Tel: 0674-3512840, Email: seiaaodisha@gmail.com
(A statutory body constituted by Ministry of Environment, Forest & Climate Change under Environment (Protection) Act, 1986)

File No. SIA/OR/MIN/306394/2023

Dated 05th December 2023.
Bhubaneswar

To

Sri Prafulla Kumar Mohanty
(Authorised Signatory)
M/s. Uditi Dwellings Private Limited,
3H, Plaza M6, Third Floor,
Jasola District Centre,
South Delhi, New Delhi - 110025

Sub: Proposal for Transfer of Environmental Clearance (EC) of granted by SEIAA, vide EC letter No. 8714/SEIAA dated:17/08/2020 for construction of Multi Storied Residential Project having built-up area-27,636.66 sqm at Mouza-Raghunathpur Jali, Bhubaneswar, District-Khordha, Odisha from M/s. KRJ Project Private Limited (Erstwhile M/s KRJ Project LLP) & Others to M/s. Uditi Dwellings Private Limited -reg.

Ref: (i) EC letter no./EC identification no. 8714/SEIAA dated: 17/08/2020.
(ii) Letter of M/s. Uditi Dwellings Pvt. Ltd. letter no. Nil dt. 06.11.2023
(iii) Online Application no. SIA/OR/MIN/306394/2023 dtd.25.11.2023

Sir/Madam,

This has reference to your online application no. SIA/OR/MIN/306394/2023 dated 25.11.2023, wherein you have requested for transfer of Environmental Clearance (EC) granted by SEIAA, Odisha vide letter no./EC identification No. 8714/SEIAA dated: 17/08/2020 in favour M/s. Uditi Dwellings Private Limited, the present owner/PP of the building.

2. The application was examined in the State Environment Impact Assessment Authority (SEIAA), Odisha in its 144th meeting held on 30.11.2023 & 01.12.2023 in accordance with the Para-11 of the EIA Notification, 2006 as amended from time to time and the following points are noted;

(i) As submitted by the PP, it is noted that EC was obtained for vide letter No. 8714/SEIAA dated:17/08/2020 for construction of Multi Storied Residential Project having built-up area-27,636.66 sqm at Mouza-Raghunathpur Jali, Bhubaneswar, District-Khordha, Odisha from for a period of 7 years in favour

of M/s. KRJ Project Private Limited (Erstwhile M/s KRJ Project LLP) & Others and the applicant was Sri Rohir Raj Modi (Authorized Signatory of M/s. KRJ Project LLP) & Others) vide the above-mentioned EC letter under reference.

(ii) Now, Sri Rohir Raj Modi (Authorized Signatory of M/s. KRJ Project LLP) & Others has submitted No Objection Certificate through Affidavit with mentioned that if, the Environmental Clerance (EC) transfer to M/s. Uditi Dwellings Private Limited he has no objection.

(iii) The building and construction project has obtained Consent to Establish (CTE) order vide letter no.4038 dt. 17.03.2021 in favour of M/s. KRJ Project LLP) & Others and no Consent to Operate (CTO) was issued by SPCB for this project as the project is not completed yet informed by present PP.

(iv) Documents submitted for EC Transfer;

a. Form No. 7 for transfer of Environmental Clearance,
b. Letter no. Letter of M/s. Uditi Dwellings Pvt. Ltd. letter no. Nil dt. 06.11.2023
c. Undertaking for accepting the terms and conditions in the original EC.
d. NO Objection Certificate through Affidavit
e. Self-certified EC compliance report

3. Transfer of Environmental Clearance (EC) for construction of Multi Storied Residential Project having built-up area-27,636.66 sqm at Mouza-Raghunathpur Jali, Bhubaneswar, District-Khordha, Odisha issued vide SEIAA, Odisha EC letter no. 8714/SEIAA dated: 17/08/2020 **is allowed** in favour of M/s Uditi Dwellings Private Limited, the present owner/PP with same validity period of original EC. The other stipulated terms and conditions of the original EC initially granted remains same subject to satisfactory compliance to all the stipulated terms and conditions of EC.

The Project Proponent shall be uploaded/submitted six monthly EC compliance in the Parivesh Portal of MoEF & CC., Govt. of India only from date of issue of transfer of EC, falling which the EC stands automatically revoked.

In case, there is a change in the scope of the project, fresh Environment Clearance shall be obtained.

Yours faithfully,

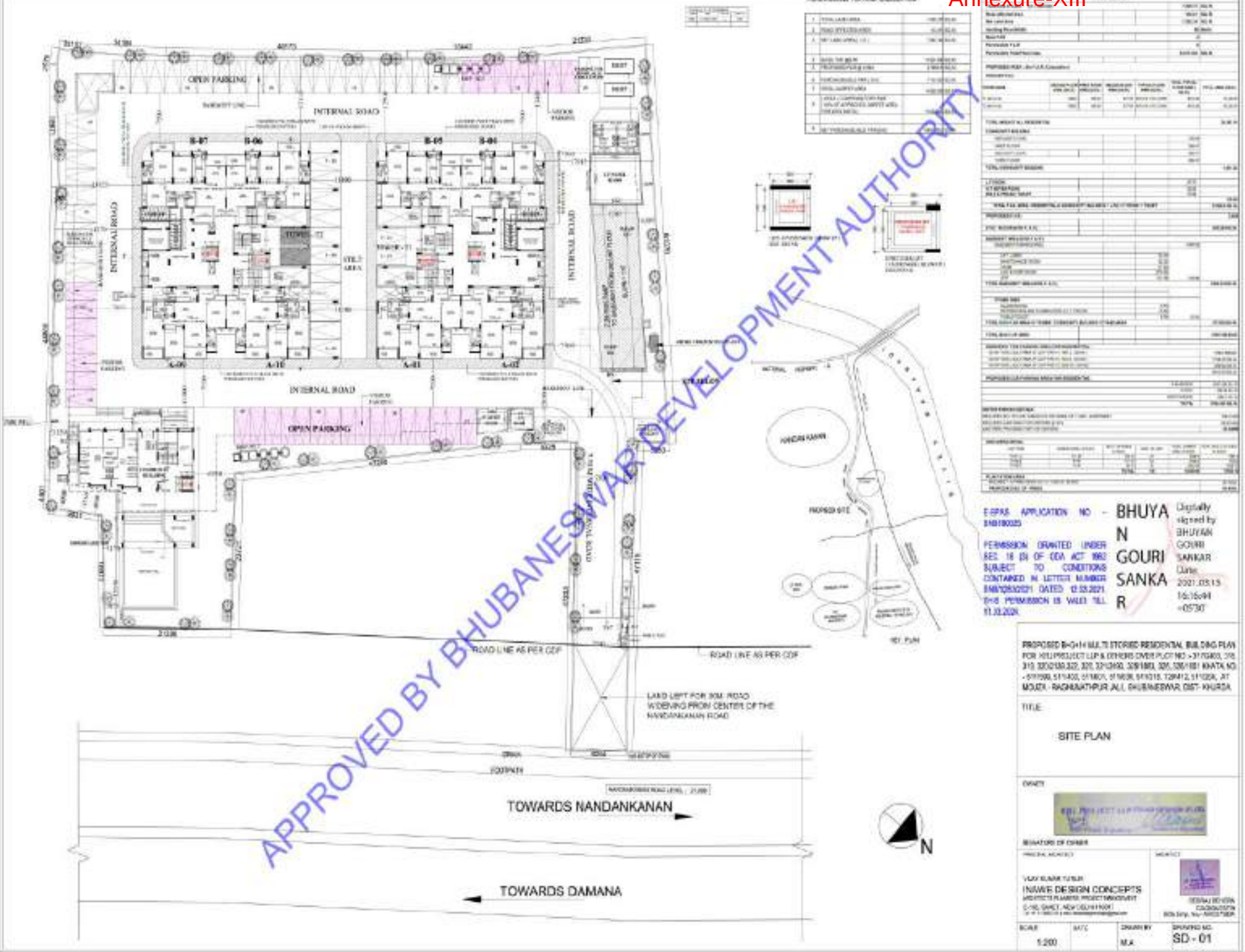
Member Secretary

Copy to

1. Joint Secretary (Environment), Ministry of Environment, Forests and Climate Change Govt. of India, Indira Paryavaran Bhavan, Jor Bagh Road, Aliganj, New Delhi-110003 for information.
2. Principal Secretary, Forests & Environment Dept., Government of Odisha for information.
3. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information.
4. Additional Principal Conservator of Forests, Regional Office (EZ), Ministry of Environment & Forests, A-31, Chandrasekharpur, Bhubaneswar for information.
5. Chairman, Central Pollution Control Board, CBD-cum-office Complex, East Arjun Nagar, New Delhi-110032 for information.
6. Member Secretary, CGWA, 18/11, Jamnagar House, Man Singh Road, New Delhi-110011for information.
7. The Collector/Sub Collector, Khordha and Tahasildar, Bhubaneswar for information and necessary action.
8. The Bhubaneswar Development Authority (BDA)/Bhubaneswar Municipality Corporation (BMC) for information and necessary action.
9. Chairman/Member / Member Secretary, SEIAA for information.
10. Chairman, SEAC/Member Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for information.
11. Guard file for record.

Member Secretary

Annexure-XIII



E-BPAS APPLICATION NO - BNB180035

PERMISSION GRANTED UNDER SEC. 16 (3) OF ODA ACT 1982 SUBJECT TO CONDITIONS CONTAINED IN LETTER NUMBER BMB/PB/0021 DATED 10.03.2021. THIS PERMISSION IS VALID TILL 11.03.2026.

BHUYAN GOURI SANKAR

Digitally signed by BHUYAN GOURI SANKAR
Date: 2021.05.15 16:16:44 +05'30'

PROPOSED B+G+14 MULTI STORIED RESIDENTIAL BUILDING PLAN FOR M/S PROJECT LLP & OTHERS OVER PLOT NO.-317/3403, 318, 319, 320/2150,322, 321, 321/2400, 329/1803, 325, 326/1851 KHATA NO. - 511/1598, 511/1400, 511/1601, 511/638, 511/2115, 729/412, 511/2206, AT MOUZA - RAGHUNATHPUR (A.I), BHUBANESWAR, DIST- KHURDA.

TITLE

SITE PLAN

OWNER

SIGNATURE OF OWNER

PRINCIPAL ARCHITECT

VIJAY KUMAR TUTEJA
INAMIE DESIGN CONCEPTS
ARCHITECTS PLANNERS PROJECT MANAGEMENT
C-150, SAKET, NEW DELHI-110017

ARCHITECT

SCALE	DATE	DRAWN BY	DRAWING NO.
1:200		M.A	SD - 01

Annexure-XIV

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)

NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Multi-storied Residential Project By M/s Krj Project Llp		
Project Address:	Mouza- Raghunathpur Jali, Bhubaneswar, District-khordha, Odisha.		
Village:	Raghunathpur Jalli (og)	Block:	Bhubaneswar
District:	Khordha	State:	Odisha
Pin Code:			
Communication Address:	Flat No:1215, Tower -4, Royal Lagoon Raghunathpur, Kalarahanga Nandankanan, Khordha, Bhubaneswar, Khordha, Odisha - 751024		
Address of CGWB Regional Office :	Central Ground Water Board South Eastern Region, Bhujal Bhawan, Khandagiri Square, Nh-5, Bhubaneshwar, Khordha, Odisha - 750001		

1.	**NOC No.:**	CGWA/NOC/INF/ORIG/2020/9264			
2.	Application No.:	21-4/2515/OR/INF/2020	3.	Category: (GWRE 2017)	Safe
4.	Project Status:	New Project	5.	NOC Type:	New
6.	**Valid from:**	10/12/2020	7.	**Valid up to:**	09/12/2025

8. Ground Water Abstraction Permitted:

Fresh Water		Saline Water		Dewatering		Total	
m³/day	m³/year	m³/day	m³/year	m³/day	m³/year	m³/day	m³/year
89.14	32536.10						

9. Details of ground water abstraction /Dewatering structures

	Total Existing No.:0					**Total Proposed No.:2**				
	DW	DCB	BW	TW	MP	DW	DCB	BW	TW	MP
Abstraction Structure*	0	0	0	0	0	0	0	2	0	0

*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit

10.	Ground Water Abstraction/Restoration Charges paid (Rs.):	325361.00

11.	Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.	No. of Piezometers	Monitoring Mechanism		
			Manual	DWLR**	DWLR With Telemetry
	**DWLR - Digital Water Level Recorder	1	0	1	0

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011
Phone: (011) 23383561 Fax: 23382051, 23386743
Website: cgwa-noc.gov.in

Validity of this NOC shall be subject to compliance of the following conditions:

Mandatory conditions:

1) Installation of digital water flow meter (conforming to BIS/ IS standards) having telemetry system in the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate through the web-portal.

2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.

3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines . Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II.

4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.

5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.

6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.

7) The firm shall report compliance of the NOC conditions online in the website (www.cgwa-noc.gov.in) within one year from the date of issue of this NOC.

8) The firm shall submit the water audit report in case of water requirement is in excess of 100 m3/day through certified auditors within three months of completion of the same to CGWA.

9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.

10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

General conditions:

11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).

12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).

13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.

14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.

15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.

16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.

17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.

18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.

19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.

20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.

21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.

22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.

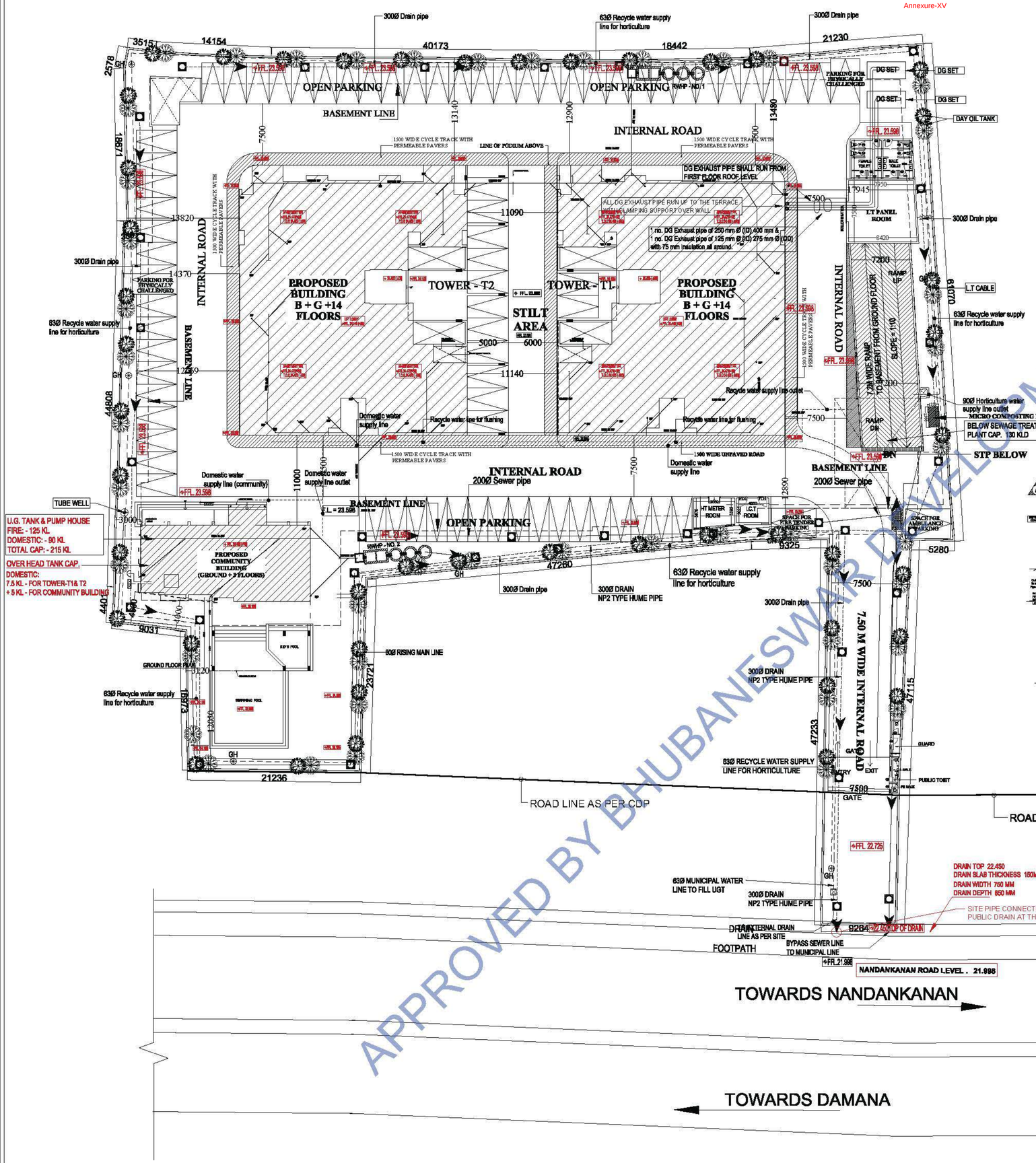
23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.

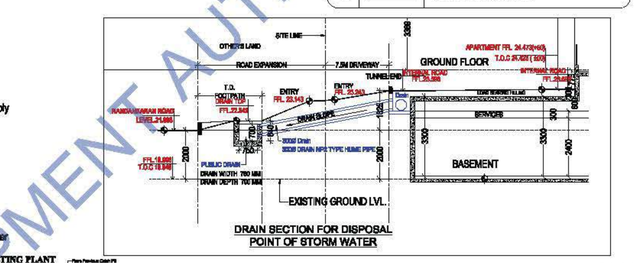
24) In case, Impact Assessment Report is required as per criteria mentioned in the guidelines , the firm shall submit it in the prescribed format before 31st December 2020 (applicable for Semi-Critical and Critical Category) failing which this NOC will be treated as cancelled/invalid and Penalty/EC shall be imposed as per the guidelines.

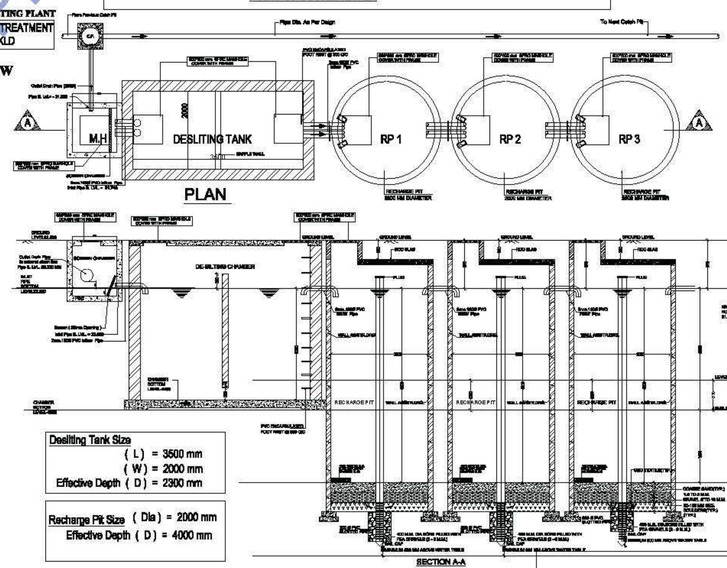
25) In case, Hydro geological report is required as per criteria mentioned in the guidelines, the firm shall submit it in the prescribed format 31st December 2020 (In case of Mining) failing which this NOC will be treated as cancelled/invalid and Penalty/EC shall be imposed as per the guidelines.

(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)

Annexure-XV







LEGEND :		
S. No.	SYMBOL	DESCRIPTION
1.	M.H	MANHOLE
2.		SEWER LINE
3.	C.P.	CATCH PIT
4.		UNDER GROUND PIPE DRAIN
5.		DOMESTIC WATER SUPPLY LINE
6.		RISING MAIN LINE (FROM T/W TO U.G.T.)
7.		MUNICIPAL WATER SUPPLY LINE.
8.		RECYCLED WATER SUPPLY LINE FOR HORTICULTURE
9.		RECYCLE WATER LINE FOR FLUSHING
10.	GH	GARDEN HYDRANT
11.		PROPOSED TUBE WELL
12.		MASONRY CHAMBER FOR ISOLATING VALVE
13.		BASEMENT RETAINING WALL

RAIN WATER HARVESTING	
Tower - T1 Roof Area	728 Sq. M
Tower - T2 Roof Area	728 Sq. M
Community Building Roof Area	286.22 Sq. M
Total Roof Area	1742.22 Sq. M
As per Requirement,6 M3 Volume of Rain Water Harverting for every 100 Sq. M Roof Area (ie. 6 x 1742.22/100)	104.53 M^3
PROPOSED	
Volume of Single Desilting Tank	
3500mm x 2000mm x 2300 mm(L x B x D)	16.10 M^3
Volume of Single Recharge Pit	
Dia 2000 mm , Depth 4000 mm	12.56 M^3
Volume of 3 No. Recharge Pit Provided (12.56 M^3 x3)	37.68 M^3
Total Volume for 1 No. RWH (16.10M^3 + 37.68 M^3)	53.78 M^3
Total No of RWH Provided	2 Nos.
Total Volume of 2 Nos. RWH (53.78 M^3 x 2)	107.56 M^3

Note : Every RWH, 1 Desilting Tank and 5 Nos. Recharge Pit as size mentioned above. Provide the volume of RWH more than required.

Desilting Tank Size	
(L)	= 3600 mm
(W)	= 2000 mm
Effective Depth (D)	= 2300 mm

Recharge Pit Size	
(Dia)	= 2000 mm
Effective Depth (D)	= 4000 mm

Total Number of RWH =02

E-BPAS APPLICATION NO – BNB190325

PERMISSION GRANTED UNDER SEC. 16 (3) OF ODA ACT 1982 SUBJECT TO CONDITIONS CONTAINED IN LETTER NUMBER BNB/1283/2021 DATED 12.03.2021. THIS PERMISSION IS VALID TILL 11.03.2024.

BHUYAN GOURI SANKAR
Digitally signed by BHUYAN GOURI SANKAR
Date: 2021.03.15 16:12:12 +05'30'

PROPOSED B+G+14 MULTI STORIED RESIDENTIAL BUILDING PLAN FOR KRJ PROJECT LLP & OTHERS OVER PLOT NO :- 317/2403, 318, 319, 320/2139,322, 320, 321/2493, 325/1863, 326, 326/1851 KHATA NO. - 511/599, 511/430, 511/601, 511/630, 511/218, 729/412, 511/204, AT MOUZA - RAGHUNATHPUR JALI, BHUBANESWAR, DIST- KHURDA.

TITLE
APPROVAL DRAWING
SERVICES - SITE PLAN

OWNER
KRJ PROJECT LLP SRIHARI INFRACON (P) LTD.
Authorised Signatory (Authorised Signatory)
SIGNATURE OF OWNER

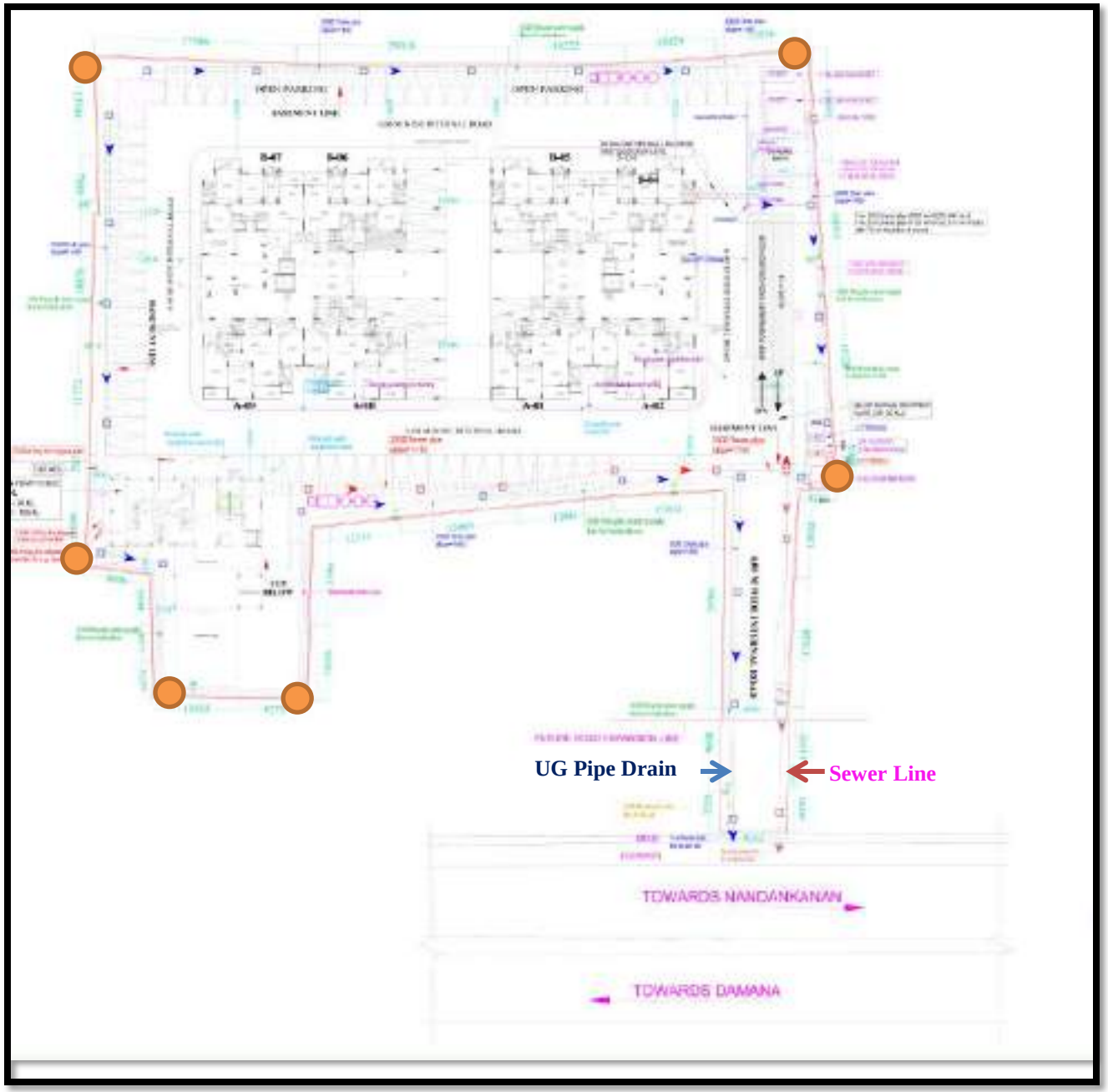
PRINCIPAL ARCHITECT
VIJAY KUMAR TUTEJA
INAWE DESIGN CONCEPTS
ARCHITECTS, PLANNERS, PROJECT MANAGEMENT
E-136, SAKET, NEW DELHI-110017
Tel. +91 11 45651741 e-mail: inawedesignconcepts@gmail.com

ARCHITECT
AR. DEBRAJ BEHERA CA/2004/33719 B.D.A. Emp. No-AR/037/B.D.A
DEBRAJ BEHERA
CA/2004/33719
BDA Emp. No.- AR/037/BDA

SCALE	DATE	DRAWN BY	DRAWING NO.
1:200		M.A	SD - 12

PLAN SHOWING RWH PITS

Annexure-XVI



LEGEND :

S.No.	SYMBOL	DESCRIPTION
1.	MH	MANHOLE
2.		SEWER LINE
3.	C.P.	CATCH PIT
4.		UNDER GROUND PIPE DRAIN
5.		
6.		
7.		
8.		
9.		
10.		GARDEN HYDRANT
11.		
12.		MASONRY CHAMBER FOR ISOLATING VALVE
13.		BASEMENT RETAINING WALL
14.		

RWH Pits

Annexure-XVII

Annexure-XVIII

Annexure-XIX

Multi Storied Residential Project by M/s KRJ Project LLP & Others, Mouza-Raghunathpurjali, District khurda, Bhubneshwar,Odisha.						
Ambient Air Quality Data March-2023				Location: AAQ-1 (Project.Site)		
S.No	Date	PM10,µg/m3	PM2.5,µg/m3	SO_2 µg/m3 ,	NO_2,µg/m3	CO, µg/m3
		IS:5182:Pt-24	IS:5182:Pt-23	IS:5182:Pt-2	IS:5182:Pt-6	IS:5182:Pt-10
1	02.03.2023	87.4	46.8	11.9	24.6	760
2	05.03.2023	86.3	46.1	13.2	22.1	790
3	09.03.2023	83.2	44.7	11.6	24.2	720
4	13.03.2023	75.4	42.1	11.4	23.1	690
5	16.03.2023	89.9	50.4	11.1	29.9	750
6	19.03.2023	85.1	46.2	12.8	27.5	790
7	22.03.2023	90.2	50.5	10.7	25.4	760
8	26.03.2023	85.0	46.8	12.4	24.6	640
	Min	**75.4**	**42.1**	**10.7**	**22.1**	**640**
	Max	**90.2**	**50.5**	**13.2**	**29.9**	**790**
	Average	**85.3**	**46.7**	**11.9**	**25.2**	**738**
	98 Percentile	**90.2**	**50.5**	**13.1**	**29.6**	**790**
NAAQS, For 24 hourly monitoring (except CO for One hour)		**100**	**60**	**80**	**80**	**4000**

Multi Storied Residential Project by M/s KRJ Project LLP & Others, Mouza-Raghunathpurjali, District Khurda, Bhubneshwar,Odisha.					
Ground water Quality March-2023					
S.No	**Parameter**	**Unit**	**Standard Limit (IS-10500:2012, RA 2018)**		**GW1**
			Desirable Limit	**Permissible Limit**	**Project site**
1	Colour	Hazen	5	15	<5
2	Odour	-	Agreeable	Agreeable	Agreeable
3	Turbidity	NTU	1	5	<1
4	pH	-	6.5-8.5	No Relaxation	7.57
5	Total Dissolved Solids (TDS)	mg/l	500	2000	556
6	Total Hardness (as CaCO3)	mg/l	200	600	196
7	Total Alkalinity (as CaCO3)	mg/l	200	600	170
8	Chlorides (as Cl)	mg/l	250	1000	130
9	Fluoride (as F)	mg/l	1	1.5	0.6
10	Calcium(as Ca2+)	mg/l	75	200	47
11	Magnesium (as Mg2+)	mg/l	30	100	19
12	Sulphate (as SO4)	mg/l	200	400	85
13	Nitrate(as NO3)	mg/l	45	No Relaxation	15
14	Iron (as Fe)	mg/l	1	No Relaxation	0.64
15	Aluminum (as Al)	mg/l	0.03	0.2	<0.01
16	Copper (as Cu)	mg/l	0.05	1.5	<0.01
17	Manganese (as Mn)	mg/l	0.1	0.3	<0.01
18	Boron (as B)	mg/l	0.5	1	<0.01
19	Zinc (as Zn)	mg/l	5	15	<0.01
20	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.01
21	Arsenic (as As)	mg/l	0.01	0.05	<0.01
22	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001
23	Total Chromium (as Cr3+)	mg/l	0.05	No Relaxation	<0.01
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.01
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001
27	Nickel (as Ni)	mg/l	0.02	No Relaxation	<0.01
28	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.002	<0.001
29	Anionic Detergent (as MBAS)	mg/l	0.2	1	<0.01
30	Silica (as SiO_2)	mg/l	,---	,---	5.7
31	Phosphate (as PO_4)	mg/l	,---	,---	0.5
32	Specific Conductivity	µS/cm	,---	,---	836
Bacteriological Parameter					
1	Total Coliform	MPN/100ml	Shall not be detectable in any 100ml Sample		Not Detected (<2)
2	E.coli	MPN /100ml	Shall not be detectable in any 100ml Sample		Absent (<2)

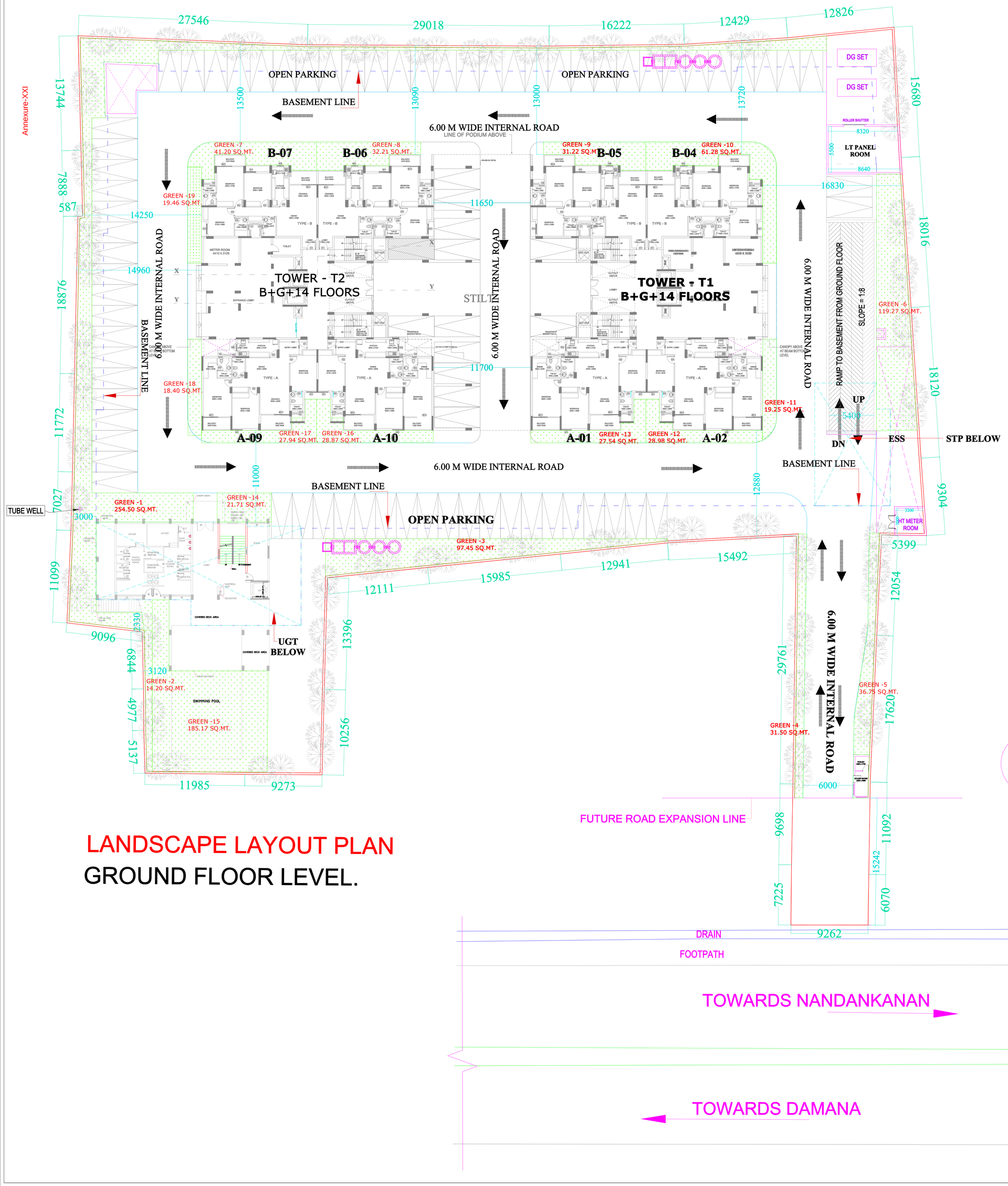
Multi Storied Residential Project by M/s KRJ Project LLP & Others, Mouza-Raghunathpurjali, District Khurda, Bhubneshwar,Odisha.

Noise Quality data March-2023						
S.No.	**PROJECT SITE**	**ZONE**	**LIMIT (as per CPCB Guidelines),Leq dB(A)**		**Observed value, Leq,dB(A)**	
			DAY*	**NIGHT****	**DAY***	**NIGHT****
1	**Project site**	Residential Area	55	45	59.3	43.1

*	Day time	(6.00AM TO 10.00PM)
**	Night time	(10.00PM TO 6.00AM)

Multi Storied Residential Project by M/s KRJ Project LLP & Others, Mouza-			
Soil Quality Data (March-2023)			
			SQ1
S.No	**Parameter**	**Unit**	**Project Site**
1	Texture	-	Sandy Clay Loam
2	Particle Size Distribution		
	Sand	%	54.8
	Silt	%	16.5
	Clay	%	28.7
3	pH (1:2 Suspension)	-	7.29
4	Electrical Conductivity (1:2 Suspension)	µS/cm	287
5	Moisture Content	%	8.3
6	Cation Exchange Capacity	meq/100gm	12.4
7	Available Potassium (as K)	mg/kg	32
8	Exchangeable Sodium (as Na)	mg/kg	89
9	Exchangeable Calcium (as Ca)	mg/kg	1860
10	Exchangeable Magnesium (as Mg)	mg/kg	318
11	Sodium Absorption Ratio	-	0.50
12	Organic Matter	%	0.82
13	Total Nitrogen (as N)	mg/kg	52
14	Nitrate (as NO_3)	mg/kg	4.8
15	Total Phosphorus (as PO_4)	mg/kg	6.3
16	Iron (as Fe)	mg/kg	56
17	Zinc (as Zn)	mg/kg	1.9
18	Copper (as Cu)	mg/kg	1.8
19	Boron (as B)	mg/kg	2.5
20	Manganese (as Mn)	mg/kg	22.3
21	Water Holding Capacity	%	32.6
22	Permeability	cm/hr	2.1
23	Porosity	%	26.7
24	Bulk Density	gm/cc	1.34

Annexure-XXI



LANDSCAPE LAYOUT PLAN
GROUND FLOOR LEVEL.

SCHEDULE OF PLANTS

S.NO	SYMBOL	BOTANICAL NAME	QTY
TYPE ALONG BOUNDARY WALL			
1		ALSTONIA SCHOLARIS	46 No.S.
1		LAGERSTROEMIA FLOSREGINAE	47 No.S.
			TOTAL = 93 Nos.

GREEN AREA	
GROUND LEVEL	
GREEN -01	261.88
GREEN -02	14.20
GREEN -03	97.45
GREEN -04	31.50
GREEN -05	36.75
GREEN -06	119.27
GREEN -07	41.20
GREEN -08	32.21
GREEN -09	31.22
GREEN -10	61.28
GREEN -11	19.25
GREEN -12	28.98
GREEN -13	27.54
GREEN -14	21.71
GREEN -15	185.17
GREEN -16	28.87
GREEN -17	27.94
GREEN -18	18.40
GREEN -19	19.46
TOTAL GREEN	**1104.28**
PODIUM LEVEL	532.26
TOTAL GREEN	**1636.54**

TOTAL LAND AREA = 7405.75 SQ.M.

TOTAL GREEN AREA ON GROUND FLOOR = 1104.28 SQ.M. =14.91%

GREEN AREA ON PODIUM FLOOR = 532.26 SQ.M. = 7.19%

TOTAL GREEN AREA = 1636.54 SQ.M.= 22.1%

MINIMUM WIDTH OF GREEN = 500mm

PROPOSED B+G+14 MULTI STORIED RESIDENTIAL BUILDING PLAN FOR KRJ PROJECT LLP & OTHERS OVER PLOT NO :- 317/2403, 318, 319, 320/2139,322, 320, 321/2493, 325/1863, 326, 326/1851 KHATA NO. - 511/599, 511/430, 511/601, 511/630, 511/218, 729/412, 511/204, AT MOUZA - RAGHUNATHPUR JALI, BHUBANESWAR, DIST- KHURDA.

TITLE

LANDSCAPE LAYOUT PLAN
GROUND FLOOR LEVEL

OWNER

SIGNATURE OF OWNER

PRINCIPAL ARCHITECT

VIJAY KUMAR TUTEJA
INAWE DESIGN CONCEPTS
ARCHITECTS, PLANNERS, PROJECT MANAGEMENT
E-136, SAKET, NEW DELHI-110017
Tel. +91 11 45651741 e-mail: inawedesignconcepts@gmail.com

ARCHITECT

DEBRAJ BEHERA
CA/2004/33719
BDA Emp. No.- AR/037/BDA

SCALE	DATE	DRAWN BY	DRAWING NO.
1:200		M.A	SD - 001

Annexure-
XXII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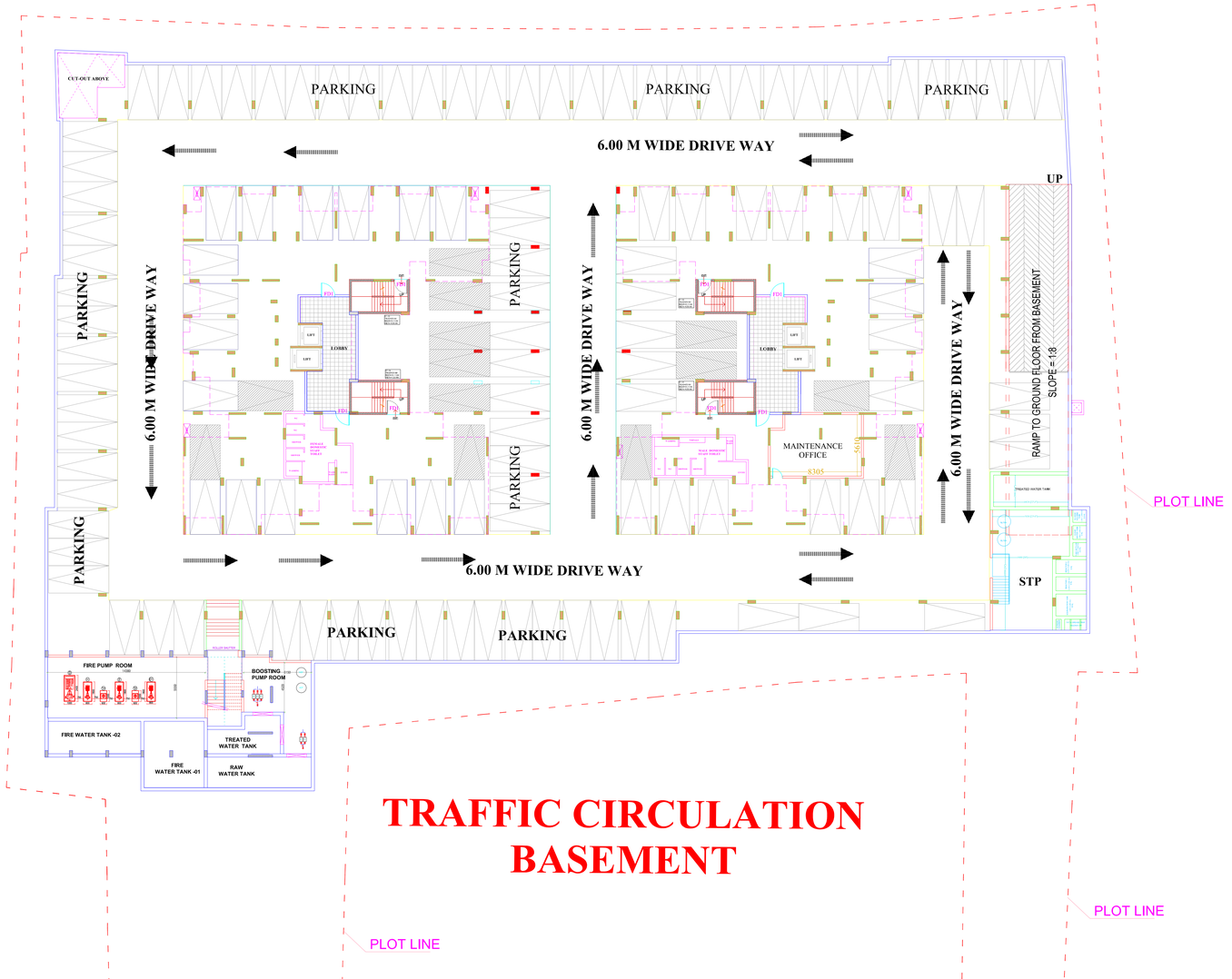
Annexure-XXIII



TRAFFIC CIRCULATION BASEMENT

N

PROPOSED B+G+14 MULTI STORIED RESIDENTIAL BUILDING PLAN FOR KRJ PROJECT LLP & OTHERS OVER PLOT NO :- 317/2403, 318, 319, 320/2139,322, 320, 321/2493, 325/1863, 326, 326/1851 KHATA NO. - 511/599, 511/430, 511/601, 511/630, 511/218, 729/412, 511/204, AT MOUZA - RAGHUNATHPUR JALI, BHUBANESWAR, DIST- KHURDA.

TITLE

BASEMENT TRAFFIC PLAN

OWNER

SIGNATURE OF OWNER

PRINCIPAL ARCHITECT

VIJAY KUMAR TUTEJA
INAWE DESIGN CONCEPTS
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ARCHITECT

DEBRAJ BEHERA
CA/2004/33719
BDA Emp. No.- AR/037/BDA

SCALE	DATE	DRAWN BY	DRAWING NO.
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10. ENVIRONMENT MANAGEMENT PLAN

The Environment Management Plan (EMP) would consist of all mitigation measures for each component of the environment due to the activities increased during the construction, operation and the entire life cycle to minimize adverse environmental impacts resulting from the activities of the project. It would also delineate the environmental monitoring plan for compliance of various environmental regulations. It will state the steps to be taken in case of emergency such as accidents at the sites including fire. The detailed EMP for the complex is given below.

10.1 Environmental Management Plan

The Environment Management Plan (EMP) is a site specific plan developed to ensure that the project is implemented in an environmental sustainable manner where all contractors and subcontractors, including consultants, understand the potential environmental risks arising from the project and take appropriate actions to properly manage that risk. EMP also ensures that the project implementation is carried out in accordance with the design by taking appropriate mitigation actions to reduce adverse environmental impacts during its life cycle. The plan outlines existing and potential problems that may adversely impact the environment and recommends corrective measures where required. Also, the plan outlines roles and responsibility of the key personnel and contractors who will be in-charge of the responsibilities to manage the project site.

10.1.1 The EMP is generally

- Prepared in accordance with rules and requirements of the MoEF and CPCB/ SPCB
- To ensure that the component of facility are operated in accordance with the design
- A process that confirms proper operation through supervision and monitoring
- A system that addresses public complaints during construction and operation of the facilities and
- A plan that ensures remedial measures is implemented immediately.

The key benefits of the EMP are that it offers means of managing its environmental performance thereby allowing it to contribute to improved environmental quality. The other benefits include cost control and improved relations with the stakeholders.

EMP includes four major elements:

- Commitment & Policy: The management will strive to provide and implement the Environmental Management Plan that incorporates all issues related to air, water, land and noise.
- Planning: This includes identification of environmental impacts, legal requirements and setting environmental objectives.
- Implementation: This comprises of resources available to the developers, accountability of contractors, training of operational staff associated with environmental control facilities and documentation of measures to be taken.
- Measurement & Evaluation: This includes monitoring, counteractive actions and record keeping.

It is suggested that as part of the EMP, a monitoring committee would be formed by M/s KRJ Project LLP & Others. comprising of the site in-charge/coordinator, environmental group representative and project implementation team representative. The committee's role would be to ensure proper operation and management of the EMP including the regulatory compliance.
The components of the environmental management plan, potential impacts arising, out of the project and remediation measures are summarized below in Table 11.

TABLE 11: SUMMARY OF POTENTIAL IMPACTS AND REMEDIAL MEASURES

S. No.	Environmental components	Potential Impacts	Potential Source of Impact	Controls Through EMP & Design	Impact Evaluation	Remedial Measures
1.	Ground Water Quality	Ground Water Contamination	Construction Phase • Waste water generated from temporary labor tents.	• No surface accumulation will be allowed.	No significant impact as majority of labors would be locally deployed	
			Operation Phase • Discharge from the project	• M/s KRJ Project LLP & Others will provide the STP to treat the discharge of Residential Project.	No negative impact on ground water quality envisaged. Not significant.	
2.	Ground Water Quantity	Ground Water Depletion	Construction Phase • Ground water will not be used for construction purposes.	• Not Applicable	No significant impact on ground water quantity envisaged.	
			Operation Phase • The source of water during operation phase is Municipal Supply.	• Rain water harvesting scheme. • Black and Grey water treatment and reuse. • Storm water collection for water harvesting. • Percolation well to be introduced in landscape plan.	No significant impact on surface/ground water quantity envisaged.	In an unlikely event of non-availability of water supply, water will be brought using tankers.

				• Awareness Campaign to reduce the water consumption		
3.	Surface Water Quality	Surface water contamination	Construction Phase • Surface runoff from site during construction activity.	• Silt traps and other measures such as additional on site diversion ditches will be constructed to control surface run-off during site development	No off-site impact envisaged as no surface water receiving body is present in the core zone.	
			Operation Phase • Discharge of domestic wastewater to STP.	• Domestic water will be treated in STP	No off-site impact envisaged	
4.	Air Quality	Dust Emissions	Construction Phase • All heavy construction activities	• Suitable control measures will be adopted for mitigating the PM2.5 & PM10 level in the air as per air pollution control plan.	Not significant because dust generation will be temporary and will settle fast due to dust suppression techniques.	During construction phase the contractors are advised to facilitate masks for the labors. Water sprinklers will be used for dust suppression during construction phase.

		Emissions of $PM_{2.5}$ & PM_{10}, SO_2, NOx and CO	Construction Phase • Operation of construction equipment and vehicles during site development. • Running D.G. set (back up)	• Rapid on-site construction and improved maintenance of equipment	Not significant.	Regular monitoring of emissions and control measures will be taken to reduce the emission levels.
			Operation Phase • Power generation by DG Set during power failure • Emission from vehicular traffic in use	• Use of low sulphur diesel if available • Providing Footpath and pedestrian ways within the site. • Green belt will be developed with specific species to help to reduce PM2.5 & PM10 level • Use of equipment fitted with silencers • Proper maintenance of equipment	Not significant. DG set would be used as power back-up (approx 6 hours) No significant increase in ambient air quality level is expected from the project's activities. There are no sensitive receptors located within the vicinity of site.	• Use of Personal Protective Equipment (PPE) like earmuffs and earplugs during construction activities. • Stack height of DG set above the tallest building as per CPCB standards
5.	Noise Environment					

			Operation Phase • Noise from vehicular movement • Noise from DG set operation	• Green Belt Development •Development of silence zones to check the traffic movement •Provision of noise shields near the heavy construction operations and acoustic enclosures for DG set. •Construction activity will be limited to day time hours only •DG set rooms will be equipped with acoustic enclosures	No significant impact due to suitable width of avenue plantation.	
6.	Land Environment	Soil contamination	Construction Phase • Disposal of construction debris	• Construction debris will be collected and suitably used on site as per the solid waste management plan for construction phase	No significant impact. Impact will be local, as waste generated will be reused for filling of low lying areas etc.	
			Operation Phase • Generation of municipal solid waste	•It is proposed that the solid waste generated will be managed as per Solid.	Since solid waste is handled by the authorized agency, waste dumping is not going to be allowed. Not significant.	

			• Used oil generated from D.G. set	•Collection, segregation, transportation and disposal will be done as per Municipal Solid Wastes (Management and Handling) Rules, 2016 by the authorized agency •Used oil generated will be sold to authorized recyclers	Negligible impact.	
7.	Biological Environment (Flora and Fauna)	Displacement of Flora and Fauna on site	<u>Construction Phase</u> • Site Development during construction	•Important species of trees, if any, will be identified and marked and will be merged with landscape plan	The site has shrubs as vegetation	
			<u>Operation Phase</u> • Increase in green covered area	•Suitable green belts will be developed as per landscaping plan in and around the site using local flora	Beneficial impact.	
8.	Socio-Economic Environment	Population displacement and loss of	<u>Construction Phase</u> • Construction activities leading to	•Residential zone as per the	No negative impact.	

		income	relocation	Bhubaneswar development authority		
			Operation Phase • Site operation	• Project will provide employment opportunities to the local people in terms of labor during construction and service personnel (guards, securities, gardeners etc) during operations • Providing quality-Integrated infrastructure.	Beneficial impact	
9.	Traffic Pattern	Increase of vehicular traffic	Construction Phase • Heavy Vehicular movement during construction	•Heavy Vehicular movement will be restricted to daytime only and adequate parking facility will be provided	No negative impact	
			Operation Phase • Traffic due to public once the project is operational	• Vehicular movement will be regulated inside the project with adequate roads and parking lots in the colony.	No major significant impact as green belt will be developed which will help in minimizing the impact on environment.	

10.2 ENVIRONMENT MANAGEMENT PLAN

An Environmental Management Plan (EMP) will be required to mitigate the predicted adverse environmental impacts during construction and operation phase of the project and these are discussed in later subsections.

10.2.1 EMP for Air Environment

Construction Phase

To mitigate the impacts of PM_{10} & $PM_{2.5}$ during the construction phase of the project, the following measures are recommended for implementation:

- A dust control plan
- Procedural changes to construction activities

Dust Control Plan

The most cost-effective dust suppressant is water because water is easily available on construction site. Water can be applied using water trucks, handled sprayers and automatic sprinkler systems. Furthermore, incoming loads could be covered to avoid loss of material in transport, especially if material is transported off-site.

Procedural Changes to Construction Activities

Idle time reduction: Construction equipment is commonly left idle while the operators are on break or waiting for the completion of another task. Emission from idle equipment tends to be high, since catalytic converters cools down, thus reducing the efficiency of hydrocarbon and carbon monoxide oxidation. Existing idle control technologies comprises of power saving mode, which automatically off the engine at preset time and reduces emissions, without intervention from the operators.

Improved Maintenance: Significant emission reductions can be achieved through regular equipment maintenance. Contractors will be asked to provide maintenance records for their fleet as part of the contract bid, and at regular intervals throughout the life of the contract. Incentive provisions will be established to encourage contractors to comply with regular maintenance requirements.

Reduction of On-Site Construction Time: Rapid on-site construction would reduce the duration of traffic interference and therefore, will reduce emissions from traffic delay.

Operation Phase

To mitigate the impacts of pollutants from DG set and vehicular traffic during the operational phase of the Colony, following measures are recommended for implementation:

- DG set emission control measures
- Vehicular emission controls and alternatives
- Greenbelt development

Diesel Generator Set Emission Control Measures

Adequate stack height will be maintained to disperse the air pollutants generated from the operation of DG set to dilute the pollutants concentration within the immediate vicinity. Hence no additional emission control measures have been suggested.

Vehicle Emission Controls and Alternatives

During construction, vehicles will be properly maintained to reduce emission. As it is a residential project, vehicles will be generally having "PUC" certificate.

Footpaths and Pedestrian ways

Adequate footpaths and pedestrian ways would be provided at the site to encourage non-polluting methods of transportation.

Greenbelt Development

Increased vegetation in the form of greenbelt is one of the preferred methods to mitigate air and noise pollution. Plants serve as a sink for pollutants, act as a barrier to break the wind speed as well as allow the dust and other particulates to settle on the leaves. It also helps to reduce the noise level at large extent. The following table indicates various species of the greenbelt that can be used to act as a barrier.

Table 13: Trees to be planted in the premises of the project

S. No.	Name of Species	Local Name	Number of Plants
1.	*Alstonia scholaris*	Blackboard	46
2.	*Lagerstroemia flosreginae*	Queen of Flower	47

10.2.2 EMP FOR NOISE ENVIRONMENT

Construction Phase

To mitigate the impacts of noise from construction equipment during the construction phase on the site, the following measures are recommended for implementation.

Time of Operation: Noisy construction equipment would not be allowed to use at night time.
Job Rotation and Hearing Protection: Workers employed in high noise areas will be employed on shift basis. Hearing protection such as earplugs/muffs will be provided to those working very close to the noise generating machinery.

Operation Phase

To mitigate the impacts of noise from diesel generator set during operational phase, the following measures are recommended:

- Adoption of Noise emission control technologies
- Greenbelt development

Noise Emission Control Technologies

The DG set room will be provided with acoustic enclosure to have minimum 25 dB(A) insertion loss or for meeting the ambient noise standard whichever is on higher side as per E (P) Act, GSR 371 (E) and its amendments. It would be ensured that the manufacturer provides acoustic enclosure as an integral part along with the diesel generators set. Further, enclosure of the services area with 4 m high wall will reduce noise levels and ensure that noise is at a permissible limit of the site and surrounding receptors.

Greenbelt Development

The following species can be used, as in a greenbelt, to serve as noise breakers:

- *Alstonia scholaris*
- *Lagerstroemia flosreginae*

10.2.3 EMP FOR WATER ENVIRONMENT

Construction Phase

To prevent degradation and to maintain the quality of the water source, adequate control measures have been proposed. To check the surface run-off as well as uncontrolled flow of water into any water body check dams with silt basins are proposed. The following management measures are suggested to protect the water source being polluted during the construction phase:

- Avoid excavation during monsoon season.
- Care would be taken to avoid soil erosion.
- Common toilets will be constructed on site during construction phase and the waste water would be channelized to the septic tanks in order to prevent waste water to enter into the water bodies.
- Any area with loose debris within the site shall be planted.
- To prevent surface and ground water contamination by oil and grease, leak-proof containers would be used for storage and transportation of oil and grease. The floors of oil and grease handling area would be kept effectively impervious. Any wash off from the oil and grease handling area or workshop shall be drained through imperious drains.
- Collection and settling of storm water, prohibition of equipment wash downs and prevention of soil loss and toxic release from the construction site are necessary measure to be taken to minimize water pollution.
- All stacking and loading area will be provided with proper garland drains, equipped with baffles, to prevent run off from the site, to enter into any water body.

Operation Phase

In the operation phase of the project, water conservation and development measures will be taken, including all possible potential for rain water harvesting. Following measures will be adopted:

- Water source development.
- Minimizing water consumption.
- Promoting reuse of water after treatment and development of closed loop systems for different water streams.

Water Source Development

Water source development shall be practiced by installation of scientifically designed Rain Water Harvesting system. Rainwater harvesting promotes self-sufficiency and fosters an appreciation for water as a resource.

Minimizing Water Consumption

Consumption of fresh water will be minimized by combination of water saving devices and other domestic water conservation measures. Further, to ensure ongoing water conservation, an awareness program will be introduced for the persons. The following section discusses the specific measures, which shall be implemented.

Domestic and Commercial Usage

- Use of water efficient plumbing fixtures (ultra low flow toilets and urinals, low flow sinks and water efficient dishwashers). Water efficient plumbing fixtures uses less water with no marked reduction in quality and service.
- Leak detection and repair techniques.
- Sweep with a broom and pan where possible, rather than hose down for external areas.
- Meter water usage: Implies measurement and verification methods.
- Monitoring of water uses is a precursor for management.

Horticulture

- Drip irrigation system shall be used for the lawns and other green area. Drip irrigation can save 15-40% of the water, compared with other watering techniques.
- Plants with similar water requirements shall be grouped on common zones to match precipitation heads and emitters.
- Use of low-angle sprinklers for lawn areas.

- Select controllers with adjustable watering schedules and moisture sensors to account for seasonal variations and calibrate them during commissioning.
- Place 3 to 5 inches of mulch on planting beds to minimize evaporation.

Promoting Reuse of Water after Treatment and Development of Closed Loop Systems

To promote reuse of waste water and development of closed loop system for waste water segregation. Two wastewater schemes are suggested, namely:

1) Storm Water Harvest

2) Waste water recycling.

Storm water harvest as discussed in earlier, will be utilized for Storage of ground water sources; and waste water will be reused on site after treatment.

Treated waste water will be used for landscaping, flushing, DG set cooling. Following section discuss the scheme of waste water treatment.

Waste Water Treatment Scheme

Proponent will treat the waste water of the project in well-designed sewage treatment plant of capacity 110 KLD based on FAB technology.

Storm Water Management

Most of the storm water produced on site will be harvested for ground water recharge. Thus proper management of this resource is a must to ensure that it is free from contamination.

Contamination of Storm Water is possible from the following sources:

- Diesel and oil spills in the diesel power generator and fuel storage area
- Waste spills in the solid / hazardous waste storage area
- Oil spills and leaks in vehicle parking lots
- Silts from soil erosion in gardens
- Spillage of sludge from sludge drying area of sewage treatment plant

A detailed storm water management plan will be developed which will consider the possible impacts from above sources. The plan will incorporate best management practices which will include following:

- Regular inspection and cleaning of storm drains.
- Clarifiers or oil/separators will be installed in all the parking areas. Oil / grease separators installed around parking areas and garages will be sized according to peak flow guidelines. Both clarifiers and oil/water separators will be periodically pumped in order to keep discharges within limits.
- Covered waste storage areas. Avoid application of pesticides and herbicides before wet seasons.
- Secondary containment and dykes in fuel/oil storage facilities.
- Conducting routine inspection to ensure cleanliness.
- Provision of slit traps in storm water drains.
- Good housekeeping in the above areas

10.2.4 EMP FOR LAND ENVIRONMENT

Construction Phase

The waste generated from construction activity includes construction debris, biomass from land clearing activities, waste from the temporary make shift tents for the labors and hazardous waste. Following section discuss the management of each type of waste. Besides waste generation, management of the topsoil is an important area for which management measures are required.

Construction Debris

Construction debris is bulky and heavy and re-utilization and recycling is an important strategy for management of such waste. As concrete and masonry constitute the majority of waste generated, recycling of this waste by conversion to aggregate can offer benefits of reduced landfill space and reduced extraction of raw material for new construction activity. This is particularly applicable to the project site as the construction is to be completed in a phased manner.

Mixed debris with high gypsum, plaster, shall not be used as fill, as they are highly susceptible to contamination, and will be send to designated solid waste landfill site.

Metal scrap from structural steel, piping, concrete reinforcement and sheet metal work shall be removed from the site by construction contractors. A significant portion of wood scrap will be reused on site. Recyclable wastes such as plastics, glass fiber insulation, roofing etc shall be sold to recyclers.

Hazardous waste

Construction sites are sources of many toxic substances such as paints, solvents wood preservatives, pesticides, adhesives and sealants. Hazardous waste generated during construction phase shall be stored in sealed containers and disposed off as per The Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2016.

Some management practices to be developed are:

- Herbicides and pesticide will not be over applied (small-scale applications) and not applied prior to rain
- Paintbrushes and equipment for water and oil based paints shall be cleaned within a contained area and will not be allowed to contaminate site soils, water courses or drainage systems
- Provision of adequate hazardous waste storage facilities. Hazardous waste collection containers will be located as per safety norms and designated hazardous waste storage areas will be away from storm drains or watercourses
- Segregation of potentially hazardous waste from non-hazardous construction site debris
- Well labeled all hazardous waste containers with the waste being stored and the date of generation
- Instruct employees and subcontractors in identification of hazardous and solid waste

Even with careful management, some of these substances are released into air, soil and water and many are hazardous to workers. With these reasons, the best choice is to avoid their use as much as possible by using low-toxicity substitutes and low VOC (Volatile Organic Compound) materials.

Waste from Temporary Makes Shift Tents for Labors

Wastes generated from temporary make shift labor tents will mainly comprise of household domestic waste, which will be managed by the contractor of the site. The wastewater generated will be channelized to the septic tank.

Top Soil Management

To minimize disruption of soil and for conservation of top soil, the contractor shall keep the top soil cover separately and stockpile it. After the construction activity is over, top soil will be utilized for landscaping activity. Other measures, which would be followed to prevent soil erosion and contamination include:

- Maximize use of organic fertilizer for landscaping and green belt development
- To prevent soil contamination by oil/grease, leaf proof containers would be used for storage and transportation of oil/grease and wash off from the oil/grease handling area shall be drained through impervious drains and treated appropriately before disposal
- Removal of as little vegetation as possible during the development and re- vegetation of bare areas after the project.
- Working in a small area at a point of time (phase wise construction)
- Construction of erosion prevention troughs/berms.

Operational Phase

The philosophy of solid waste management at the complex will be to encouraging the four R's of waste i.e. **R**eduction, **R**euse, **R**ecycling and **R**ecovery (materials & energy). Regular public awareness meetings will be conducted to involve the people in the proper segregation and storage techniques. The Environmental Management Plan for the solid waste focuses on three major components during the life cycle of the waste management system i.e., collection and transportation, treatment or disposal and closure and post-closure care of treatment/disposal facility.

Collection and Transportation

- During the collection stage, the solid waste of the project will be segregated into biodegradable waste and non-biodegradable. Biodegradable waste and non biodegradable

waste will be collected in separate bins. Biodegradable waste will be treated in the project premises by organic waste converter. The recyclable wastes will be sent off to recyclables. Proper guidelines for segregation, collection and storage will be prepared as per Municipal Solid Wastes (Management and Handling) Rules, 2016.

- To minimize littering and odor, waste will be stored in well-designed containers/ bins that will be located at strategic locations to minimize disturbance in traffic flow.
- Care would be taken such that the collection vehicles are well maintained and generate minimum noise and emissions. During transportation of the waste, it will be covered to avoid littering.

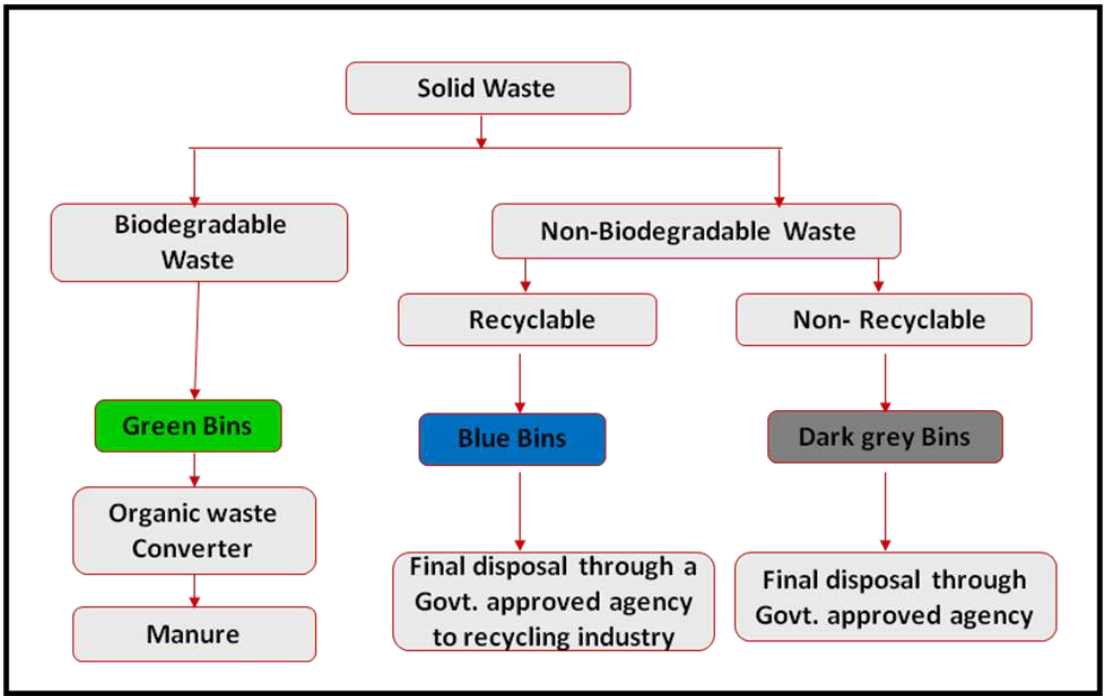


Figure 2: Waste Management Flow Diagram

Disposal

With regards to the disposal/treatment of waste, the management will take the services of the authorized agency for waste management and disposal of the same on the project site during its operational phase.

10.2.5 EMP FOR ECOLOGICAL ENVIRONMENT

Construction activity changes the natural environment. But project also creates a built environment for its inhabitants. The project requires the implementation of following choices exclusively or in combination.

Construction Stage

- Restriction of construction activities to defined project areas, which are ecologically sensitive
- Restrictions on location of temporary labor tents and offices for project staff near the project area to avoid human induced secondary additional impacts on the flora and fauna species
- Cutting, uprooting, coppicing of trees or small trees if present in and around the project site for cooking, burning or heating purposes by the labors will be prohibited and suitable alternatives for this purpose will be made
- Along with the construction work, the peripheral green belt would be developed with suggested native plant species, as they will grow to a full-fledged covered at the time of completion.

Operation Stage

Improvement of the current ecology of the project site will entail the following measures:

- Plantation and Landscaping
- Green Belt Development
- Park and Avenue Plantation

The section below summarizes the techniques to be applied to achieve the above objectives:

Plantation and landscaping

Selection of the plant species would be done on the basis of their adaptability to the existing geographical conditions and the vegetation composition of the forest type of the region earlier found or currently observed.

Green Belt Development Plan

The plantation matrix adopted for the green belt development includes pit of 0.3 m × 0.3 m size with a spacing of 2 m x 2 m. In addition, earth filling and manure may also be required for the

proper nutritional balance and nourishment of the sapling. It is also recommended that the plantation has to be taken up randomly and the landscaping aspects could be taken into consideration.

Multi-layered plantation comprising of medium height trees (7 m to 10 m) and shrubs (5 m height) are proposed for the green belt. In addition creepers will be planted along the boundary wall to enhance its insulation capacity.

Selection of Plant Species for Green Belt Development

The selection of plant species for the development depends on various factors such as climate, elevation and soil. The plants would exhibit the following desirable characteristics in order to be selected for plantation

1. The species should be fast growing and providing optimum penetrability
2. The species should be wind-firm and deep rooted
3. The species should form a dense canopy
4. As far as possible, the species should be indigenous and locally available
5. Species tolerance to air pollutants like SO_2 and NO_x should be preferred
6. The species should be permeable to help create air turbulence and mixing within the belt
7. There should be no large gaps for the air to spill through
8. Trees with high foliage density, leaves with larger leaf area and hairy on both the surfaces
9. Ability to withstand conditions like inundation and drought
10. Soil improving plants (Nitrogen fixing rapidly decomposable leaf litter)
11. Attractive appearance with good flowering and fruit bearing
12. Bird and insect attracting tree species
13. Sustainable green cover with minimal maintenance.

Parks and Avenue Plantation

- Parks and gardens maintained for recreational and ornamental purposes will not only improve the quality of existing ecology at the project site but also will improve the aesthetic value.

- Avenue Plantation
- Trees with colonial canopy with attractive flowering
- Trees with branching at 7 feet and above
- Trees with medium spreading branches to avoid obstruction to the traffic
- Fruit trees to be avoided because children may obstruct traffic and general movement of public

10.2.6 EMP for Socio-Economic Environment

The social management plan has been designed to take proactive steps and adopt best practices, which are sensitive to the socio-cultural setting of the region. The Social Management Plan for project focuses on the following components:

- **Income Generation Opportunity during Construction and Operation Phase**

The project would provide employment opportunity during construction and operation phase. There would also be a wide economic impact in terms of generating opportunities for secondary occupation within and around the complex. The main principles considered for employment and income generation opportunities are out lined below:

- Employment strategy will provide for preferential employment of local people.
- Conditions of employment would address issues like minimum wages and medical care for the workers. Contractors would be required to abide to employment priority towards locals and abide by the labor laws regarding standards on employee terms and conditions.

- **Improved Working Environment for Employees**

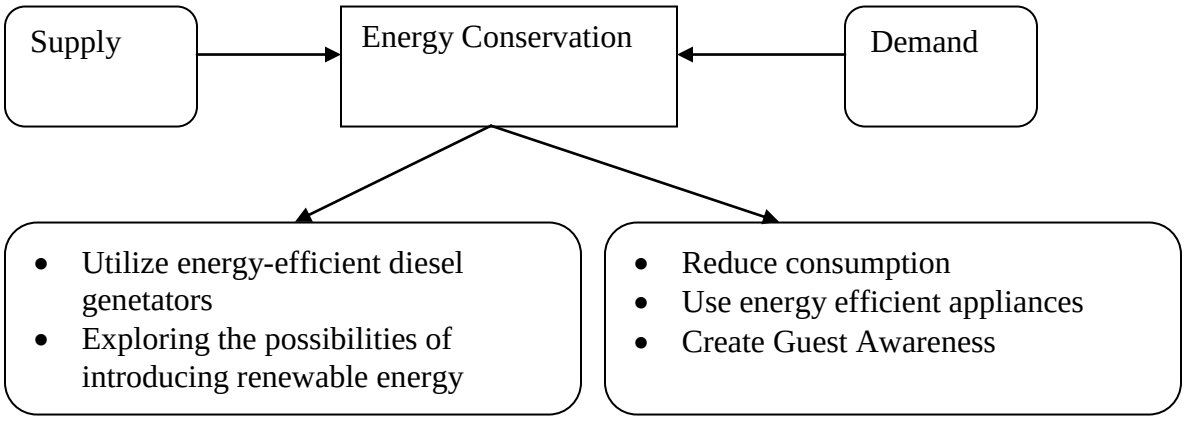
The project would provide safe and improved working conditions for the workers employed at the facility during construction and operation phase. With the proposed ambience and facilities provided, the complex will provide a new experience in living and recreations. Following measures would be taken to improve the working environment of the area:

- Less use of chemicals and biological agents with hazard potential.
- Developing a proper interface between the work and the human resource through a system of skill

- Improvement Provision of facilities for nature care and recreation e.g. indoor games facilities.
- Measures to reduce the incidence of work related injuries, fatalities and diseases.
- Maintenance and beautifications of the complex and the surrounding roads

10.2.7 EMP FOR ENERGY CONSERVATION

Energy conservation program will be implemented through measures taken both on energy demand and supply.



Energy conservation will be one of the main focus during the complex planning and operation stages. The conservation efforts would consist of the following:

❖ **Architectural design**

- Maximum utilization of solar light will be done.
- Maximize the use of natural lighting through design.
- The orientation of the buildings will be done in such a way that maximum daylight is available.
- The green areas will be spaced, so that a significant reduction in the temperature can take place.

❖ **Energy Saving Practices**

- Energy efficient lamps will be provided within the complex.

- Constant monitoring of energy consumption and defining targets for energy conservation. Adjusting the settings and illumination levels to ensure minimum energy used for desired comfort levels.

❖ **Behavioral Change on Consumption**

- Promoting public awareness on energy conservation
- Training staff on methods of energy conservation and to be vigilant to such opportunities.

10.3 ENVIRONMENTAL MANAGEMENT SYSTEM AND MONITORING PLAN

For the effective and consistent functioning of the complex, an Environmental Management system (EMS) would be established at the site. The EMS would include the following:

- An Environmental management cell.
- Environmental Monitoring.
- Personnel Training.
- Regular Environmental audits and Correction measures.
- Documentation – standards operation procedures Environmental Management Plan and other records.

10.3.1 ENVIRONMENTAL MANAGEMENT CELL

Apart from having an Environmental Management Plan, it is also proposed to have a permanent organizational set up charged with the task of ensuring its effective implementation of mitigation measures and to conduct environmental monitoring. The major duties and responsibilities of Environmental Management Cell shall be as given below:

- To implement the environmental management plan.
- To assure regulatory compliance with all relevant rules and regulations.
- To ensure regular operation and maintenance of pollution control devices.
- To minimize environmental impact of operations as by strict adherence to the EMP.
- To initiate environmental monitoring as per approved schedule.
- Review and interpretation of monitored results and corrective measures in case monitored results are above the specified limit.

- Maintain documentation of good environmental practices and applicable environmental laws for a ready reference.
- Maintain environmental related records.
- Coordination with regulatory agencies, external consultants, monitoring laboratories.
- Maintenance of log of public complaints and the action taken.

Hierarchical Structure of Environmental Management Cell

Normal activities of the EMP cell would be supervised by a dedicated person who will report to the site manager/coordinator of the project. The hierarchical structure of suggested Environmental Management Cell is given in following Figure 3.

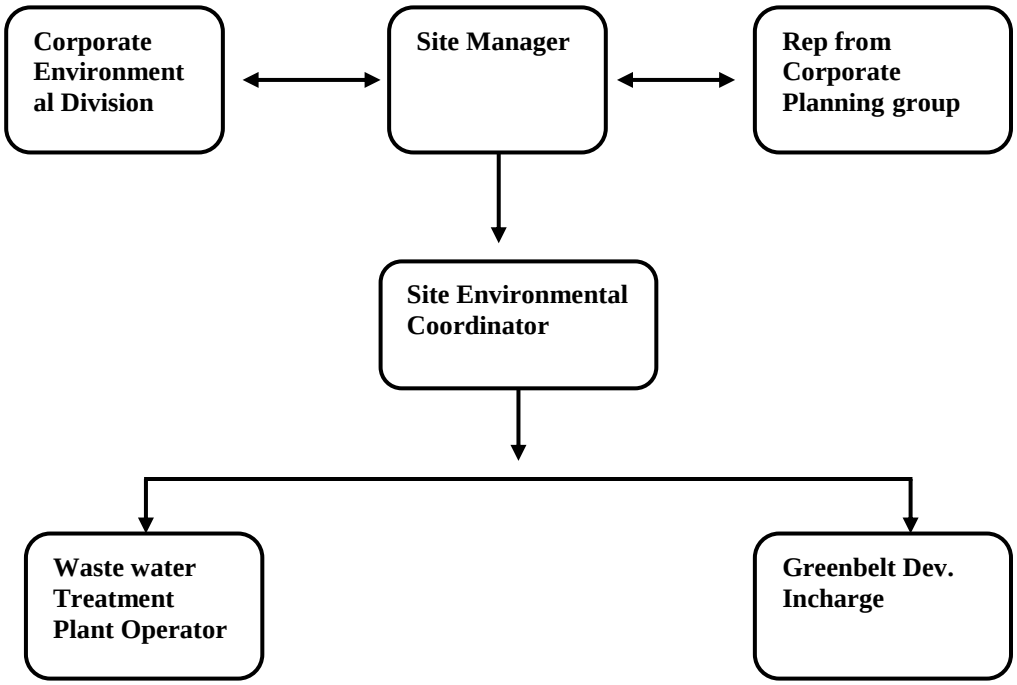


Figure 3: Environment Management Cell Structure

10.3.2 ENVIRONMENTAL MONITORING

The purpose of environmental monitoring is to evaluate the effectiveness of implementation of Environmental Management Plan (EMP) by periodic monitoring. The important environmental parameters within the impact area are selected so that any adverse affects are detected and time

action can be taken. The project proponent will monitor ambient air Quality, Ground Water Quality and Quantity, and Soil Quality in accordance with an approved monitoring schedule.

Table 12: Suggested Monitoring Program for project

S.No.	Type	Locations	Parameters	Period and Frequency
1.	Ambient Air Quality	Project Site	Criteria Pollutants: SO_2, NO_2, PM, CO	Twice in a Year as per EIA Notification 2006
2.	Groundwater (Potability testing)	Project site	Drinking water parameters as per IS 10500.	Twice in a Year as per EIA Notification 2006
3.	Ambient Noise	Project site	dB (A) levels	Twice in a Year as per EIA Notification 2006.
4.	Fresh water quality	Municipal Supply	As per IS 10500 potable water standards	Twice in a Year as per EIA Notification 2006
5.	Soil quality	Project site	Organic matter, C.H., N, Alkalinity, Acidity, heavy metals and trace metal, Alkalinity, Acidity.	Twice in a Year as per EIA Notification 2006
6.	Waste Characterization	Residential	Physical and Chemical composition	Daily
7.	Treated water	Outlet of STP	BOD, MPN, coliform count, etc.	Daily

10.3.3 Awareness and Training

Training and human resource development is an important link to achieve sustainable operation of the facility and environment management. For successful functioning of the project, relevant EMP would be communicated to:

Persons and Contractors

People must be made aware of the importance of waste segregation and disposal, water and energy conservation. The awareness can be provided by periodic Integrated Society meetings. They would be informed of their duties.

10.3.4 Environmental Audits and Corrective Action Plans

To assess whether the implemented EMP is adequate, periodic environmental audits will be conducted by the project proponent's Environmental division. These audits will be followed by Correction Action Plan (CAP) to correct various issues identified during the audits.

KRJ Project LLP

Annexure XXV

Registered Office: 5, Raja Subodh Mullick Square
5th Floor, FL-F2, Kolkata,-700013, West Bengal
LLPIN – AAO-5672
Email Id – krjprojectllp@gmail.com, Contact No. +91-9338764967

Date: 16.12.2019

CER UNDERTAKING

I, Vijay Kumar Tuteja, Authorized Signatory of M/s KRJ Project LLP, do hereby solemnly undertake as under w.r.t. Multi Storied Residential Project at Mouza - Raghunathpur Jali, Bhubaneswar, District-Khordha, Orissa. Total project cost is 40 crores.

As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 1st May 2018, an amount of Rs. 80 Lacs [@ 2.0%of project cost]still be earmarked under Corporate Environment Responsibility (CER) for the following activities:

S. No.	ACTIVITY	YEAR-WISE IMPLEMENTATION BUDGET (INR)			TOTAL BUDGET (INR)
		1st Year (2020-2021)	2nd Year (2021-2022)	3rd Year (2022-2023)	
1.	Education facility for nearby communities	5 lacs	7.5 lacs	7.5 lacs	20 lacs
2.	Solar power	–	–	25 lacs	25 lacs
3.	Rain water harvesting	–	10 lacs	15 lacs	25 lacs
4.	Plantation in community area	3.3 lacs	3.3 lacs	3.4 lacs	10 lacs
	TOTAL BUDGET PROPOSED FOR CER				80 lacs

For KRJ Project LLP

Vijay Kumar Tuteja
Authorized Signatory

KRJ PROJECT LLP

SOLID WASTE GENERATION

Solid waste would be generated both during the construction as well as operation phase. The solid waste expected to be generated during the construction phase will comprise of excavated materials, used bags,bricks, concrete, MS rods, tiles, wood etc. The following steps are proposed to be followed for the management solid waste:

- Construction yards are proposed for storage of construction materials.
- The excavated material such as topsoil and stones will be stacked for reuse during later stages of construction
- Excavated top soil will be stored in temporary constructed soil bank and will be reused for landscaping of the group housing project**.**
- Remaining soil will be utilized for refilling / road work / rising of site level at locations/ selling to outside agency for construction of roads etc.

During the operation phase, waste will comprise of domestic and horticultural waste. The solid waste generated from the project shall be approx.**437.5kg per day** (@ 0.5 kg per capita per day for residents, @ 0.15 kg per capita per day for the visitor, 0.25 kg per capita per day for the staff and landscape waste @ 0.2 kg/acre/day) and STP sludge. Following arrangements will be made at the site in accordance to Municipal Solid Wastes (Management and Handling) Rules, 2016.

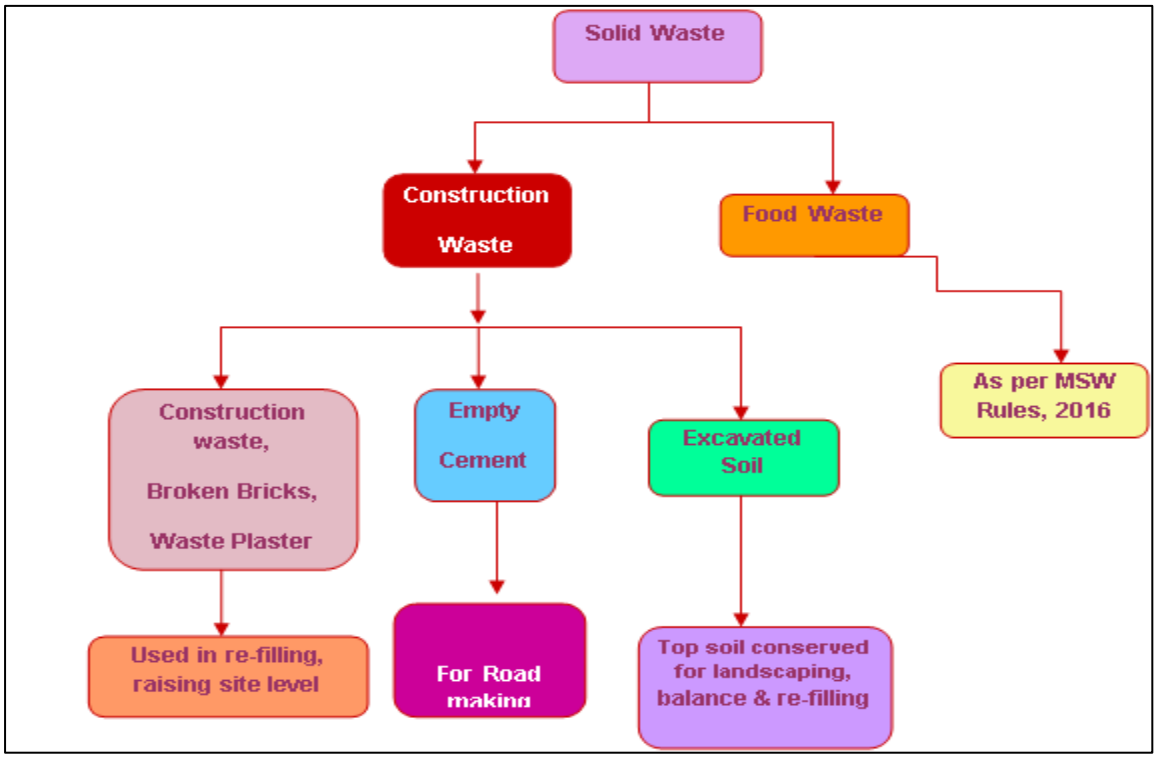


Figure 1: Solid Waste Management Scheme (Construction Phase)

Table 1: Calculation of Solid Waste Generation

S. No.	Category	Kg/capita/day	Waste generated (kg/day)
1.	Residents (740)	@ 0.5 kg/day	370
2.	Staff (60)	@ 0.25 kg/day	15
3.	Visitors (288)	@ 0.15 kg/day	43.2
4.	Landscape waste (0.404 acre)	@ 0.2 kg/acre/day	0.08
5.	STP sludge	Waste water generated *0.35* B.O.D difference/1000	9.3
	TOTAL SOLID WASTE GENERATED		**437.5kg/day**

Collection and Segregation of waste:

- A door to door collection system will be provided for collection of domestic waste in colored bins from household units.
- The local vendors will be hired to provide separate colored bins for dry recyclable and Bio-Degradable waste.

- For waste collection, adequate number of colored bins (Green, Blue & dark grey bins separate for Bio-degradable and Non Bio-degradable) are proposed to be provided at the strategic locations of the area.
- Litter bin will also be provided in open areas like parks etc.

Treatment of waste:

Bio-Degradable waste

- Bio-degradable waste will be subjected to composting by the use of organic waste converter and the compost will be used as manure.
- STP sludge is proposed to be used for horticultural purposes as manure.
- Horticultural Waste is proposed to be composted and will be used for gardening purposes.

Recyclable waste

Grass Recycling – The cropped grass will be spread on the green area. It will act as manure after decomposition.

Recyclable wastes like paper, plastic, metals etc. will be sold off to recyclers.

Disposal:

Recyclable and non-recyclable wastes will be disposed through local approved agency. Solid waste management Scheme is depicted in the following figure.

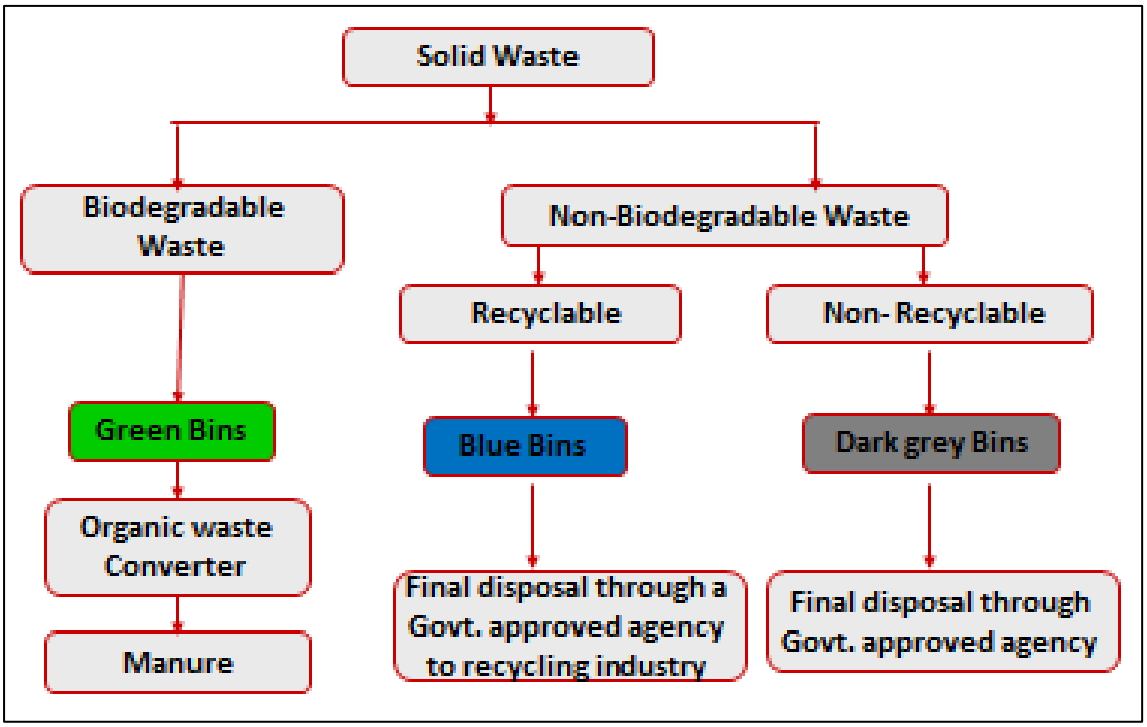


Figure 2:Solid Waste Management Scheme (Operation Phase)

Organic Waste Converter

A waste converter is a machine used for the treatment and recycling of solid and liquid refuse material. A converter is a self-contained system capable of performing the following functions: pasteurization of organic waste; sterilization of pathogenic or biohazard waste; grinding and pulverization of refuse into unrecognizable output; trash compaction; dehydration.

Benefits of organic waste converter:

1. Large quantity of solid waste is converted to manure in a very short period
2. Manures can be sold as compost to farmers, or used for gardening
3. Machine requires less space and the efficiency is high
4. Manpower and maintenance is very less
5. This is one of the latest techniques of managing solid waste

Operation cost of OWC:

Organic Waste Converter - 300 (Dim. 3m × 4m) is proposed to be used for composting waste 120kg/batch or 3000 kg/day & it requires electricity of about 13.5 HP.

No. of batches /day = 3000/120 = 25

No. of batches to convert 262.5 kg/day = 262.5/120 = 2.2 (say 3)

Monthly per capita Operation Cost of OWC:

The operating cost of OWC-300	=	90,000 INR/month
Cost/day	=	90,000/30
	=	3000/- (i.e. 25 batch/day = 3000/-)
1 batch/day cost	=	3000/25
	=	120 INR
Cost for 3 batch/day	=	3 × 120/-
	=	360/-
Monthly operating cost	=	30 × 360
	=	10,800/-
Total residential population of the project	=	740
Operating cost of OWC-300	=	10,800 INR/month

Monthly per capita cost

= Monthly operating cost/Total Residential population of the project (i.e. 740)

= 10,800/740

= **INR 14.59/month/person (Say 15 INR/month/person)**

Figure 3: Organic Waste Convertor

OIC

Annexure XXVII

KRJ Project LLP

Correspondence Address : 3H, Plaza M6, Jasola District Centre, Jasola, New Delhi110025
Email Id – ashianaregal.bbsr@gmail.com, Contact No. 011-4056 4056,
Mob +91 8826738812

To,

Date-31.12. 2022.

The Joint Director,

Regional Office,Ministry of Environment, Forest & Climate Change

A/3, Chandersekharpur,Bhubaneshwar – 751023

Sub: Six-monthly Compliance (Session: DEC.2022) of the stipulated Environmental conditions/safeguards in the Environmental clearance letter and Environmental Monitoring Report for "Multi-Storied Residential Project" located at Mouza-Raghunathpur Jali ,Tehsil- Bhubaneswar, District – Khordha,Odisha by M/s KRJ Project LLP & Others

Ref: Environmental Clearance Letter No. 122283/11-MIS/ 11-2019 Dated 17th August 2020.

Dear Sir,

This is in reference to the State Level Environmental Impact Assessment Authority, Haryana EC vide Letter No. **122283/11-MIS/ 11-2019 Dated 17th August 2020,**in which we have been asked to submit the compliance with the specific and general conditions of the same.

In view of above, we are approaching you by submitting a copy of the following information/ documents for your kind perusal:

1. Point-wise compliance of the stipulated environmental conditions/ safeguards, along with necessary documents & annexures.
2. Environmental monitoring report along with other necessary permissions/documents **(Session : DEC.2022)**

We fully assure you that we will comply with all conditions as specified in the Environment clearance granted to us. Details of Representative are as follows:

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY * HARYANA *
27-01-2023

KRJ PROJECT LLP

Authorised Signatory

O/C

KRJ Project LLP

Correspondence Address : 3H, Plaza M6, Jasola District Centre, Jasola, New Delhi110025
Email Id – ashianaregal.bbsr@gmail.com, Contact No. 011-4056 4056,
Mob +91 8826738812

To,

Date-31.12. 2022.

The Joint Director,

Regional Office,Ministry of Environment, Forest & Climate Change

A/3, Chandersekharpur,Bhubaneshwar – 751023

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2. Environmental monitoring report along with other necessary permissions/documents **(Session : DEC.2022)**

We fully assure you that we will comply with all conditions as specified in the Environment clearance granted to us. Details of Representative are as follows:

27/01/23

KRJ PROJECT LLP

Authorised Signatory

Annexure XXVIII

TPCODL

OFFICE OF T[illegible] DIVISIONAL MANAGER (ELECT.)
BCDD-II, Plot No-N1/228, IRC Village, Nayapalli, Bhubaneswar-751015
Ph. No. : (0674) 2551809

BCDD-II/Tech./ No. 9584 **Date.** 07.9.21

The SDO (Eng)
Peripherial Sub-Divn,Bhubaneswar

Sub:-Charging of 11 KV line,100KVA 11/0.4 KV sub station to effect power supply 55KW load (Construction Power) at 11 KV supply with LT single point metering in GPS tariff to M/s KRJ Projects LLP for construction of their Two Blocks of Basement + Ground +14 Storied Residential apartment and B+G+3 Storied community building over BDA permitted Plot No-317/2403,318,319, 320/2139,322,320 ,321/2493,325/1863 ,326,326/1851 Khata No - 511/3490 ,511/3491,511/3491, 511/3488,511/3645 ,729/412,511/3662, at Raghunathpur Jali Bhubaneswar against proposed future load 900 KW/1000KVA as applied by Sri Prafulla Kumar Mohanty authorized signatory of M/s KRJ Projects LLP under Baranga Section.

Ref :- This office letter No -4323dt 12.04.21
Notification No-5000027663 dt 12.04.21

Sir,

With reference to above , it is to intimate you that, the 11 KV line & 100 KVA 11/0.4 KV sub station has already been inspected by The S.E-Cum-E.I Bhubaneswar on dt-03.08.21

The copy of Inspection report No-123 date – 03.08.21 of the S.E-Cum-E.I Bhubaneswar and compliance report thereof submitted by Electrical Contractor M/s Unique Power Tech (Licence No-1638) (HT) are enclosed herewith for your kind information & necessary action.

Hence,you are requested to make necessary arrangements for charging of the line & sub station under intimation to the undersigned and ensure that all the defects /deficiencies noticed in the Inspection report are complied before charging.

You are also requested to contact with the central MRT for testing of the metering installation before effecting power supply.

The SDO is advised to ensure that all the works & materials have been executed as per RE Specification & ISI Standard as per sanction estimate permission letter No-4323 date-12.04.21 of BCDD-II BBSR The Size of Sub-station LT Panel, LT Cable with standby cable,size of conductor & size of earth.electrodes/earthing provided are to be strictly checked & ensured that they are as per approval letter & ISI standard.

The following Points also to be strictly ensured.
1 Size of conductor to be strictly ensured as per the sanctioned estimate.
2. All earth connection to the earth electrode should be done by 50x6mm GI flat.
3. AB Switch Handle to be earthed .
4. Sub station panel to be arthed at both the points .
5. Proper sand illing and gravelling(25mm-40mm depth) with proper size gravel and minimum 100mm thick
6. Boundary wall should must be around the 11/0.4 KV sub station & other outdoor electrical equipments.

Enc l :- 1) Inspection Report

2) Compliance Reports of the Electrical Contractor

Yours faithfully

Manager (Elect)
B.C.D.D. - II ,BBSR

07/09/21

Cont..P-2

TPCODL

OFFICE OF THE DIVISIONAL MANAGER (ELECT.)
BCDD-II, Plot No-N1/228, IRC Village, Nayapalli, Bhubaneswar-751015
Ph. No. : (0674) 2551809

No. 9585 (3) (3) date – 07.9.21

Copy to

1. Manager MRT Division No-I BBSR for information & necessary action. He requested to depute his staff for installation of meter.
2. SDO (Com) Peripherial Sub-division for information
3. JM (Elect) Baranga section for information & necessary action.

Encl: As above

Manager (Elect)
B.C.D.D. - II ,BBSR

07/09/21