

MINUTES OF THE 86th MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE (SEAC), JHARKHAND HELD ON 25TH JANUARY, 2021.

The 86th meeting of State Level Expert Appraisal Committee (SEAC), Jharkhand was held on 25th January, 2021 under the Chairmanship of Shri Ashok Kumar Singh, IFS (Retd.) in the Conference Room at SEAC, Ranchi.

The following members were present :

1. Shri Ashok Kumar Singh, IFS (Retd.) - Chairman
2. Dr. Kirti Avishek - Member
3. Shri Niranjana Lal Agarwalla - Member
4. Dr. Raju Kumar - Member
5. Dr. Ajay Govind Bhatt - Member
6. Shri Ashok Kumar Dubey, IFS - Secretary

SEIAA forwarded New Ranchi High Court Building & Residential Complex, Ranchi to the SEAC for the technical appraisal. The documents in hard copies were submitted to SEIAA by PAs i.e. Executive Engineer, Building Construction Deptt., Govt. of Jharkhand on 23.01.2021, which was taken for appraisal on 25.01.2021 by SEAC.

Day 1: January 25, 2021 [Monday]

Consideration of Proposal

1. New Ranchi High Court Building & Residential Complex of Building Construction Department, Govt. of Jharkhand at Site -1, HEC Campus, V ill. : Tiril, Dhurwa, Ranchi.

(Proposal No. : SIA/JH/MIS/59747/2019)

The PP has submitted the final EIA / EMP report to the SEIAA office on 23.01.2021 and This project was taken for appraisal by this committee on 25.01.2021.

Chronology of Events :

The proposed project is under violation as work Started onsite without prior EC under EIA, notification,2006. (Approximately 90% of construction activities of phase 1 have been done on the site).

S.No	Particulars	Dates
1.	Construction Work Started	January, 2016
2.	Proposal submitted to MoEF & CC in violation category	11 th September 2017
3.	Proposal transferred to SEIAA, Jharkhand by MoEF&CC	28 th March 2018
4.	EDS Letter	24 th May 2018

5.	Construction Work Stopped	October, 2018
6.	TOR Proposal (Resubmission) EDS reply	18th June, 2019
7.	Acceptance of TOR Proposal	5 th July 2019
8.	ToR was granted by SEIAA	20 th August, 2019
9.	Final EIA / EMP submitted by PP (Online)	12 th January, 2021
10.	Final EIA / EMP submitted by PP to SEIAA	23 rd January, 2021
11.	Final EIA / EMP forwarded by SEIAA to SEAC	23 rd January, 2021

This project i.e. proposed New Ranchi High Court Building and Residential Complex along with allied facilities is developed by Greater Ranchi Development Agency limited (GRDA) and Building Construction Department, Govt. of Jharkhand at Site 1 HEC Campus, Village Tiril Dhurwa, Ranchi, Jharkhand.

Brief of the project :

- The Project is designated under Category "B" and falls under Item 8(b) (Township & Area development Project) due to plot area is more than 50 ha.
- HEC Site-1 covers an area of 1,902.64 acres and is located in the South-Western part of the Ranchi city at a distance of approximately 3 km from Ring road and approximately 2 km from NH-75. Major part of the site is located within Ranchi Municipal Corporation limit.
- Project (site 1) cover 1,902.64 acres and is located in the South-Western part of the Ranchi city.
- The Proposed High Court Building is being developed on the total plot area of 162.22 acres (656481.05 sq.m). The built up area is 118552.98 sq.m.
- The complex comprises of an auditorium, conference rooms, committee meeting halls, separate building for advocate general and government pleader where people's representatives shall formulate laws/public policies.
- Total proposed Project Cost is 264 Crores.

Salient features of the project :

1.	Name of the project	New Ranchi High Court Building and Residential Complex
2.	Name of applicant	Greater Ranchi Development Agency Limited (GRDA) & Building Construction Department,

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		Govt. of Jharkhand.
3.	Category of the project	8(b) (Township & Area development Project), as per EIA Notification, 2006.
4.	Project location	Site 1 HEC Campus, Village Tiril Dhurwa, Ranchi, Jharkhand Latitude 23° 18'52.07"N Longitude 85° 16'12.52"E

Particulars as revised by the PAs after the exclusion of plot no. 790 (P) from the project area.

S. N.	Particulars	Area
1	Plot area	656481.05 sq.m.
2	Permissible FAR @ 2.0	1312962.1 sq.m.
3	Proposed FAR @0.18	118166.59 sq.m
4	Built up Area	118552.98 sq.m.
5	Proposed Open Area @90.98 % of Plot area	597296.5 sq.m.
7	Proposed Green Area @ 10.14 % of Open Area	60580.95 sq.m.
8	Total Water Requirement	353 KLD
9	Fresh Water Requirement	130 KLD
10	Wastewater Generation	167 KLD
11	Solid Waste Generation	717.15 kg/day
12	Parking Provided	1350 ECS
13	Power Demand & Source	4,000 KVA(by JSEB)
14	Back up	2 nos DG sets (1*1500 KVA +1*500 KVA)
15	RWH Pits	18 pits
16	EMP cost	175 Lakhs as proposed originally with addition of 30 Lakhs as part of specific condition and Rs. 2.72 Crores as remedial measures caused due to violation.

S. No.	Particulars	Area in Sq.m.
1	Total Plot area	656481.05

2	Permissible Ground Coverage @ 50 % of Plot area	328240.525
3	Proposed Ground Coverage @ 9.01 % of plot area	59184.47
4	Permissible FAR @ 2 of plot area	1312962.1
5	Proposed FAR @0.18 of plot area	118166.589
a	Total Area for Phase I (Built up area)	87055.000
	Court Block	59871.000
	Advocate Block (BLOCK-1)	13592.000
	Advocate Block (BLOCK-2)	13592.000
b	Total Area for Phase 2 (Built up area)	10261.200
	Typist Block-1	1106.7
	Typist Block-2	1106.700
	Bar Council	1554.600
	PO, Bank, Utility	718.200
	Dispensary	748.100
	Auditorium	5,026.90
c	Total Area for Phase 3 (Built up area)	21236.78
	Hon'ble Chief Justice's Residence	977.61
	Hon'ble Judges' Residence	15,777.78
	Registrar General Residence	606.84
	Registrars' Residence	3,437.76
	Out House	436.80
6	Built up area	118552.98

Building Blocks :

S. No.	Description	No. of Floors	No. of Blocks/Chamber
1.	Court Block	G+2	25
2.	Advocate Chambers (Block 1 & 2)	G+2	500
3.	Typist (Block 1 & 2)	G+1	-

4.	Bar Council	G+1	-
5.	PO, Bank, Utility	G+1	-
6.	Auditorium	G+2	-
7.	Dispensary	G	-
8.	Residential Complex	G+1	39
9.	Out Houses	G	8
10.	Watch Tower		1 no

S. No.	Connectivity & Site Surroundings		
	Description		Distance and Direction
1	Nearest Railway Station	Hathia Railway Station Argora Railway Station Ranchi Railway Station	4 km towards East 5.64 km towards North East 7.4 km towards North East
2	Nearest Airport	Birsa Munda, Ranchi Airport	4.6 km towards East
3	Nearest Settlement Area	Dhurwa HEC Colony Village Kute Adarsh Nagar	1.9 km towards South East 1.6 km towards South East 0.78 km towards North West 1.00 km towards South
4	State Boundary	Jharkhand-West Bengal state border	57 Km towards East
5	Nearest Highway/Roads	NH -75 Nayasarai Road Ring Road	2.6 Km towards East 0.18 km towards North 2.5 km towards West
6	Water Bodies	Dhurwa Dam Chitranjan Lake	1.8 km towards South West 0.75 Km towards East
7	Nearest School & College	J.N. Collage State Board of Technical Education Sardar Patel Kanya Mahavidyalaya	1.8 km towards South East 1.95 km towards South East 2.3 Km towards North East

8	Nearest Hospital	Ispat hospital Summer Hospital & Research Center Pvt. Ltd. Vatsalya Children hospital	3.8 km towards North East 4.5 km towards West 5.4 km towards North East
9	Places of worship	Jagannath Temple GEK Church Dibdih	1.0 km towards North East 3.6 km towards North East
10	Important Settlements	CRPF Camp JSCA International Stadium Complex	1.5 Km towards North West 0.25 Km towards South East

Development of Green Belt :

Total Plot area	656481.05 sq.m
Open Area	597296.5 sq.m.
Landscape area required@ 10% of open area	60580.959 sq.m

Water requirement:

During construction phase, source of water is private water tanker. It is estimated that water demand during the construction phase may vary from 50 KLD. Water requirement during the operational phase will be met through either Municipal supply (Ranchi Municipal Corporation or Ground water after taking permission from CGWA). The total water requirement for the proposed project has been estimated to be 353 KLD. Total domestic water requirement of the project is estimated as 193 KLD.

Power requirement:

Estimated power load for the project is 4000 KVA. Source of the power will be Jharkhand State Electricity Board. Power back-up will be provided through DG sets in case of power failure. 2 nos DG sets of 2000KVA (1*1500 KVA +1*500 KVA) each will be provided for power back-up.


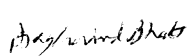


Parking facility:

The total parking required is 1250 and proposed parking is 1350 ECS.

As per Jharkhand Bye laws, the required parking is 1250 ECS but we proposed parking of 1350 ECS on the surface level

Solid waste generation and management

It is estimated that maximum solid waste generation would be about 717.15kg / day and 121.576 kg of sludge (wet basis). Organic waste converter shall be providing to manage the biodegradable waste. Small area will be designated for secondary processing, where the proper segregation of waste will take place before sending it for proper disposal. These solid wastes will be collected

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separately by putting three types of separate bins at the source of generation. For the biodegradable waste green bins will be provided, for the Non-biodegradable waste White bins and for the domestic hazardous waste black bins will be provided. The E-waste (Discarded computers, copiers, fax machines, electric lamps, cell phones, audio equipment, etc) generated will be managed as per the E-Waste (Management) Rules, 2016. The Hazardous waste (Used Oil, Oil Contaminated Wastes) generated will be managed as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

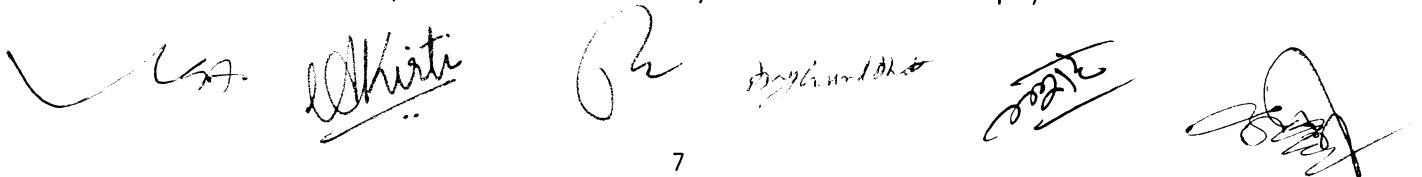
DFO, Wildlife Ranchi vide memo no. 873, dated 05.12.2020 certified that the project is out side of notified ESZ.

DFO, Ranchi Division vide letter no. 3934, dated 19.08.2019 certified that the distance of reserved / protected forest is 250 m from proposed project site and also mentioned the Plot no. 790 (P) of project site is protected forest as per the notification no. C/F-17033/55-2180-R dated 01.07.1955.

The PAs has given an undertaking that plot no. 790 (P) is excluded from project battery limit of New Ranchi High Court & Residential Complex. In absence of register II or Khatiyan, the Deputy Commissioner, Ranchi has given an undertaking if project area falls in to Jangle-Jhari category the PAs will follow the provisions of Forest (Conservation) Act, 1980.

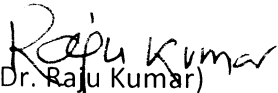
The committee also recommends the following project specific conditions :

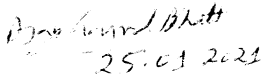
- i. Apart from the green belt area ^(15 Acres) plantation work will be done all along the boundaries and road side & all suitable places in the campus in consultation with Deptt. of Forest, Govt. of Jharkhand.
- ii. The present Ambient Air Quality at the project site is reported to be much above the permissible limit. In order to mitigate and improve the air quality within acceptable limits an additional budget of Rs. 20 Lakhs has been proposed to be EMP budget. The PAs have accepted this proposal.
- iii. Rain Water Harvesting Storage Tank / Pond has been recommended with an additional budget of Rs. 10 Lakhs to the EMP budget which has been accepted by PAs.
- iv. Municipal Solid Waste Generated at the source should be scientifically collected, segregated and disposed as required by law.
- v. Initiatives for increasing the uses of renewable energy and reduce load on the conventional sources (not less than 10% of total energy requirement) .
- vi. On site Disaster Management Plan to be prepared & approved by the Competent Authority.
- vii. Bank Guarantee to the tune of Rupees 2.72 Crores in favour of Jharkhand State Pollution Control Board shall be submitted.
- viii. Environmental Compensation as directed by Hon'ble NGT shall be payable.




Based on the presentation made and information provided, the Committee decided that the proposal for New Ranchi High Court Building & Residential Complex of Building Construction Department, Govt. of Jharkhand at Site -1, HEC Campus, Vill. : Tiril, Dhurwa, Ranchi is recommended for grant of EC. The various conditions for grant of EC is enclosed as Annexure - I.


The meeting concluded with thanks to all present.



(Dr. Raju Kumar)
Member


25.01.2021
(Dr. Ajay Govind Bhatt)
Member


25/01/21
(Niranjana Lal Agarwalla)
Member


(Dr. Kirti Avishek)
Member


25.01.2021
(Ashok Kumar Dubey)
Secretary


(Ashok Kumar Singh)
Chairman

I. Statutory Compliance

- i. As per the MoEF&CC, Govt. of India notification S.O. no. 804(E), dated 14.03.2017 section 13 (3)

“ In cases of violation, action will be taken against the project proponent by the respective State or State Pollution Control Board under the provisions of section 19 of the Environment (Protection) Act, 1986 and further, no consent to operate or occupancy certificate will be issued till the project is granted the environmental clearance.”

- ii. As per the MoEF&CC, Govt. of India notification S.O. no. 804(E), dated 14.03.2017 section 13 (7)






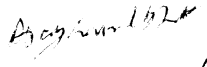


“The project proponent will be required to submit a bank guarantee equivalent to the amount of remediation plan and Natural and Community Resource Augmentation Plan with the State Pollution Control Board and the quantification will be recommended by Expert Appraisal Committee and finalized by Regulatory Authority and the bank guarantee shall be deposited prior to the grant of environmental clearance and will be released after successful implementation of the remediation plan and Natural and Community Resource Augmentation Plan, and after the recommendation by regional office of the Ministry, Expert Appraisal Committee and approval of the Regulatory Authority.”

Since, the project relates to construction of New High Court Building, Jharkhand and the Project Proponent is Govt. of Jharkhand (Building Construction Deptt.) and the receiver (JSPCB) of Bank Guarantee is also a body of Govt. of Jharkhand, the EC is being recommended with the conditions that above direction of Govt. of India shall be fulfilled within 03 months from the date of EC.

- iii. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
- iv. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of fire fighting equipment etc as per National Building Code including protection measures from lightening etc.
- v. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- vi. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- vii. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention &

Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.




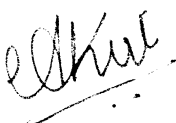

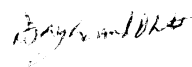


- viii. The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
- ix. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- x. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
- xi. The provisions of the Solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
- xii. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.
- xiii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel (kerosene/gas) for cooking, safe drinking water, medical health care, etc. The housing may be in the form of temporary structures to be removed after completion of the project.
- xiv. Provision of drinking water, waste water disposal, solid wastes management and primary health facilities shall be ensured for labour force. Proper sanitation facilities shall be provided at the construction site to prevent health related problems. Domestic as well as sanitary wastes from construction camps shall be cleared regularly.
- xv. All the labourers to be engaged for construction works shall be screened for health and adequately treated before issue of work permits. The contractor shall ensure periodic health check-up of construction workers.
- xvi. All vehicles/equipment deployed during construction phase shall be ensured in good working condition and shall conform to applicable air and noise emission standards. These shall be operated only during non-peaking hours.
- xvii. Accumulation/stagnation of water shall be avoided ensuring vector control.
- xviii. Water during construction phase should be preferred from Municipal supply.
- xix. Unskilled construction labourers shall be recruited from the local areas.
- xx. Monitoring of ground water table and quality once in three months shall be carried out. Construction of tube wells, bore wells shall be strictly regulated.
- xxi. Adequate provision shall be made to cater the parking needs. Parking spaces standards as given in "Manual on Norms and Standards for Environmental Clearance of Large Construction Projects" issued by Ministry of Environment and Forests, Government of India shall be adopted.
- xxii. Rest room facilities shall be provided for service population.

- xxiii. Water body falling within premises (if any) shall not be lined or no embankment shall be cemented. The water bodies, if any, shall be kept in natural conditions without disturbing the ecological habitat.
- xxiv. Construction shall conform to the requirements of local seismic regulations. The project proponent shall obtain permission for the plans and designs including structural design, standards and specifications of all construction work from concerned authority.
- xxv. Project proponent shall install Wind Augmentation and Air Purifying Unit (4 Units at one location in Ranchi) on Pilot basis to deal with particulate matter pollution.

II. Air quality monitoring and preservation

- i. 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.
- ii. A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
- iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM25) covering upwind and downwind directions during the construction period.
- iv. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- v. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3 meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
- vi. Sand, murrum, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
- vii. Wet jet shall be provided for grinding and stone cutting.
- viii. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
- ix. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules 2016.

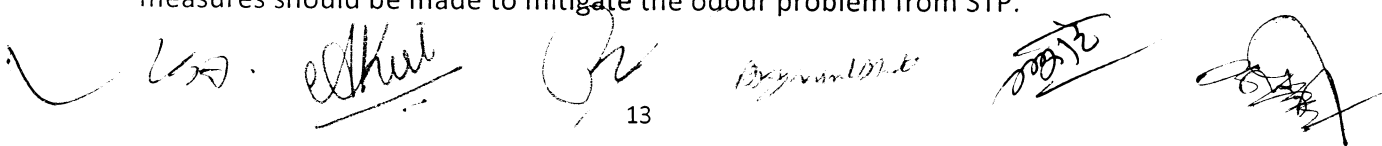
- x. The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
- xi. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. 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.
- xii. For indoor air quality the ventilation provisions as per National Building Code of India.

III. Water quality monitoring and preservation

- i. 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.
- ii. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
- iii. Total fresh water use shall not exceed the proposed requirement as provided in the project details.
- iv. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
- v. 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.
- vi. At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
- vii. 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.
- viii. 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.

- ix. 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.
- x. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- xi. The local bye-law provisions on rain water harvesting should be followed. If local byelaw 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/storage tanks shall be provided for ground water recharging as per the CGWB norms.
- xii. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.
- xiii. All recharge should be limited to shallow aquifer.
- xiv. No ground water shall be used during construction phase of the project.
- xv. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.
- xvi. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
- xvii. Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.
- xviii. No sewage or untreated effluent water would be discharged through storm water drains.
- xix. Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.
- xx. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.

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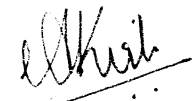
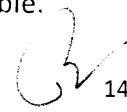
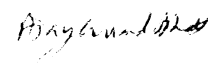


- xxi. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

IV. Noise monitoring and prevention

- i. 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.
- ii. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures

- i. 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.
- ii. Outdoor and common area lighting shall be LED.
- iii. 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.
- iv. 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.
- v. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.
- vi. 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.



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VI. Waste Management

- i. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.
- ii. Disposal of muck during construction phase shall not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- iii. 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.
- iv. Organic waste compost/ Vermiculture pit/ Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
- v. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
- vi. 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.
- vii. 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.
- viii. 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.
- ix. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.
- x. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

VII. Green Cover

- i. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
- ii. A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide

canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.

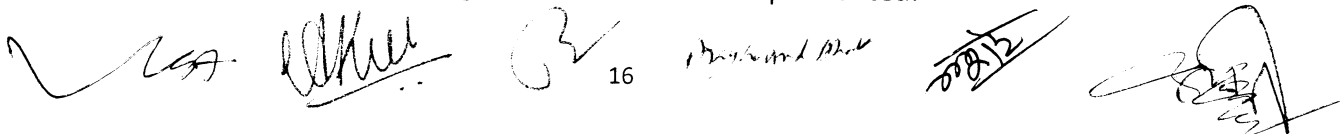
- iii. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
- iv. 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.

VIII. Transport

- i. 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
- ii. 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.
- iii. 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 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

IX. Human Health Issues

- i. 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.
- ii. For indoor air quality the ventilation provisions as per National Building Code of India.
- iii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

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- iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- v. Occupational health surveillance of the workers shall be done on a regular basis.
- vi. A First Aid Room shall be provided in the project both during construction and operations of the project.

X. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

XI. Miscellaneous

- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry / SEIAA / SEAC may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry / SEIAA / SEAC reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. It shall be mandatory for the project management to submit six (06) monthly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard copies and soft copies to the regulatory authority concerned Regional Office of MoEF & CC at Ranchi and Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi / CPCB / SEIAA.
- xiv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

- xv. Any appeal against this EC 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.

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