



Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), JHARKHAND)

To,

The -1

Public Works Department

Office of Executive Engineer, Special Work Division, Building Construction
Department, Government of Jharkhand, Dindayal Nagar, Near State Guest
House, Morabadi, Ranchi -834003

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity
under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC)
in respect of project submitted to the SEIAA vide proposal number
SIA/JH/INFRA2/418801/2023 dated 18 Feb 2023. The particulars of the
environmental clearance granted to the project are as below.

1. EC Identification No.	EC23B038JH110777
2. File No.	EC/SEIAA/2022-23/2750/2023
3. Project Type	New
4. Category	B
5. Project/Activity including Schedule No.	8(a) Building and Construction projects
6. Name of Project	Proposed MLA Residential Complex in Core Capital Area at Site-1,HEC Area, Ranchi
7. Name of Company/Organization	Public Works Department
8. Location of Project	JHARKHAND
9. TOR Date	N/A

The project details along with terms and conditions are appended herewith from page
no 2 onwards.

Date: 31/03/2023

(e-signed)
Ashok Kumar, IFS
Member Secretary
SEIAA - (JHARKHAND)

*Note: A valid environmental clearance shall be one that has EC identification
number & E-Sign generated from PARIVESH. Please quote identification
number in all future correspondence.*

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State Level Environment Impact Assessment Authority, Jharkhand

Nursery Complex, Near Dhurwa Bus Stand, Dhurwa, Ranchi. Jharkhand-834 004

E-mail: msseiaa.jhk@gmail.com / chr-seiaajhr@gov.in

website: www.jseiaa.org

Letter No. : EC/SEIAA/2022-23/2750/2023/

Ranchi, Date :

**To: Sri Manoj Kumar Hansda,
Executive Engineer, Special Work Division,
Building Construction Department, Government of Jharkhand,
Dindayal Nagar, Near State Guest House
Morabadi, District : Ranchi, Jharkhand : 834001.**

Sub. : Environmental Clearance for the project "Proposed MLA Residential Complex in Core Capital Area of Special Works Division, Building Construction Department, Govt. of Jharkhand at Site – 1, HEC Area at Village : Ani, Tehsil : Nagri, District : Ranchi, Jharkhand" (Proposal No. : SIA/JH/INFRA2/418801/2023) – regarding.

Ref. : Your application no. - Nil, dated - 18.02.2023.

It is in reference to the project "Proposed MLA Residential Complex in Core Capital Area of Special Works Division, Building Construction Department, Govt. of Jharkhand at Site – 1, HEC Area at Village : Ani, Tehsil : Nagri, District : Ranchi, Jharkhand" submitted by you for seeking prior Environmental Clearances (EC).

This is a new project which has been taken for appraisal on 20.02.2023.

Project is classified as Category 8(a) as per EIA Notification as the built-up area is less than 1.50.000 sqm. and development area is less than 50 ha.

Proposed MLA Residential Complex in Core Capital Area at Site-I, HEC Area, Ranchi. The total plot area of the project is 176078.723 m². The project site is earmarked as Housing development area as per the master plan of Ranchi 2037.

The Proposed project is located in Site-1, HEC Area, Ranchi. The total plot area of the project site is 179695.1547 m². The site is earmarked for Residential development as per the local development plan. The latitude and longitude of the centre of the project site are 23°19'24.65"N and 85°16'33.68"E respectively

Salient Features of the Project:

Sl. No.	Description	Quantity	Unit
1	Plot Area	176078.723	m ²
2	Proposed Built Up Area	49853.500	m ²
3	No of blocks	70	
4	Max Height of Building (Upto Terrace)	14.1	m

5	Max No of Floors	G+2	Nos
6	Cost of Project	216	Cr
7	Expected Population (Including Floating and maintenance Staff)	639	No.
8	Permissible Ground Coverage Area (50%)	88039.36	m ²
9	Proposed Ground Coverage Area (17.24 %)	30355.97	m ²
10	Permissible FAR Area (3.0)	52823.61	m ²
11	Proposed FAR Area (0.28)	4930.20	m ²
12	Non FAR Area	44923.29	m ²
13	Total Water Requirement	119	KLD
14	Fresh water requirement	46	KLD
15	Treated Water Requirement	41	KLD
16	Waste water Generation	46	KLD
17	Proposed Capacity of STP	55	KLD
18	water for reused from onsite RWH Tanks	32	KLD
19	Treated Water Available for Reuse from onsite STP	41	KLD
20	Required Parking	250	ECS
21	Proposed Total Parking	480	ECS
22	Required Open/Green Area (20% of plot area)	35215.74	SQMT
23	Proposed Open/Green Area (31% of plot area)	54584.40	SQMT
	Green Buffer Area (6 % of the plot area)	10564.72	SQMT
	Incidental Green Area/ Green Cover (25 %)	44019.68	SQMT
24	Total Solid Waste Generation	0.28	TPD
25	Organic waste	0.11	TPD
26	Inorganic waste	0.17	LPD
27	Quantity of Sludge Generated from STP	3.5-4.0	KG/DAY
28	Total Power Requirement	2709	KVA
29	DG set backup	500	KVA
30	DG sets Proposed	500	KVA
31	No of DG Sets	1	No.
32	Proposed Roof Top SPV Power Generation	150	KWp

Land Details:

KHATA No.	Plot No.
52	39 P
14	41P
36	44P,176
6	45P,209,210,254,256,257,258,259,260P
13	46P, 47P,179
70	114P,177,220
27	175,201P,215,246,373,374P,382
38	178,180

45	181,183,195P,207P,208P,253
46	182,184P,187P
47	185,186
16	192P,214,304P,305P,306,307P,302
18	193P
23	211,212P,218,250,251,252
69	213,296
80	216,301,309
82	217
36	219
4	222,223P,240P,243,244
67	242P
50	245
10	261,262P,291P,292,293,294P,295P,298,303
41	284,285P,297,299,300
40	308P,375P
35	310P,311P
42	372P
	247,248,249,255

Adjacent Features of the Project Site

S. No.	Surrounding Feature	Distance from Project Site	Direction w.r.t. Project Site
1.	Vidhan Sabha	290 Meter	W
2.	Indra Nagar	60 Meter	E
3.	Sail City	630 Meter	N
4.	Paras HEC Hospital	630 Meter	S

Communication Facilities with the Project Site

S. No.	Type of Facility	Name of Facility	Distance from Project Site	Direction w.r.t. Project Site
1.	Roads	• NH-39	2.64 KM	W
		• NH-75	3.12 KM	E
		• SH-23	4.78 KM	NW
		• Jagannathpur Mandir Road	246 Meter	S
2.	Railway	• Hatia - Railway Station	4.42 KM	SE
		• <u>Ranchi Junction</u>	6.55 KM	NE
		• Piska Railway Station	6.95 KM	W
		• Balasiring Railway Station	5.71 Km	S
3.	Airport	• Birsa Munda Airport	3.20 KM	E

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**Project Site and Surrounding Area within 500 m
Features & Facilities in the Surrounding
Area**

SN	Type of Facility	Name of Nearest Facility	Distance & Direction from Project Site
1.	Hospital	Paras Hec Hospital, Ranchi	630 M in S direction
		Summer Hospital & Research Centre	4.22 Km in SE direction
		City Hospital	3.94 Km in NE direction
		Raj hospital	5.77 Km in NE direction
		St. Barnabas Hospital	6.71 Km in NE direction
		Doranda Hospital	4.43 Km in NE direction
2.	School	Yogoda Satsanga Mahavidyalaya, Gosaidih	276 M in SE direction
		Kendriya Vidyalaya CRPF Camp	1.5 Km in SW direction
		Prabhat Tara School	916 M in S direction
		St Thomas School, Dhurwa	1.17 km in SE direction
		Saraswati Shishu Vidya Mandir	1.55 km in S direction
		Government Primary School	3.42 km in S direction
		Indian Institute Of Management-Ranchi (IIM-Ranchi)	2.61km in NW direction
		Dayanand Public School	2.51 km in NE direction
		Kendriya Vidyalaya HEC	2.10 km in E direction
		DAV Jawahar Vidhya Mandir	3.69 km in NE direction
		Delhi Public School, Sail Township	2.59 km in NE direction
		St. Xaviers School, Doranda	4.33 km in NE direction
		St. Mary Nursery School, Doranda	4.34 in NE direction
3.	Community Facilities	GALA Banquet & Conference - Banquet hall	2.26 Km in E
		Vidhan Sabha Colony Ground	885 Meter in E
		Shaheed Vijay Soreng Park	1.96 KM in E
		Dhurwa Dam	2.74 Km in SW
		Park Golf course	13.18 Km in NE
		Sai Dhurwa Cricket Academy	1.81 Km in SE
4.	Places of worship	Hanuman Mandir	190 Meter in S
		Jagannath Mandir	562 Meter in SE
		Sai Mandir is situated at an aerial distance of	730 Meter in N
		Jagannath Masi Rath Yathra Temple	1.16 km in E

		Durga Mandir, Dhurwa	2.50 km in S direction
		Lord Hanuman And Lord Shiva Temple.	1 km in NE direction
5.	Defence installations	Army western cantonment	14.6 km in NE direction
6.	Archaeological site		
7.	State/National boundaries	Jharkhand -West Bengal Border	56 km in E direction

Details of Parking Facilities

Level of Parking	No. of Car Parking (ECS)	
	Proposed	Required
Total parking	480	250

Power Requirement, Source and Backup Arrangement

Power requirement	2709 KVA
Sources of power	JBVNL (Jharkhand Bijli Vitran Nigam Limited) Grid supply
Back-up power supply arrangement	Back-up DG sets of total capacity 500 kVA (Also roof top SPV power generation 150 KWP is proposed.
Stack height of DG	6 m above the terrace level of the building

Water Requirement, Source and Water Balance

Water Requirement during Operation Stage

WATER REQUIREMENT				
	POPULATION/ AREA/UNIT	RATE IN LTS	TOTAL QTY IN KL	BASIS
RESIDENTIAL				
DOMESTIC	490	76	~37	Manual on norms and standards for environment clearance of large construction projects, Ministry of Environment and Forests, Government of India
FLUSHING	490	24	~12	
NON RESIDENTIAL (Working)				
DOMESTIC	100	25	2.50	As Per NBC 2016, Clause 4.1.2

FLUSHING	100	20	2.00	As Per NBC 2016, Clause 4.1.2
VISITORS				
DOMESTIC	49	5	0.25	As Per NBC 2016, Clause 4.1.2
FLUSHING	49	10	0.49	As Per NBC 2016, Clause 4.1.2
TOTAL POPULATION	639			
Swimming POOL			5	
GARDENING	56767.78	1	58	
DG COOLING	500	0.25	0.5	
TOTAL WATER REQUIREMENT			119	

Water Source during Operation Stage

SN	Source	Quantity (kld)
1	Fresh water from municipal supply	46
2	Recycle of treated water from onsite STP	41
3	Rain Water Tanks	32
	Total water source	119

Green Area and Number of Trees

Plot area for development: 176078.723 m²

Green Buffer Area : 10564.72 m² (6 % of the plot area)

Incidental Green Area/ Green Cover : 44019.68 m² (25 %)

Total Green Area: 54584.40 m² (31 % of the plot area)

No. of tree plantation required (1 tree per 80 m ² of plot area for development) = 176078.723 m ² plot area / 80 m ² per tree =	2200.98
No. of tree plantation proposed	2256

Sewage Quantity, Treatment, Reuse & Disposal

Quantity of sewage	46 kld
Collection of sewage	Sewage generated during the operation phase will be collected through underground sewerage system (pipe drain) for treatment in STP. Separate storm water drainage system will be provided for rain water.

Treatment of sewage	Sewage will be treated up to the tertiary level in the on-site Sewage Treatment Plant (55 kld capacity) based on MBBR technology. All parameters of the STP treated effluent shall be maintained as per EP Rules, 1986/ CPCB standards.
Reuse/recycle and Disposal of treated sewage	During normal operations, the treated sewage will be reused and recycled for horticulture and toilet flushing.
Location of the STP	Within project site

Rain Water Harvesting

There will be total 6 nos rain water harvesting pits .

All the pits will be preceded by a storage tank for re-use.

Solid Wastes Collection, Recycle & Disposal

Quantity	Total 0.28 (Biodegradable 0.11 TPD + Non-biodegradable: 0.17 TPD)
Nature	Biodegradable: Waste vegetables and foods Non-biodegradable: Papers, cartons, thermocol, plastics, glass etc.
Collection and disposal	The municipal solid wastes generated from the project will be segregated into biodegradable waste, non-biodegradable waste, plastic waste, domestic hazardous waste and horticulture waste in separate bins as per Solid Waste Management Rules, 2016. The biodegradable wastes will be composted in on-site composting unit and the manure will be used for landscaping. The other segregated wastes will be disposed at Nagar Nigam designated site through authorized vendors as per local norms. Dewatered/ dried sludge from STP will be used as manure in horticulture.
Recycling	Recyclable wastes comprising paper, plastic, glass etc., will be disposed at Nagar Nigam designated site through to authorized vendors.
STP Sludge	This will be used as manure in Land scaping

Energy Conservation Measures

- Proposed building envelope is efficiently designed having very less exposed area in West / South-West / North-West direction. Energy efficient glass has been considered to minimize the heat load in the building. Proposed U factor & Solar Factor shall be as per NBC/ ECBC 2017 (as applicable). Additionally Efficient Lighting System - combination of LED Light fixture is proposed for Entire building and campus lighting which will significantly reduce the lighting load requirement in the project. Additionally 150 KWp solar panel to be installed at over the parking area. Total 150 KWp electrical powers to be generated through solar system

In future the project proponent assures that additional 200 kwp of solar panels will be installed making the total solar capacity as 350 kwp

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Environmental Management Plan

Proposed Environmental Mitigation Measures

Area	Mitigation Measures
	Construction Stage:
Water quality	• Toilet and drinking water facilities for construction workers will be provided by the contractor at the construction site to avoid unhygienic condition at site. • Mobile Toilets will be used.
Air quality	• Barricades of sufficient height all along the project boundary will be erected to prevent dispersion of dust and noise • Regular sprinkling of water on roads and vulnerable areas of the construction site will be carried out for dust suppression. • Properly tuned construction machinery & vehicles in good working condition with low noise & emission will be used and engines will be turned off when not in use. DG sets to comply with emission norms & stack height regulations. • Construction materials will be properly stored at the storage yard with proper shades and covers located at the off-site. • Trucks carrying construction materials and debris will be suitably covered by tarpaulin and plastic sheets. • Use of mask by construction workers.
Noise level	• Enclosed/ canopy type DG sets will be used. • Protective gears such as ear mufflers etc. will be provided to construction personnel exposed to high noise levels.
Solid wastes	• Construction wastes will be recycled and excess construction debris will be disposed at designated places in tune with the local norms. • Municipal solid wastes from construction site will be disposed at Nagar Nigam authority designated dumping site through authorized vendors.
Landscape	• Appropriate landscape including plantation of evergreen and ornamental flowering trees, palms, shrubs and ground covers at open spaces within the complex will be done, which would serve the dual purpose of controlling fugitive dust and improving the aesthetics of the area.
Health & Safety	• Personal protective equipments (PPE) and other safety measures will be provided to the construction workers as per occupational safety norms to prevent accidents/ hazards. • First aid and health checkup facility will be provided at the construction site.
	Operation Stage:

Water quality	• Sewage will be treated up to the tertiary level in the on-site STP. • Sewage will be reused for toilet flushing and horticulture. • Regular monitoring of STP Outlet quality will be carried out as per norms.
Air quality	• Back up DG sets will comply the applicable emission norms. • Adequate stack height for DG sets will be provided as per norms. • Back up DG sets will be used only during power failure. • Regular monitoring of emissions from DG sets and ambient air quality will be carried out as per norms.
Noise level	• DG sets will be installed in the basement to minimize the vibration and impact on ambient noise. • DG room will be treated acoustically as per norms to control the noise from DG sets. • Pumps, Compressors, DG sets etc. will be properly maintained for fuel efficiency and noise control. • Personal protective equipment will be provided to the maintenance staff working in high noise areas.
Solid wastes	• Solid wastes will be segregated into biodegradable & non-biodegradable components. • Biodegradable wastes will be composted in an on-site composting unit and the manure will be used for landscaping. • Non-biodegradable/ recyclable wastes will be disposed at designated dumping site through authorized vendors.
Hazardous waste	• Used/spent oil from DG sets will be temporarily stored in an isolated area with proper marking & restriction and finally sold to registered recyclers as per HW rules.
Rainwater harvesting	• For rain water harvesting surface and roof rain water will be harvested using a combination of RWH pit and existing natural drain/nullah
Fire protection	• Adequate fire protection facilities will be installed including fire detectors, fire alarm and fire fighting system as per National Building Code of India. • Fire fighting training & mock drills will be conducted at regular intervals as per norms and safety manual
Landscape	• Proper maintenance of landscape round the year including replacement of the decayed plants.
Health & Safety	• Adequate safety measures will be provided to the maintenance staff complying to the occupational safety manuals to prevent accidents/ hazards. • First aid and health checkup facility will be provided at the building.

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Others	• The building will be provided with disabled-friendly design, timber-free construction, energy efficient lighting & ventilation, and control of indoor environment. • Undertaking all necessary pollution control measures to maintain the emissions and discharges within the prescribed/stipulated limits.
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Statutory Clearances:

1	DFO Certificate	: Divisional Forest Officer (DFO), Ranchi Forest Division vide letter no. 467, dated 07.02.2023 certified that distance of Reserved Forest/Protected Forest is more than 250 meters from project site.
2	DFO wildlife	: DFO, Wildlife Ranchi vide letter no. 17, dated 05.01.2023 certified that the proposed project site is outside Eco Sensitive Zone of Palkot Wildlife Sanctuary.
3	CO certificate	: The CO, Nagri (Ranchi) vide letter no. 130 (ii), dated 28.01.2023 has mentioned the plot no. of the project is not recorded as "Jangle Jhari" in R.S. Khatiyani & Register II.
4	AAI NOC	: PAs has submitted the NOC application vide NOC ID RAN/EAST/ B/021123/741424 for Height Clearance.
5	Fire Department	: PAs has submitted the application vide letter dated 09.02.2023 for Fire Advisory.
6	Building Plan	: Conceptual Plan submitted.

State Level Environment Level Impact Assessment Authority (SEIAA), Jharkhand in its 102nd meeting held on 17th & 18th March, 2023 discussed the project proposal along with recommendations made by SEAC in its 101st meeting held on 20th, 21st, 22nd, 23rd and 24th February, 2023 and decided to grant EC to the project.

On the basis of recommendation of SEAC and decision of SEIAA to grant of EC, Environmental Clearance is hereby issued to the **"Proposed MLA Residential Complex in Core Capital Area of Special Works Division, Building Construction Department, Govt. of Jharkhand at Site – 1, HEC Area at Village : Ani, Tehsil : Nagri, District : Ranchi, Jharkhand"** alongwith the following specific conditions as recommended by SEAC:

I. Specific Conditions:

- i. This Environmental Clearance is valid subject to the following condition below –
That this project has-
 - a. Obtained all legal rights to operate at concerned place.

- b. Complied with all existing concerned laws of the land and
 - c. Complied with the decisions of SEIAA on the issue of Environmental Clearance till date.
- ii. Environment management system including organization structure to be drawn to ensure compliance of EC conditions stipulated based on principles of Continuous Improvement and periodical management review.
 - iii. All raw material to be stored only under covered shed.
 - iv. PAs to offset (upto20%) consumption of conventional energy sources by promoting use of solar energy, passive energy utilization, optimum fenestration, shading effect and heat islands.
 - v. Developers to promote energy conservation measures such that it offsets not less than 02 % of connected load. It is to be achieved by solar panels etc meeting ECBC norms.
 - vi. Trees should be planted & maintained not less than 15% of project area.
 - vii. Organic Waste Converter (OWC) to be installed of sufficient capacity such that all organic waste (bio degradable) generated is used as compost manure.
 - viii. Developers/Company to install STP of sufficient capacity such that all the sewage generated is treated and reused.
 - ix. Developers/Company to install Rain water harvesting structures such that all the roof top water runoff is collected and harvested including reuse on 100% basis.
 - x. Developers/Company to conduct and submit carbon footprint and carbon sequestration study report including mitigation measures as a part of EC compliance.
 - xi. Water runoff originating from open non constructed areas of project premises to be harvested /guided in such a way that it does not create water logging condition outside.
 - xii. Sufficient number of EV fast charging point to be installed.
 - xiii. Ground water will not be used without the permission of competent Authority.
 - xiv. After approval of Building Plan from competent Authority, it should be submitted to the SEIAA.
 - xv. Install the required STP, if project start functioning before commencing or functioning of CETP of Municipal Corporation.
 - xvi. This Environmental Clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT, MoEF & CC and any other Court of Law, if any, as may be applicable to this project.
 - xvii. Environmental clearance is subject to obtaining prior clearance from forestry and Wildlife angle including clearance from standing committee of NBWL, as may be applicable to this project (in case any fauna occurs / is found in the Project area or if the area involves forest land or Wildlife habitat i.e. core zone of elephant/tiger reserve etc. and or located with in 10 km. of protected area).
 - xviii. The project proponent may apply simultaneously for forest and NBWL clearance, in order to complete the formalities without undue delay, which till process on their

respective merits, no rights will vest in or accrue to them unless all clearance are obtained.

- xix. This Environmental Clearance shall be valid subject to the sustainable environmental management.

II. Statutory Compliance :

- i. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
- ii. 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.
- iii. 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.
- iv. In the writ petition (Civil) no. 202/1995, T.N. Godaverman Thirumulpad vs union of India and ors. the Hon'ble Supreme Court passed an order dated 03.06.2022 " National Park or Wildlife Sanctuary must have an ESZ of minimum 01 km in which the activities prescribed and prescribed in the guidelines of 09th February, 2011 shall be strictly adhered to".
- v. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- vi. 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.
- vii. The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
- viii. 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.
- ix. 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.
- x. The provisions of the Solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
- xi. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.
- xii. 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.

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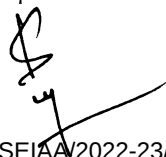
safe drinking water, medical health care, etc. The housing may be in the form of temporary structures to be removed after completion of the project.

- xiii. 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.
- xiv. 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.
- xv. 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.
- xvi. Accumulation/stagnation of water shall be avoided ensuring vector control.
- xvii. Water during construction phase should be preferred from Municipal supply.
- xviii. Unskilled construction labourers shall be recruited from the local areas.
- xix. 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.
- xx. 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.
- xxi. Rest room facilities shall be provided for service population.
- xxii. 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.
- xxiii. 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.

III. 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.

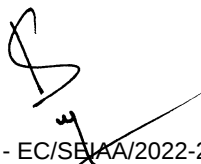
- iv. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur 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, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
- vi. Sand, murram, 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.

IV. 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 based on the MBBR/MBR/SBR technology. 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.
- 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.

V. 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.



VI. 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.

VII. 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.

VIII. 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.

IX. 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.

X. Human Health Issue:

- 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.
- 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.

XI. 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.

XII. 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. The SEIAA, Jharkhand or any other competent Authority may alter modify the above conditions or stipulate any further condition in the interest of Environment Protection.
- xvi. 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.
- xvii. The Prescribed EC is valid as per Notification no. S.O. 1807(E) dated 12.04.2022 of MoEF & CC, Govt. of India.

Sd/-

Member Secretary
State Level Environment Impact
Assessment Authority, Jharkhand.

Memo No. : EC/SEIAA/2022-23/2750/2023/ 440.

Ranchi, Date : 21.03.23.

Copy to:

1. Additional Chief Secretary, Department of Forests, Environment & Climate Change, Govt. of Jharkhand.
2. Deputy Commissioner, District- Ranchi, Jharkhand.
3. Divisional Forest Officer, Ranchi Forest Division, Ranchi, Jharkhand.
4. Divisional Forest Officer, Wildlife Division, Ranchi, Jharkhand.
5. Director IA Division, Monitoring Cell, MoEF and Climate Change, Indira Paryavaran Bhavan, Jorbag Road, Aliganj, New Delhi – 110003.
6. Integrated Regional Office, Ranchi, Ministry of Environment, Forest and Climate Change, 2nd Floor, Jharkhand State Housing Board (HQ), Harmu Chowk, Ranchi, Jharkhand – 834002.
7. Member Secretary, Jharkhand State Pollution Control Board, Ranchi.
8. Secretary, Jharkhand State Expert Appraisal Committee, Ranchi.
9. Website.
10. Guard file.

Member Secretary
State Level Environment Impact
Assessment Authority, Jharkhand

21/03/2023

Signature