

ENVIRONMENTAL
CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive,
and Virtuous Environmental Single-Window Hub)



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

To,

The Chief (Mine Planning and Projects)
Tata Steel Limited
Registered Office
Bombay House,
24 Homi Mody Street,
Mumbai- 400001,
Site: www.tatasteelindia.com Address for communication
D. Vijayendra,
Head (Planning), Noamundi
M/s Tata Steel Ltd., Noamundi Iron Mine
P.O. Noamundi, Thana: Noamundi
Dist: West Singhbhum (Jharkhand)
Pin Code : 833217, JHARKHAND
e-mail: gm.office@tatasteel.com -833217

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/INFRA2/433155/2023 dated 14 Jun 2023. The particulars of the
environmental clearance granted to the project are as below.

1. EC Identification No.	EC23B038JH119305
2. File No.	EC/SEIAA/2023-24/2859/2023
3. Project Type	New
4. Category	B
5. Project/Activity including Schedule No.	8(a) Building and Construction projects
6. Name of Project	SANGRAM SAI TOWNSHIP PHASE 2
7. Name of Company/Organization	Tata Steel Limited
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: 14/07/2023

(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/2023-24/2859/2023/ 182

Ranchi, Date : 10/07/2023

To: Shri D. Vijayendra,
Chief (Mine Planning & Projects) OMQ,
M/s Tata Steel Limited, General Managers Office,
OMQ, P.O. : Noamundi, District : West Singhbhum,
Jharkhand : 833217.

Sub. : Environmental Clearance for the project "Sangram Sai Township Phase 2 of M/s Tata Steel Limited at Village :Mahudi, Tehsil : Noamundi, District : West Singhbhum, Jharkhand" (Proposal No. : SIA/JH/INFRA2/433155/2023) – regarding.

Ref. : Your application no. – MD/ENV/657/88/2023, dated - 14.06.2023.

It is in reference to the project "Sangram Sai Township Phase 2 of M/s Tata Steel Limited at Village :Mahudi, Tehsil : Noamundi, District : West Singhbhum, Jharkhand" submitted by you for seeking prior Environmental Clearances (EC).

This is a new project which has been taken for appraisal on 18.06.2023.

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.

Sangram Sai Township Phase 2 of Tata Steel Ltd. is a building construction project under schedule 8(a) of EIA notification, 2006 & it comprises of four blocks of residential building. Project Proponent has proposed to build four building blocks having total built-up are 34111.03 m² as per approved building plan.

Salient features of the project:

Particular	Details
Project Name	Sangram Sai Township Phase 2
Proponent	Tata Steel Ltd.
Type of Building	Residential Building
Latitude	22° 9'34.36"N
Longitude	85°30'7.32"E
Mauza	Mahudi
Tehsil	Noamundi
Thana	Mahudi
Thana No.	744

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District	West Singhbhum
State	Jharkhand
Plot Area	14152.05 Sq.m.
Tree Cover	1986.11 Sq. m. (14.03%)
Permissible FAR	2.00 (28304.10 sq. m.)
Consumed FAR	1.82 (25750.12 sq. m.)
Permissible Ground Coverage	50.00 % i.e. 7076.02 Sq.m.
Consumed Ground Coverage	28.57 % i.e. 3938.58 Sq.m.
No. of Building Block	5 Residential Building Blocks Block E Block F Block G Block H A General Store
Total Built-Up Area	Total Built- Up Area: 34111.03m ²
No. of Floor	Block E : 9 Floor Block F : 9 Floor Block G : 9 Floor Block H : 9 Floor A Employee Cooperative Store : 1 Floor
Height	Block E : 31.65 m Block F : 31.65 m Block G : 31.65 m Block H : 31.65 m A General Store : 3.30 m
Building Configuration	Total Dwelling Units: 288 (2 BHK) 72 Units X 4 Blocks
Population	1584 including 10% floating population
Parking	Two Wheeler 264 Car 137 Area : 2978.51 m ²
Municipal Solid Waste	Total Municipal Solid Waste = 864.00 Kg / Day Bio-Degradable = 345.60 Kg / Day Non-Biodegradable = 518.40Kg / Day
Power Requirement	549 KVA Source : JSEB
Power Back-Up	Centralized Power Back-up System of Noamundi Iron Ore Mine (TSL)
RWH Pits	4 Pits
Total Fresh Water Requirement	142.56 KLD
Source of Fresh Water	Existing Water Supply System
Reuse of treated water for flushing	71.28 KLD
Volume of Waste Water	185.33 KLD
Capacity of STP	850.00 KLD

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Utilization of Treated Water	333.59 KLD (90 % of total waste water) Reuse of Treated Water from STP Flushing : 71.28 KLD Dust Suppression : 20 KLD Horticulture : 20 KLD Discharge (Utilized back in Plant at Noamundi) : 222.31 KLD
Total Water Consumption	Treated Water 111.28 + Fresh Water 332.64 = 443.92 KLD
Project Cost	Rs. 144.26 Crores
Connectivity	
Railway	Noamundi Railway Station 2 Km
Airport	Sonari Airport, Airport 126 Km away & Bisra Munda Airport Ranchi 221 Km away.
Road	Kolebira – Hat Gamharia Road (SH – 04) adjacent to the project site.

Plot Area Break – up

Block E	1035.13 Sq.m.
Block F	1035.13 Sq.m.
Block G	866.68 Sq.m.
Block G	866.68 Sq.m.
STP	291 Sq.m.

Khata no. & Plot no. of the project :

Khata no.	Plot no.
02	597 (P)

Population Estimation

Construction Phase : 150 labors will attend during construction phase.

Operational Phase

Number of Residential Building Block = 4

Number of 2 BHK unit in each Block = 72

i.e. Total 2 BHK Unit = 288

As per NBC 2006 norms **5 person** can be accommodate in **2 BHK** Residential Unit;

Hence Estimated population = 5 X 288 = 1440

10 % Floating Population = 1440 X 10% = 144

Total Population = 1440 + 144 = **1584**

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Municipal Solid Waste

Construction Phase

Building Type	Municipal Solid Waste @0.2 Kg per Person per Day	Bio-degradable (40% of MSW)	Non-Biodegradable (60% of MSW)
Residential Building	30 Kg / Day	12 Kg / Day	18 Kg / Day

Operational Phase

Building Type	Municipal Solid Waste @0.6 Kg per Person per Day	Bio-degradable (40% of MSW)	Non-Biodegradable (60% of MSW)
Residential Building	864.00 Kg / Day	345.60 Kg / Day	518.40 Kg / Day

Water & Waste Water

Construction Phase

Potable : 1.5 KLD @ 10 L per Person

Flushing : 2.5 KLD @ 15 L per Person

Construction work : 25 KLD

Total : 29 KLD

Source – Tata Water Supply System

Operational Phase

Water Balance (KLD)		Source
Domestic @ 90L	142.56	Tata Water Supply System
Flushing @ 45L	71.28	Treated Water
Horticulture	10.00	Treated Water
Dust Suppression	10.00	Treated Water
Discharge	56.98	Treated Water
Total	290.82	
Fresh Water Demand	142.56	
Treated Water Demand	148.26	From STP

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STP & Waste Water Management

STP Calculation (KLD)			
Total Domestic Water	332.640	299.376	90% of Domestic Water is Waste Water
Total Flushing Water	71.28	71.28	100% of Flushing Water is Waste Water
Total Volume of Waste Water		370.656	
STP Capacity		850.00	
Waste Water Management (KLD)			
Volume of Treated Water from STP i.e., 90% of Waste Water			333.59
Break-Up			
Flushing			71.28
Horticulture			20.00
Dust Suppression			20.00
Utilization back in Noamundi Plant			222.31

Rain Water Harvesting

4 Rainwater Harvesting pits are proposed. Rain water from roof tops will be drained through rain water vertical down take pipes. These vertical down take pipes shall be located at suitable locations inside the shafts or periphery of the building. The terrace will be sloped. The down take pipes will be connected to the storm water network and then to Rainwater Harvesting Pits.

Catchment Area(m ²)	Runoff Coefficient	Intensity of Rainfall in 24 hr. (mm)	Maximum Intensity of Rainfall hourly (mm/hr)	Retention Time - Runoff (m ³ /15 mins)	Runoff 60 minutes
3362.62	0.85	180	9	6.43	25.72
Volume of desilting Tank (m ³)	Volume of Recharge Pit (m ³ Per pit)	Total Volume (M ³)	Runoff 60 minutes	No. of pits required	No. of pits proposed
3.375	3.375	6.75	25.72	3.81	4

Solid Waste Management Construction Phase

Solid Waste generated during construction phase would include top soil, brick bats, pieces of reinforcing roads, pieces of wood boards & waste of other construction material, cans of paints electrical wire, etc.

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Top Soil would be separately stored at pre-defined location within the site & preserved for landscaping. Sub – Soil would be stored for reuse in road making, plinth filling, etc.

Brickbats wastes of concrete would also be stored for road construction, etc. Surplus C & D waste would be handed over to nearby communities. E-Waste & Hazardous waste (cans of paints) would be collected in separates containers to be sold to authorized recyclers. Recyclable wastes including bags, packing, pcs of steel rods shall be given to community people/villagers as required,

Operational Phase

During operational phase of buildings municipal solid waste would be generated. They would be stored in different color bins.

- ✓ Recyclable Waste - Blue
- ✓ Wet (Bio-Degradable) Waste - Green
- ✓ E-Waste - Yellow
- ✓ Hazardous Waste - Black

The waste generated will be treated in the existing solid waste management facility of Tata Steel Limited at Noamundi.

E-Waste & Hazardous Wastes would be handed over to authorized recyclers.

Energy Conservation

Energy Conservation will be 15% achieve through;

Innovative Design and Advanced Architecture

- ✓ **Roof Top Heating Elimination**

Creation of roof insulation (use of insulation tiles) for preventing roof top heating due to intense natural heating during daytime, preventing the need of cooling systems.

- ✓ **Use of Shear Wall Construction Method**

Shear wall construction method has been adopted instead of the conventional brick and mortar method which act as an insulator maintaining a difference between external and internal temperatures thereby keeping the interiors cooler.

- ✓ **Large Windows and Balcony for proper natural daylight**

Modern Architecture with huge glaze, allowing penetration of maximum daylight, saving energy during the daytime.

Statutory Clearance :

1	DFO Forest Distance	DFO, Chaibasa Forest Division vide letter no. : 139, dated 19.01.2023 certified that the distance of reserved / protected forest is more than 250 m from proposed project site.
2	DFO wildlife	: DFO, Dalma Elephant Project vide letter no. : 319, dated : 25.02.2023 certified that proposed project site is outside Eco Sensitive Zone of Dalma Wildlife Sanctuary.
3	CO certificate	: The CO, Noamundi vide vide letter no. 48, dated 01.02.2023 has mentioned the plot no. of the project is not recorded as “Jangal Jhari” in R.S. Khatiyon & Register II.
4	AAI NOC	: Airport authority of India issued NOC vide NOC ID ROUR/EAST /B/040623/751035, dated 30.05.2023 valid upto 29.05.2031.

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5	Fire Department	:	A fire advisory has been issued by Fire Department, Jharkhad, Ranchi vide vide memo no. 1572/Tech./ 2023, dated 21.03.2023.
6	Building Plan	:	Conceptual Plan submitted.

State Level Environment Level Impact Assessment Authority (SEIAA), Jharkhand in its 106th meeting held on 03rd & 04th July, 2023 discussed the project proposal along with recommendations made by SEAC in its 105th meeting held on 15th, 16th, 17th, 18th and 19th June, 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 “Sangram Sai Township Phase 2 of M/s Tata Steel Limited at Village :Mahudi, Tehsil : Noamundi, District : West Singhbhum, 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. MSW Collection centre should be located in isolated and preferably unmanned area. Movement of the vehicle carrying waste should be under tarpaulin covered condition only. Route of vehicle should be such that it avoids residential areas as far as practical.
- xvi. ISO 14k EMS system standard to be followed for implementation of EMPs with MRM in place for feedback to Sr management.
- xvii. A cycling tract to be provided in residential complex so as to save on fuel and make in campus movement environment friendly.
- xviii. Install the required STP, if project start functioning before commencing or functioning of CETP of Municipal Corporation.
- xix. 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.
- xx. 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).
- xxi. 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.
- xxii. 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 lightning 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, 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, 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.

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.

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- 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.

15/07/2023
Member Secretary
State Level Environment Impact
Assessment Authority, Jharkhand.

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4. Deputy Conservator of Forest & Field Director Elephant Project, Jamshedpur, 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

02/07/2023

Validity unknown

Digitally signed by Shri Ashok
Kumar, IFS
Member Secretary

Date: 7/14/2023 1:17:45 PM

