

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 18TH OCTOBER 2023**

The SEAC met on 18th October 2023 at 10:30 AM in the Conference Hall of State Pollution Control Board Odisha, Bhubaneswar under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

1.	Sri Sashi Paul	--	Chairman (through VC)
2.	Dr. K. Murugesan	--	Member Secretary
3.	Dr. Rabi Narayan Patra	--	Member
4.	Dr. Chittaranjan Panda	--	Member
5.	Prof. (Dr.) H.B. Sahu	--	Member (through VC)
6.	Prof. (Dr.) Abanti Sahoo	--	Member (through VC)
7.	Prof. (Dr.) B.K. Satpathy	--	Member
8.	Er. Kumuda Ranjan Acharya	--	Member
9.	Shri Jayant Kumar Das	--	Member
10.	Dr. Ashok Kumar Sahu	--	Member
11.	Dr. K. C. S Panigrahi	--	Member (through VC)

Draft proceedings of the meeting was finalized by the members through e-mail and final proceedings of the meeting was confirmed by the members through e-mail. The agenda-wise proceedings and recommendations of the committee are depicted below.

ITEM NO. 01

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S ODISHA INDUSTRIAL INFRASTRUCTURE DEVELOPMENT CORPORATION (IDCO) FOR (LB+GB+G+12) OFFICE BUILDING AND SERVICE BUILDINGS (IT & ITES, INCUBATION CENTER) OVER PLOT NO. - 1288 (P) & KHATA NO-420, OVER AN BUILT-UP AREA OF 40229.635 SQM MOUZA – PATHARAGADIA, BHUBANESWAR, KHORDHA DISTRICT OF SRI JITENDRIYA JYOTIPRAKASH - TOR

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of EIA Notification, 2006 and amendment thereafter.
2. This proposal is for Terms of Reference for Environmental Clearance of M/s Odisha Industrial Infrastructure Development Corporation (IDCO) for (LB+GB+G+12) Office Building and Service Buildings (IT & ITES, INCUBATION CENTER) Over Plot no. - 1288 (P) & Khata no-420, over an built-up area 40229.635 Sqm Mouza – Patharagadia, Bhubaneswar, Khordha District of Sri Jitendriya Jyotiprakash.
3. **Category:** This project falls under Category "B", Project or Activity 8(a) Building and Construction projects as per EIA Notification dated 14th Sept, 2006 as its amendments.

4. The building plan has been approved by Special Planning Authority, IDCO. Letter No. 11708 dated 10.05.2022. Approved Built Up Area = 40229.63 sqm. (as per Special Planning Authority, IDCO). Approved Layout Plan on dated- 10.05.2022.
5. **Location and connectivity:** The proposed development is a (LB+GB+G+12) multi storied office building and service building (B+G+2) within the development plan area of special planning authority, IDCO. The site is located back side to the local landmarks of Shikharchandi hill. Total land required for this proposed project is 14447.27 sqm (3.57 Acre). The proposed construction will be over Plot no-1288, Khata no- 420 at Mouza – Pathargadia, Tahasil – Bhubaneswar, PS- Chandaka no. 40, Dist- Khordha, Odisha bounded by Latitude 20°21'16.26"N and Longitude 85°48'02.83"E. Nearest NH/ Highway is NH –16 at a distance from (SE); Nearest Railway Station is Bhubaneswar Railway Station is 1.7 K m (E); Nearest Airport is Biju Pattnaik Airport, BBSR-10.30 km (SSW)
6. As per the BDA revised Master Plan, project site is earmarked in SEZ (Special Economic Zone) zone where Commercial IT/Office Establishments are permitted.
7. **Present status of construction:**

Area Statement (Main Building) (A1):-

Sl. No.	Floor Name	Floor To Be Used		Gross Plinth Area In Sq. Mtr.			Work completed so far	Work Yet to be Completed
		Front Tower	Rear Tower	Front Tower	Rear Tower	Front Tower+ Rear Tower		
i)	Lower Basement	Parking	Parking	-	-	2835	All	Nil
ii)	Upper Basement	Parking	Parking	-	-	2845	All	Nil
iii)	Ground Floor	Cafeteria & Conference	Service Floor	1024	1343.7	2367.7	All	Nil
iv)	1 st Floor	Office	Parking	1024	1395.7	2419.7	Structure	Fit-out
v)	2 nd Floor	Office	Parking	1024	1395.7	2419.7	Do	Fit-out
vi)	3 rd Floor	Office	Parking	967.8	1395.7	2363.5	Do	Fit-out
vii)	4 th Floor	Office	Office	1069.55	1395.7	2465.25	Do	Fit-out
viii)	5 th Floor	Office	Office	1069.55	1395.7	2465.25	Do	Fit-out
ix)	6 th Floor	Office	Office	1069.55	1395.7	2465.25	Do	Fit-out
x)	7 th Floor	Office	Office	1069.55	1395.7	2465.25	Do	Fit-out
xi)	8 th Floor	Office	Office	1069.55	1395.7	2465.25	Do	Fit-out
xii)	9 th Floor	Office	Office	1069.55	1395.7	2465.25	Do	Fit-out
xiii)	10 th Floor	Office	Office	1125.75	1475	2600.75	Do	Fit-out
xiv)	11 th Floor	Office	Office	1125.75	1475	2600.75	Do	Fit-out
xv)	12 th Floor	Office	Office	1125.75	1475	2600.75	Do	Fit-out
Total Area				13834.35	18330	37845.31		

Area Statement (Main Building) (A1):-

Sl. No.	Floor Name	Floor To Be Used		Gross Plinth Area In Sq. Mtr.			Work completed so far	Work Yet to be Completed
		Front Tower	Rear Tower	Front Tower	Rear Tower	Front Tower+ Rear Tower		

Area Statement (Service Building) (A2)						
xvi)	Lower Basement	STP	252.2		All	Nil
xvii)	Upper Basement	Operation Area	291		All	Nil
xviii)	Ground Floor	DG , Panel Transformer	356.8		All	Nil
xix)	1st Floor	Panel Room	366.8		All	Nil
Total Area			1275.8			
Area Statement (Fire Pump Room) (A3)						
xx)	Basement	Pump Room	193		All	Nil
xxi)	Ground Floor	Pane Room	36.56		All	Nil
Total Area			229.56			
Area Statement (Vehicular Ramp) (A4)						
xxii)	Two Nos. Vehicular Ramp In Rear Tower From Ground To Lower Basement			237.98 Sqm Each	475.96	All Nil
xxiii)	Two Nos. Vehicular Ramp In Front Tower From Ground To Upper Basement		137.67+57.87		195.54	All Nil
Total Area					671.5	
Area Statement(Car Lift Well) (A5)						
xxiv)	2 Nos. Of Car Lift In Rear Tower			Each 30.35 Sqm.	60.72	Complete a car lift work
xxv)	Connecting Way From Car Lift Well To Building Provided At 1 st , 2 nd & 3 rd Floor Level For Both Cart Lift Well Side (Total 6 Nos.)			Each 24.29 Sqm.	145.74	All
Total Area					206.46	
Grand Total Bilt-Up Area					40229.63	

8. **Water requirement:** Total Water requirement is 142 KLD (Fresh water + Flushing water). Total domestic water requirement is 64 KLD. Total flushing water requirement is 78 KLD. Wastewater generation from entire official building is 128 KLD and STP Capacity is 150 KLD with INDION FMR Technology. Source of water is through Provision by IDCO for supply water/ ground water (stand by).

Water Calculation							
Sl. No.	Particulars	Units	Total Quantity Of Occupancy	Domestic	Flushing	Total	Wastewater Generation
a)	Office Employees @ 1 person/ 10 sqm	Office Area of two towers	2660	53200	66500	119700	107730

		26536.4 sqm					
b)	Food Court	Seats	300	6000	4500	10500	9450
c)	Visitors @ 10% of total office employees	NO.S	265	1325	2650	3975	3577.5
d)	Maintenance Staff	NO.S	170	3400	4250	7650	6885
	TOTAL		3395	63925	77900	141825	127642.5
				64 KLD	78 LD	142KLD	128 KLD

9. **Rainwater harvesting details:** Surface runoff from road, paved area and green belt area (14 cum/hr) has collected by a recharge pit having capacity of 4 cum. Total no. of Rain Water Harvesting Pit are 11 in numbers.

10. **Parking Proposed:** Total parking required is 10614.58 sqm (40% FAR area). Total parking provided is 10880.00 sqm (open parking- 1042 sqm and cover parking- 9838 sqm) and total 440 ECS has been provided (including 10% of visitor parking).

LOCATION	AREA IN SQM	NO. OF ECS	Type of vehicle	AREA in Sqm	Total NO. OF ECS	Type of vehicle	AREA in Sqm	NO. OF ECS	Total NO. OF ECS
LOWER BASEMENT	2835	88.6	4wheeler	2560	80	2wheeler	275	45.83333	46
UPPER BASEMENT	2845.96	88.9	4wheeler	2560	80	2wheeler	285.96	47.66	48
1 ST FLOOR	1395.7	69.8	4wheeler	1200	60	2wheeler	195.7	32.61667	33
2 ND FLOOR	1395.7	69.8	4wheeler	1200	61	2wheeler	195.7	32.61667	33
3 RD FLOOR	1395.7	69.8	4wheeler	1200	62	2wheeler	195.7	32.61667	33
COVERED PARKING AREA	9868.06	386.9	4wheeler	8720	343	2wheeler	1148.06	191.3433	193
OPEN PARKING AREA	1042	52.1	4wheeler	800	40	2wheeler	242	40.33333	40
TOTAL PARKING PROVIDED INCLUDING VISITORS	10910.06	439.0	4wheeler	9520	383	2wheeler	1390.06	231.6767	233
TOTAL PARKING PROVIDED FOR EMPLOYEES	9819.054	395.0865	4wheeler	8568	344.7		1251.054	208.509	209.7
Visitors Parking (10% OF TOTAL	1091.006	43.8985	4wheeler	952	38.3	2wheeler	139.006	23.16767	23.3

PARKING
AREA)

11. **Power Requirement:** During the operational phase (100% Completion) of the project, power requirement will be around 2801 KW. The power will be entirely supplied by 11 KV source of CESU of GRIDCO, Odisha. The maximum demand of phase I and II taken together is 2801 KW. Considering a power factor of 0.9 the maximum demand works out to 3112 KVA. To meet the load and to ensure uninterrupted service, the scheme provides for 3 Nos 1600 KVA transformers and 3 Nos. 1500 KVA prime power DG sets
12. **Solid waste generation:** The solid waste generated from the project will mainly be around MSW (Municipal Solid Waste) 0.640 T/day. The total biodegradable solid waste will be 0.380 T/day and the total non-biodegradable solid waste will be 0.260 T/day. It will be collected in different coloured bins. Proper waste management practices shall be adopted during collection, storage and disposal of solid waste and construction and demolition waste generated.

Description	Weight	Disposal
Organic Solid Waste	380.2 kg/day	Converted to compost
Inorganic Waste	260 kg/day	Authorized Recyclers
E-waste	500 kg/year	Authorized Recyclers
STP Sludge	5kg/day	Manure for landscaping area
Hazardous Waste	1000 Litres	Authorized Disposal Agency

13. **Greenbelt:** the total green area developed is 3113 sqm. A greenbelt of native plant species has been developed. Total green area measures 3113 m² (approx. 21.5 % of the net plot area). Trees like *Plumeria alba*, *Plumeria rubra*, *Scotch Pine Topiary* and *Livistona palm*. etc. and flowering and ornamental plants have been proposed to be planted inside the premises.
14. **Project cost:** Total estimated cost of the proposed project is Rs.157.16 Crores.
15. **Violation Details:** The Proponent has already constructed the office building and service buildings (IT & ITES, Incubation Center) without obtaining the Environmental Clearance.
16. **Environment Consultant:** The Environment consultant M/s **Visiontek Consultancy Services Pvt. Ltd. (Bhubaneswar)** along with the proponent made a presentation on the proposal before the Committee.

The SEAC observed that the proponent has already constructed the project without obtaining Environmental Clearance as per EIA Notification 14th Sept. 2006 and amendment thereafter. The SEAC, after detailed deliberations on the proposal in terms of the provisions of the MoEF&CC, Govt. of India Notification dated 14th March, 2017, confirmed the case to be of violation of the EIA Notification, 2006 and recommended for issuing **Standard Term of Reference as per Annexure – A along with the following specific Term of Reference** for undertaking EIA and preparation of Environmental Management Plan (EMP):

- (i) The State Government to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no Consent to Operate to be issued till the project is granted Environmental Clearance.
- (ii) The project proponent shall be required to submit a Bank Guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of Environmental Clearance. The quantum shall be recommended by the SEAC and finalized by the regulatory authority i.e. SEIAA, Odisha. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC and approval of the regulatory authority i.e. SEIAA, Odisha.
- (iii) Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.
- (iv) Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
- (v) The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants.
- (vi) The proponent shall pay the penalty for such violation as per SoP for violation issued vide OM F No. 22-21/2020/IA. III, dtd. 07.07.2021 of MoEF & CC, Govt. of India.
- (vii) Fire disaster management plan specially designed for topmost floors with detailed note on hydrant system pump and water storage.
- (viii) Detailed calculation of renewable energy/solar energy along with roof top solar plan layout.
- (ix) Clear site layout showing all features of the project and distance from road.
- (x) Traffic Study Report to be submitted and vetted from reputed institute.
- (xi) Structural Stability certificate from appropriate authority as per regulatory authority guidelines be submitted and vetted from reputed institute.
- (xii) Detailed calculation of Rain Water Harvesting and Layout showing Rainwater Harvesting pits.
- (xiii) Layout map showing the treated water fallout to nearest drain and its distance.
- (xiv) Layout of internal drainage map and their fallout to external public drain.
- (xv) Copy of permission of the concerned authority of the drain / sewer to discharge the treated water from project to the nearby drain.
- (xvi) Reduce discharge of treated water to drain by planting more trees.

- (xvii) The greenbelt to be provided along the outer periphery of the plot along the boundary the spacing maybe reduced to 2m x 2m to accommodate more trees and should be planted on a hierarchical pattern.
- (xviii) The concept of vertical garden may also be considered apart from landscaping, potted plants, Parks & Gardens.
- (xix) The water Treatment Plant, Waste Water Treatment Plant, STP, DG set's location to be marked in the layout plan.
- (xx) Adequate overhead portable water tank to be provided as per the norms apart from Treated Waste Water tank for use in dual plumbing system for the flush in the toilet.
- (xxi) To submit Sabik RoR with Kisam and Hal RoR with Kisam to rule out involvement of Forest and DLC land in the project.
- (xxii) For parking of various types of vehicle adequate provision of basement, Stilt, Open area and Mechanical parking may be considered.
- (xxiii) Provision of lift with ventilation, lighting and AC from lowest basement to terrace roof top to be provided.
- (xxiv) Efforts for Energy Conservation in the project as per Bureau of Energy Conservation in line with Energy Conservation Act, 2003 to be submitted for the project.
- (xxv) Disaster Management Plan for the project may be prepared and submitted as per Disaster Management Act, 2005.
- (xxvi) Indicate the system of Storm Water Drainage, Rainwater Harvesting System and Recharge Well.
- (xxvii) Copy of permission obtained from the CGWA for drawl of ground water.
- (xxviii) Detailed notes on water flow meters proposed for monitoring of water consumption under different heads.
- (xxix) Details on drainage network of the site, drainage connection, permission to discharge treated waste water and copy of water balance during the monsoon.
- (xxx) Details of STP proposed incorporating the treatment system such as UV, filtration and chlorination facility in it.
- (xxxi) Copy of revised lay out clearly demarking the parking area along with the open parking space.
- (xxxii) Zone-3 has been shown as green belt area whereas the same has been indicated as re-creation/Lawn area. Therefore, the proponent shall rectify the same while applying for EC.
- (xxxiii) Detailed layout of the fire corridor.
- (xxxiv) The proponent shall justify the violation that is why there is delay in applying for EC.
- (xxxv) Copy of the certificate from the concerned DFO regarding distance of the site from Chandaka. and Nandankanan Sanctuary and its Eco-Sensitive Zone.

(xxxvi) Project proponent has mentioned about Incubation Centre. Project proponent should provide details of incubation centre, i.e. types of incubation and related infrastructure. If biological incubation there are several environmental implications on it.

ITEM NO. 02

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. NATIONAL ENTERPRISES FOR ENHANCEMENT OF IRON ORE PRODUCTION FROM 0.5 MTPA TO 1MTPA ALONG WITH 180 TPH BENEFICIATION PLANTS OF RAIKELA IRON ORE MINES OVER 45.932 HECTARE AT. VILLAGE RAIKELA, TEHSIL - KOIDA, DIST- SUNDARGARH OF SRI CHARANJIT SINGH GREWAL - TOR

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of EIA Notification, 2006 and amendment thereafter.
2. This proposal is for Terms of Reference for Environmental Clearance of M/s. National Enterprises for enhancement of iron ore production from 0.5 MTPA to 1MTPA along with 180 TPH beneficiation plants of Raikela Iron ore mines over 45.932 hectare at. Village Raikela, Tehsil - Koida, Dist- Sundargarh of Sri Charanjit Singh Grewal.
3. **Category:** This project falls under Category "B" Project or Activity 1(a)-Mining of Minerals projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
4. **Project details:** The ToR was granted for enhancement of production from 0.5 MTPA to 1.0 MTPA vide letter no 8603/SEIAA dated 16.07.2020 from SEIAA, Odisha. Subsequently, the Public Hearing has been conducted successfully on dated 22.10.2021. Later the Project Proponent intended to modify with setting up a 180 TPH Beneficiation Plant. Subsequently the PP has applied for fresh ToR vide proposal No SIA/OR/MIN/436689/2023 15.07.2023.
5. Sri Charanjit Singh Grewal is the proprietor of the firm vide letter no MRMP/A/38-ORI/BHU/2019-20, dated 07.01.2020. The Lease deed was executed on 21.12.1983 & valid up to 20.12.2033.
6. **List of Statutory clearances obtained earlier:**

Forest Clearance	FC letter no. 8-128/1997-FC, dated 10.11.2005. Further on 17.07.2013, as per circular of MoEF, the lessee has submitted application for diversion of 6.559 ha of safety zone area.
Environment Clearance	EC letter no. SEIAA/1957, dated 08.09.2016 for production of 0.5million TPA of iron ore
CTE from SPCB	Obtained, vide letter no. 3025/IND-II-NOC-5567, dated 22.02.2012
CTO from SPCB	Obtained, vide letter no. 8819/IND-I-CON-2272, dated 31.05.2023
MP approval	IBM approved for the period 2018-19 to 2022-23 vide letter no. MRMP/A/38-ORI/BHU/2019-20, dated 07.01.2020.

7. **Status of Forest Clearance:** Proposal No.FP/OR/MIN/427/1997, file No. 8-128/1997-FC, Area inverted- 37.317 ha dated 10/11/2005, Stage- II clearance accorded.

8. Approval letter of mining plan was obtained vide letter no MRMP/A/38-ORI/BHU/2019-20, dated 07.01.2020.
9. **Location and Connectivity** – The proposed site is located at Plot No.6/P, 7/P, 8/P, 513/P, 589/P, 516/P, 517/P, 518/P, 519/P, 520/P, 585/P, 586/P, 782/P at Village Raikela, Tehsil - Koida, Dist.-Sundargarh, Odisha bounded by Geo Coordinates: Latitude-21°52' 46.70"N to 21° 53'06.40"N and Longitude-85°10' 58.98"E to 85° 11'25.69"E featured in Topo Sheet No. 73 G/1. Nearest railway station is Barsuan railway station - 18 km (SW); Nearest Road is Tensa-Koira Rd. 3.0 km NH 520-7km; Nearest Airport is Jharsuguda Airport- 170 km and Nearest town is Koira town - 11 km (North-east). Nearest sanctuary is Hadagarh WLS 133 km away, National Park Similipal is 95 km., Karo River is 6 km, Sarkunda Nala is 7.5 km & Kuradhi Nadi 8 km away.
10. Comparative table for Previous EC and proposed enhanced production for which TOR applied for:

Previous EC Capacity	Facilities (Existing)	Present applied for	Facilities (Proposed)	Final Capacity	Final Facility
0.5 MTPA ROM	2X150 TPH Crusher & 2X150 TPH Screening	1 MTPA (Additional 0.5MPA ROM)	180TPH Beneficiation plant	1.0 MTPA ROM	2X150 TPH Crusher, 2X150 TPH Screening & 180 TPH Beneficiation Plant

11. Summary of products generated by the project:

Units	Products and By products	Existing	Additional	After Expansion
MTPA	Iron Ore	0.5	0.5	1.0

12. **Method of Mining:** The proposed method of mining is Open Cast fully mechanized method. Bench dimension is 6m height & 10 m width. Water table of the region is at 520m AMSL and during post monsoon it goes up to 523m AMSL. The depth of hole in this mine will be 10% more i.e. up to 6.5m. Power gel will be used for blasting with the help of detonators and safety fuse /NONEL. Blasting pattern will be staggered (V type) with delay interval of 25ms, Power factor has been assumed to be 6t/kg.

Sl. No.	HEMM with Capacity	Nos.
i)	Excavator-0.9 cum	05
ii)	Excavator-1.4 cum	03
iii)	Pay Loader- 1.9cum	05
iv)	Rock drill- 100mmdia	01
v)	Tipper-25t	09
vi)	Mobile Crushing unit - 150TPH	02
vii)	Mobile Screening unit-150 TPH	02

viii)	Beneficiation Plant 180 TPH	01
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13. Number of topsoil dumps with area and capacity, no of waste/reject dump:

Period	Generation	No of Dump	Area	Capacity
Existing	Nil	1	1.96	1469100cu m
Plan Period	355264cu m	No additional Dump, Dumping - 289670 cum Back-filling- 65594cum	Back filling- 0.64Ha Dumping -No additional area	355264cu m
Conceptual Period	949122cu m	Dumping over Dump-A - 281000CUM	0.54ha additional area	949122cu m
		Back-filling - 668122 cum	6.68Ha	

14. Area under excavation is 19.420 ha in plan period, during conceptual period is 21.420 ha. Total mined out area will be 26.475, backfilled area of 6.68 ha.

15. Details of crushers /screen/beneficiation plant:

Facility	Existing in TPH	Proposed	Final in TPH
Crushing Plant	2x150	Nil	2x150
Screening Plant	2x150	Nil	2x150
beneficiation plant	Nil	180	180

17. Water Requirement: The total water requirement shall be 203 KLD, total fresh make up water shall be 81.5KLD & recycled water shall be 116.5 KLD (Settling tank, ETP & STP) which will be sourced from Karo river by with due permission.

Sl. No	Type of unit	Water in KLD	Recycled ETP, STP & Settling Tank	Makeup
i)	Process	180	108	72
ii)	Dust suppression & Dry Fog System	5	5	0
iii)	Drinking/Washing	7	4	7
iv)	Workshop	5	3	1
v)	Wheel Wash	3	1.5	1.5
vi)	Greenbelt development	3	4	
		203	116.5	81.5

18. Green Belt:

Plan Period	Area in Ha	No of Plants
Place		

Safety Zone	1.2	2560
Dump Slope	0.9	1350
Untouched	0.5	750
Conceptual Period		
Back Filled	5.42	13550
Bench	21.075	52687.5
Terrace	2.5	6250
Road	0.78	1950
Mineral Stack	4	10000
Screening	2.428	6070

19. Land use as per mining at the end of plan period and at conceptual stage

Particulars	As at present in ha.)	Land use after 2022-23 (in ha)	At the end of conceptual period (in ha)
Area under excavation	19.42	18.992	24.047
Overburden dump site	1.96	2.81	2.5
Mineral storage	3.992	4	Nil
Infrastructure & Mine camp	0.28	0.28	Nil
Road	0.75	0.78	Nil
Green belt including safety zone	1.7	1.8	3.065
Beneficiation Plant	0	2.428	2.428
Other (Settling Pond, Magazine & Beneficiation Plant)	1.07	1.26	Nil
Sub-Total	29.172	32.35	32.04
Untouched area	3.195	0.017	0.327
Overlapping area	13.565	13.565	13.565
Total	45.932	45.932	45.932

20. Details of Waste Generation: During the plan period, waste generation will be 355264m³ and conceptually 949122m³. Waste from beneficiation (i.e. tailings) will be 875000m³.

21. Mitigation of waste produced:

Period	Generation	No of Dump	Area	Mitigation
Existing		1	1.96	Dumping and stabilization with protection wall & Plantation

Plan Period	355264cum	No additional Dump, Dumping - 289670 cum Back-filling-65594cum	Back filling- 0.64Ha Dumping -No additional area	Dumping & Back Filling, stabilization with Plantation
Conceptual Period	949122cum	Dumping over Dump-A - 281000CUM	0.54ha additional area	Dumping & Back Filling, stabilization with Plantation
		Back-filling - 668122 cum	6.68Ha	
		Tailings from Beneficiation Plant 629856 cum		Will be dry pressed and back filling

22. **Baseline study details:** Base line study has been carried out in the period of December 2019 – February 2020.
23. **Power Requirement & Solar Power details:** About 600 KVA power will be required and 30 KVA from solar energy is proposed for the project.
24. **Rainwater harvesting details:** Two Settling ponds of 20m length X 20m width X 3m depth and 20m length X 15m width X 9m depth are already constructed, about 5 KLD during lean season.
25. **Total Employment:** After enhancement of production and beneficiation plant the total employment will be 109 persons
26. **Project cost:** Estimated cost of the proposed project is 33.4 Cr.
27. **Environment Consultant:** The Environment consultant **M/s Global Tech Enviro Experts Pvt. Ltd.** along with the proponent made a presentation on the proposal before the Committee. The project proponent requested for exemption of fresh public hearing for the revised proposal.

Considering the information furnished and the presentation made by the consultant **M/s Global Tech Enviro Experts Pvt. Ltd** along with the project proponent, the SEAC recommended the following:

- a) **The proponent may be asked to submit the following for further processing of EC application:**
- Justification as to why a fresh public hearing will not be conducted for revised proposal. Documents in support of exemption of public hearing wherein the Ministry has allowed the projects under similar cases exempting the public hearing process.
 - Copy of approved mining plan and lease document for reduced lease area.
- b) **Following specific ToRs may be prescribed while issue of Terms of References.**
- Specify the area under mining, safety zone, Common boundary and where exactly the proponent has proposed to take up the expansion activity. Accordingly, the proponent shall submit the layout.

- ii) Calculate and furnish greenbelt development in percentage (%) coverage over the ML area.
- iii) A layout demarking the tailing pond & rejects dumping area.
- iv) In case of Dry stacking of tailings, the proponent shall furnish details of management practices including moisture content of tailing cakes, height and slope of the tailing dumps.
- v) Detailed Material balance of different grades of Fe and other elemental analysis of the materials.
- vi) Permission from the competent Authorities for drawl of Ground water/ Surface water.
- vii) Copy of wildlife conservation plan duly approved by competent authority in Forest Department.
- viii) Copy of traffic study report duly vetted by an institute of repute.
- ix) Details regarding parking plaza and open space available for movement of vehicles.
- x) Compliance status report of NEERI guidelines.
- xi) Detailed note on water balance, material balance, P₂O₅ and sulphur generation and management.
- xii) Stacking arrangement details along with water content, slope and pattern.
- xiii) Detailed notes/process flow chart of equipment and machineries deployed.
- xiv) During Iron ore production, crushing, screening lots of dust will be generated. Proponent has suggested 5 KLD water to be used for dust suppression and dry fog system. Water requirement may be much higher than 5 KLD.

ITEM NO. 03

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. ASSOTECH SUN GROWTH ABODE LLP FOR RESIDENTIAL APARTMENT BUILDING "AVENUE-7, ASSOTECH WORLD" OF M/S. ASSOTECH SUN GROWTH ABODE LLP AT PLOT NO. 317, 318, 319, 327/11161, 327/11159 & OTHERS OVER AN BUILT-UP AREA 2,24,655.00 SQMOF MOUZA - RUDRAPUR, PS-BALIANANTA, TEHSIL-BHUBANESWAR, DIST-KHORDHA OF SRI SASHANK SEKHAR ROUT - TOR

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of EIA Notification, 2006 and amendment thereafter.
2. This proposal is for Terms of Reference for environmental clearance of M/s. Assotech Sun Growth Abode LLP for Residential Apartment Building "Avenue-7, Assotech World" of M/s. Assotech Sun Growth Abode LLP at Plot No. 317, 318, 319, 327/11161, 327/11159 & others over an built-up area 2,24,655.00 sqm of Mouza - Rudrapur, Ps-Baliananta, Tehsil-Bhubaneswar, Dist-Khordha of Sri Sashank Sekhar Rout.
3. **Category:** The proposed project falls in schedule 8(b): Township & Area Development Projects, under Category "B", as per EIA notification – 2006 and amendment thereof.
4. BMC has provisionally approved the building plan vide letter no. 20629/BMC, dated 28.04.2023.
5. Drainage permission from BMC has been obtained vide letter no. 31277, dated 03.07.2023.

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6. Ground Water permission from CGWA vide NOC no. CGWA/NOC/INF/ORIG/2021/12208, dated 03.07.2021.
7. Height Clearance from AAI has been obtained Vide NOC No. BHUB/EAST/B/072522/685895, dated 26.08.2022.
8. NOC from Public Health Division for Water & Sewerage connection has been obtained vide letter no. 6010, dated 31.05.2023.
9. **Location and connectivity:** The proposed site is located at Mouza-Rudrapur, PS-Balianta, Tehsil-Bhubaneswar, Dist-Khordha, Odisha. The Geographical co-ordinate of the project site is: Latitude $-20^{\circ} 19' 24.5''$ to $20^{\circ} 19' 32.03''$ N & Longitude - $85^{\circ} 53' 17.75''$ to $85^{\circ} 53' 26.47''$ E. The project site is well connected with National Highway NH-16 at a distance of approx 0.6 Km in West direction. The nearest railway station is Mancheswar Railway station at a distance of approx 4.5 Km in West direction & Bhubaneswar Railway Station at a distance 9.2 Km in South-west direction. The nearest airport is Biju Patnaik Airport at a distance of approx. 11.5 Km in South-west direction from project site.
10. The site is coming under Bhubaneswar Municipal Corporation (BMC).
11. The total plot area is 34982.0 sq.mt. with total built-up area 2,24,655.0 sq.mt.
12. The Building Area, Details of the Project in tabulated form

Particular	Proposed	Permissible
Project Name	Avenue-7, Assotech World, Assotech Sun Growth Abode LLP	
Land Falling in the proposed CDP road, ASSOTECH WORLD Avenue 7 Access road to be given as gift to BMC through Gift Deed	10,683.00 sqm	--
Net Plot Area of Avenue 7	34,982.00 sqm	--
Ground Coverage	18,287.00 sqm	--
FAR Area	1,62,805.00 sqm	--
Total Built up Area	2,24,655.00 sqm	--
Maximum Height	86.90 m	150 m
Road Area	5,478.00 sqm	--
Stilt Parking Area	15,987.00 sqm	40,463.00 sqm
Basement Parking Area	29,160.00 sqm	
Open Parking Area	500.00 sqm	
Total Parking Area	45,647.00 sqm	
Green Belt Area	9,580.00 sqm (27.0 %)	6,996.36 sqm (20 %)
Maximum No. of Floor	B+S+25	--
Power Requirement	4350.0 KVA	--
Solar	218.0 KVA	
No. of DG sets	2x1500 KVA	--
Fresh Water requirement	524.40 KLD	--
Sewage Treatment Plant	STP Capacity - 700	--

	KLD	
Estimated Population-Residential, Commercial, Floating/visitors	6438 nos.	--

13. **Water requirement:** Fresh make up of 524.4 m³/day will be required for the project which will be sourced from Ground Water.

Sl. No.	Description	Total Population	Per Capita Consumption (ltr/day)		Water Requirement (KLD)		
					Domestic	Flushing	Total
i)	Premium	3144 nos.	Fresh (90)	Flushing (45)	282.9	141.5	424.4
ii)	Supreme	2304 nos.	Fresh (90)	Flushing (45)	207.4	103.7	311.1
iii)	Maintenance Staff	150 nos.	Fresh (25)	Flushing (20)	3.8	3.0	6.8
iv)	Club House	560 nos.	Fresh (25)	Flushing (20)	13.9	11.2	25.1
v)	Visitor	280 nos.	Fresh (5)	Flushing (10)	1.4	2.8	4.2
vi)	Swimming Pool	--	--	--	15.0	--	15.0
TOTAL					524.4	262.2	786.6

14. **Wastewater management:** Total wastewater generated from the residential building is 681.7-BS/ 647.6 -PPT KLD which is treated in STP of Capacity 700 KLD.

15. **Power requirement:** Total Power requirement of the proposed residential building is 4350.0 KVA, Source is TPCODL, 2 x1500 KVA DG Sets is provided. Total 218.0 KVA Solar Power Generation which is 5.0% of total power required in project.

16. **Rain Water Harvesting:** Total 885 cum Rain Water is harvested through 14no. of recharge pits.

17. **Parking Requirement:** Total parking area provided is 45647.0 Sq.mt. and total 1502 nos. of ECS and location of parking area is Basement, Stilt & Open.

Parking Area Provided			
Basement Parking Area			29160.0 sqm
Stilt Parking Area			15987.0 sqm
Open Surface Parking			500.0 sqm
Total Parking	--	--	45647.0 sqm
Equivalent Car Space Provided			
	Area(sqm)	Area/ECS	
Basement Parking Area	29160.0	32	911 ECS
Stilt Parking Area	15987.0	28	571 ECS
Open Surface Parking	500.0	25	20 ECS
Total Parking Provided			1502 ECS

18. **Firefighting Installations:** Fire Fighting will be provided as per NBC Norms.

19. **Green Belt Development:** Greenbelt is developed over an area of 9,580.00 sqm which is 27% of the total plot area. Total 437 nos. of plants to be planted and 3 tier plantations.

20. **Solid Waste Management generation and management:**

Solid waste Generation

S. No.	Category	Counts (heads)	Waste generated (kg/day)
i)	Residents	5448 @ 0.40 kg/day	2179.2
ii)	Floating Population	330 @ 0.15 kg/day	49.5
TOTAL SOLID WASTE GENERATED			2228.7 kg/day

Solid waste Management

Sl. No.	Description of Waste	Organic Quantity Kg/ Day	Inorganic Quantity Kg/ Day	Method of Collection	Method of Disposal
i)	General Garbage	891.48		Manual	Organic waste converter
			1337.22	Manual	sold to recycler
ii)	STP Sludge including office and Amenity	80.0 Kg/Day		Manual	On Own Land for Gardening

21. **Project cost:** The estimated project cost is 600.0 Crores and cost for EMP is Rs. 2.21 Crores.

22. **Environment Consultant:** The Environment consultant M/s Centre for Envotech & Management Consultancy Pvt. Ltd, Bhubaneswar along with the proponent made a presentation on the proposal before the Committee.

Considering the information / documents furnished by the proponent and presentation made by the consultant M/s Centre for Envotech & Management Consultancy Pvt. Ltd, Bhubaneswar the SEAC recommended the following:

(A) The proposed site shall be visited by Sub-Committee of SEAC to verify the followings. ToRs to be issued after site visit.

- i) Environmental settings of the project site.
- ii) Verify if the site is a flood prone area.
- iii) Construction activity if any started at the site.
- iv) Road connectivity to the project site.
- v) Drainage network at the site.
- vi) Discharge point for discharge of treated water and distance of the discharge point from the project site.
- vii) Any other issues including local issues.

(B) Following specific ToRs may be prescribed while issue of Terms of References for the project for EIA study.

- i) Copy of Permission obtained from the concerned authority for drainage connection & discharge of storm water and treated waste water from STP.
- ii) Documents/credentials in support of drainage discharge into the Prachi Dhara/Prachi River.
- iii) Copy of Structural Stability study report.
- iv) Copy of Soil quality, soil stability and soil erosion study report before and after the construction.
- v) The water balance to reduce the quantity of wastewater generation as the quantity of treated waste water discharge is very high i.e. 336.1 KLD.
- vi) Copy of land documents along with permission obtained from the landowners (General Power of Attorney or Sale deed) for construction of drainage network over the respective plots.
- vii) Details of Reduced Level of Ground water and Bottom Reduced level of Rainwater harvesting pit.
- viii) Revenue map indicating plot details of the gifted road with copy of gift deed
- ix) Ownership of the land showing in revenue map connecting the drain to Prachi Dhara.
- x) BMC permission letter to allow discharge of treated water to Prachi Dhara.
- xi) Structural stability, Traffic study vetted and green belt plan (as not much trees there).

ITEM NO. 04

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S ASSOTECH SUN GROWTH ABODE LLP "AVENUE 17TH, ASSOTECH WORLD" FOR DEVELOPMENT OF AFFORDABLE HOUSING UNITS (S+5) STORIED UNDER MODEL 1 OF ODISHA HOUSING FOR ALL POLICY FOR URBAN AREAS, 2022 TOWARDS COMPENSATORY FAR OVER PLOT NO. 493, 502, 518, 590, 591 & OTHERS OF OVER AN BUILT UP AREA 51,664.00 SQM MOUZA-JAYPUR, PS-BALIANATA, TEHSIL-BHUBANESWAR, DIST-KHORDHA OF SRI SASHANK SEKHAR ROUT - EC

1. This proposal is for Environmental Clearance of M/s Assotech Sun Growth Abode LLP "Avenue 17th, Assotech World" for Development of Affordable Housing units (S+5) Storied under Model 1 of Odisha Housing for all policy for Urban Areas, 2022 towards compensatory FAR over Plot No. 493, 502, 518, 590, 591 & others of over an built up area 51,664.00 sqm Mouza-Jaypur, Ps-Balianta, Tehsil-Bhubaneswar, Dist-Khordha of Sri Sashank Sekhar Rout.
2. **Category:** As per EIA Notification, 2006 and its subsequent amendments, the proposed project falls under Category B in Schedule in item 8(a): Building & Construction Projects.
3. BMC has provisionally approved the building plan vide letter no. 25968, dated 26.05.2023.
4. Drainage permission from BMC has been obtained vide letter no. 31297, dated 03.07.2023.
5. Ground Water permission from CGWA vide NOC no. CGWA/NOC/INF/ORIG/2023/18681, dated 09.06.2023.
6. Height Clearance from AAI has been obtained vide NOC no. BHUB/EAST/B/072422/685880, dated 26.08.2022.

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7. NOC from Public Health Division for Water & Sewerage connection has been obtained vide letter no. 6031, dated 31.05.2023.
8. **Location and connectivity:** The proposed site is located at Mouza-Jaypur, PS-Balianta, Tehsil-Bhubaneswar, Dist-Khordha, Odisha. The Geographical co-ordinate of the project site is: Latitude $-20^{\circ} 19' 39.07''$ to $20^{\circ} 19' 46.13''$ N & Longitude - $85^{\circ} 53' 29.48''$ to $85^{\circ} 53' 41.15''$ E. The project site is well connected with National Highway NH-16 at a distance of approx. 2.4 Km in West direction. The nearest railway station is Mancheswar Railway station at a distance of approx 4.24 Km in West direction & Bhubaneswar Railway Station at a distance 8.9 Km in South-west direction. The nearest airport is Biju Patnaik Airport at a distance of approx. 10.8 Km in South-west direction from project site.
9. The site is coming under Bhubaneswar Municipal Corporation (BMC).
10. The total plot area is 25157.00 sq.mt. with total built-up area 51664.0 sq.mt.
11. The Building Area Details of the Project in tabulated form

Particular	Proposed	Permissible
Project Name	Assotech Sun Growth Abode LLP "Avenue 17 th , Assotech World	
Total Plot Area	25,157.00 sqm	--
Plot gifted to BMC	3,844.00 sqm	--
Net Plot Area	21,313.00 sqm	
Ground Coverage	10,736.00 sqm	--
FAR Area	42,354.50 sqm	--
Total Built up Area	51,664.00 sqm	--
Maximum Height	19.20m	--
Road Area	8,065.10sqm	--
Still Parking Area	9,309.60 sqm	4235.45sqm
Total Parking Area	9,309.60 sqm	
Green Belt Area	4,345.00 sqm (20.4 %)	4262.6sqm (20 %)
Maximum No. of Floor	S+5	--
Power Requirement	1668.0 KVA	--
Solar	83.0 KVA	
No. of DG sets	1x500 KVA	--
Fresh Water requirement	373.5 KLD	--
Sewage Treatment Plant	STP Capacity - 500 KLD	--
Estimated Population- Residential, Commercial, Floating/visitors	4440 nos.	--

12. **Water requirement:** Fresh make up of 373.5 m³/day will be required for the project which will be sourced from Ground Water.

Sl. No.	Description	Total Population	Per Capita Consumption (ltr/day)		Water Requirement (KLD)		
			Fresh (90)	Flushing (45)	Domestic	Flushing	Total
i)	Residential	3850 nos.	Fresh (90)	Flushing (45)	346.5	173.25	519.75

ii)	Floating	390 nos.	Fresh (5)	Flushing (10)	1.95	3.9	5.85
iii)	Maintenance Staff	200 nos.	Fresh (25)	Flushing (20)	5.0	4.0	9.0
iv)	Club House	--	--	--	5.0	--	5.0
v)	Commercial	--	--	--	5.0	--	5.0
vi)	Filter Backwash	--	--	--	10.0	--	10.0
TOTAL					373.45~373.5	181.1	554.6

13. **Wastewater generation and management:** It is expected that the project will generate 479.9 KLD of wastewater which will be treated in STP. The wastewater will be treated in the STP of capacity of 500 KLD.
14. **Power requirement:** Total Power requirement of the proposed building is 1668.0 KVA, Source is TPCODL, 1x500 KVA DG Sets is provided. Total 83.0 KVA Solar Power Generation which is 5.0% of total power required in project.
15. **Rain Water Harvesting:** Total 566.83 cum Rain Water is harvested through 9nos. of recharge pits.
16. **Parking Requirement:** Total parking area provided is 9,309.60 Sq.mt. and total 333 nos. of ECS and location of parking area is Stilt.

Parking Area Provided			
Stilt Parking Area			9309.6 sqm
Total Parking	--	--	9309.6 sqm
Equivalent Car Space Provided			
	Area(sqm)	Area/ECS	
Stilt Parking Area	9309.6	28	333 ECS
Total Parking Provided			333 ECS

17. **Firefighting Installations:** Fire Fighting will be provided as per NBC Norms.
18. **Green Belt Development:** Greenbelt is developed over an area of 4,345.00 sqm which is 20.4% of the total plot area. Total 267 nos. of plants to be planted and 3 tier plantations.
19. **Solid Waste Management:** Solid waste generated and its management.

Solid waste Generation			
S. No.	Category	Counts (heads)	Waste generated (kg/day)
i)	Residents	3850 @ 0.45 kg/day	1732.5
ii)	Floating Population	590 @ 0.15 kg/day	88.5
iii)	STP Sludge		85.0
TOTAL SOLID WASTE GENERATED			1906.0 kg/day

20. The estimated project cost is 97.5 Crores and cost for EMP is 0.97 Crores.

21. **Environment Consultant:** The Environment consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd, Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **M/s Centre for Envotech & Management Consultancy Pvt. Ltd, Bhubaneswar** alongwith the project proponent, the SEAC recommended the following:

A. The proponent may be asked to submit the following for further processing of EC application:

- i) Copy of Permission obtained from the concerned authority for drainage connection & discharge of storm water and treated water from STP.
- ii) Documents/credentials in support of drainage discharge into the Prachi Dhara/Prachi River.
- iii) Copy of Structural Stability study report.
- iv) Copy of Soil quality, soil stability and soil erosion study report before and after the construction.
- v) Revisit the water balance to reduce the quantity of wastewater generation as the quantity of treated waste water discharge is very high i.e. 336.1 KLD.
- vi) Copy of land documents along with permission obtained from the landowners (General Power of Attorney or Sale deed) for construction of drainage network over the respective plots.
- vii) Details of Reduced Level of Ground water and Bottom Reduced level of Rainwater harvesting pit.
- viii) Copy of traffic study report vetted by an Institute of Repute.
- ix) Clarify the discrepancy between proposed greenbelt percentage and documents submitted regarding the greenbelt.
- x) Document in support of access to Plot no-595 which is a Govt. land situated inside the proposed area and clarify the fate of the said Plot No. 595 (Govt. land).
- xi) Documents in support of relaxation for construction of 6m wide road in the By-Laws from the BMC.

B. The proposed site shall be visited by Sub-Committee of SEAC to verify the followings

- i) Environmental settings of the project site.
- ii) Verify if the site is a flood prone area.
- iii) Construction activity if any started at the site.
- iv) Road connectivity to the project site.
- v) Drainage network at the site.
- vi) Discharge point for discharge of treated water and distance of the discharge point from the project site.

vii) Any other issues including local issues.

ITEM NO. 05

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S CHROME SAGAR FOR ENHANCEMENT IN PRODUCTION OF CHROME BENEFICIATION PLANT FROM THROUGHPUT CAPACITY OF 18,500 TPA TO 1,15,000 TPA AND MONOLITHIC UNIT FROM 24,000 TPA TO 72,000 TPA OVER AN AREA OF 7.6 ACRE LOCATED AT: PUBALA, SUKINDA, JAJPUR OF SRI RAJENDRA KUMAR THATOI - EC

1. This proposal is for Environmental Clearance of M/s Chrome Sagar for Enhancement in production of Chrome beneficiation plant from throughput capacity of 18,500 TPA to 1,15,000 TPA and monolithic unit from 24,000 TPA to 72,000 TPA over an area of 7.6 Acre located At: Pubala, Sukinda, Jajpur of Sri Rajendra Kumar Thatoi.
2. **Category:** This project falls under Category "B" under 2(b): Mineral Beneficiation as per EIA Notification dated 14thSept. 2006 and its amendments.
3. **TOR details:** Terms of Reference was issued by SEIAA, File No: 72961/27-IND/03-2022 dtd. 02.04.2022 for the proposed project.
4. The unit has chrome beneficiation plant of 18,500 TPA throughput Environmental Clearance from MoEF&CC, Govt. of India, vide letter no. 1611/SEIAA dated 06.07.2021.
5. **Public hearing details:** The Public hearing was conducted successfully 14.09.2022 at 11 A.M. at MouzaKanchichua.
6. **List of Statutory Clearances obtained earlier -**
 - a) Consent to Establish was granted vide letter No: 179/KNG/IND- 266 dtd 06.02.2020.
 - b) Consent to Operate obtained vide letter no.1692/KNG/IND/266 dtd 08.07.2021 was valid till 31.03.2023.
 - c) Certified Compliance Report issued by Regional Officer, Bhubaneswar, MoEF&CC vide File No: 109-1146/EPE/&63 dated 03.08.2023.
7. **Location and connectivity:**
8. Chrome Beneficiation Plant of M/s. Chrome Sagaris coming undervillage Pubala, Po- Mangalpur, Tahasil: SukindaDist- Jajpur at Plot No:1138,1139/1640 & 1278/1641, 1139, 1152, 1277,1278 and bearing Khata No.: 267/39 & 95. Geo-coordinates of project site is at Latitude: 20°56'04"N &Longitude: 85°33"E. The nearest railway station is Jajpur Road railway station &Sukinda Road railway station located at a 17Km from the project site. It is located at a distance of 2.5km from the Sukinda-hatibari road and nearest village is Pubala village at a distance of 1km. Bhubaneswar Airport is 80km from the site. The nearest water bodies are Brahmani River at 8.5km & Jhamra river-4.5 km. The nearest Reserve forest is Balibo Reserve forest at 1km distance. The project falls under Survey of India bearing **Topo sheet no. 45T/13.**
9. **Baseline study conducted:** Baseline study was conducted during Pre-Monsoon season of 2022 i.e. from March to May, 2022.

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- a) **Ambient Air monitoring:** -Ambient Air Quality was monitored at eight sampling stations, and the monitoring were conducted for a period of three months. PM₁₀ is within range of 55.6µg/m³ to 84.1 µg/m³, PM_{2.5} is within range of 30.6µg/m³ to 46.2 µg/m³, SO₂ is within range of 4.3µg/m³ to 12.3 µg/m³ and NO_x is within range of 13.4µg/m³ to 22.3 µg/m³.
- b) **Ground Water quality monitoring:** Groundwater quality parameters were monitored at 8 locations. pH is within range of 6.6 – 7.6, Total Hardness is within range of 28 to 192 mg/l, Chloride is within range of 12 to 70 mg/l, Fluorides is within range of 0.06 to 0.8 mg/l, TDS is within range 36 to 360 mg/l. Heavy metals like Cadmium, Arsenic, Mercury and Chromium are within the range of Cd <0.001mg/l, As <0.001mg/l, Hg<0.0005mg/l Cr⁺⁶<0.05mg/l.
- c) **Surface Water quality monitoring:** Surface water quality parameters were monitored at 4 locations. pH is within range of 6.8 to 7.3, Dissolved Oxygen is within range of 6.7 to 7.6 mg/l, Biochemical Oxygen Demand is within range of 2-4 mg/L, Chemical Oxygen demand is within range of 15 – 35 mg/L & Cr⁺⁶<0.05mg/l.
- d) **Ambient Noise monitoring:** Noise level in the study area was monitored at eight sites. Noise levels vary from 40.4 to 50.7dB (A) during day time and 31.2 to 41.3dB (A) during night time.
- e) **Soil monitoring:** Soil samples were collected from four locations. The pH of the samples ranged from 5.5 to 6.5, Potassium –228.5 to 376 mg/ kg, Phosphorous –27.9 to 48.1 mg/ kg, Organic Carbon% –0.56 to 1.07, Electrical Conductivity- 60 to 100 µmhos/Cm, Total Chromium – 45.74 – 55.26 mg/ Kg, Hexavalent Chromium – 5.6 to 9.5 mg/Kg.

10. Process Details:

- a) **Details of Minerals:** The beneficiation process of chrome ore involves up-gradation of low-grade chrome ore (<35-38% Cr₂O₃) to semi high-grade ore (48-52% of Cr₂O₃).Raw material procured from OMC Chromite mines located in Sukinda valley.
- b) **Beneficiation process:** The project is a standalone beneficiation plant. The beneficiation process of chrome ore involves up-gradation of low-grade chrome ore (<35-38% Cr₂O₃) to semi high-grade ore (48-52% of Cr₂O₃). The beneficiation process of chrome ore includes dispersal of the ferruginous coating and removal of the gangue material from the ore. Before the low-grade feed to the beneficiation plant the chromite, ore lumps were screened and oversized material i.e. 20 to 100 mm size material will be sent to the grinding unit. The Recovery rate is 70-75% (in weight). The COB Plant will consist of the following activities; Feeding to the Hopper – 20 TPH, Conveyor, Wet screening (2 nos) (0-1mm and 1-75mm), Wet grinding – 20 TPH, Slurry Pump (7 no) – 5 TPH, Spiral separator (24 nos) – 5 TPH, Hydro cyclone (3 nos) – 10 TPH, Settling tanks, Dozing of Chemicals, Collection & Disposal of tailing, Water Reservoir, Handling of rejects materials, Recovery of concrete.
- c) **Land use at the end of plan period and at conceptual stage :**The existing plant is present plant is operating over an area of 2.2 acres. Additional land of 5.4 acres has been acquired by the project proponent and converted for Industrial purpose.

Sl. no	Head	At present At the (Ha.) / Existing Area	At the end of SOM of period (Ha.)/ Proposed Area	At the end of conceptual period (Ha.)/ Total Land use after Expansion
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i)	Rain Water Reservoir	0.18	0.11	0.29
ii)	ETP & Settling Tank	0.07	0.27	0.34
iii)	Raw Material Stock Yards	0.31	0.19	0.5
iv)	Finished Products Stock Yard	0.05	0.17	0.22
v)	COB Plant	0.15	0.45	0.6
vi)	Road and Parking	0.25	0.15	0.4
vii)	Office, Weigh Bridge and Rest Shade and Electrical Panel	0.1	0.03	0.13
viii)	Refractory Unit	0.18	0.18	0.36
ix)	Tailing Stack Yard	0.18	1.18	1.36
x)	Green Belt	0.73	1.78	2.51
xi)	Open space	--	0.89	1.89
	Total	2.2	5.4	7.6

11. **Transportation of raw Material:** The raw material i.e. low grade chrome ore will be sourced from mines of Odisha Mining Corporation, Sukinda which is located at a distance of 25 Km from the project site. The transportation of ore from the mines to the project site will be done through covered trucks.
12. **Water requirement:** The total water requirement for the proposed project will be 875 KLD and make up water requirement for process will be 44 KLD. The water requirement for drinking purpose will be 3 KLD, for dust suppression will be 5 KLD and for plantation will be 5 KLD. Total makeup water requirement for the proposed expansion project will be 57 KLD. Out of the total water requirement 32 KLD will be sourced from ground water and 25 KLD will be sourced from RWH pond. They have obtained permission for drawl of 48 KLD ground water from CGWA.
13. **Wastewater details:** The process water is completely recycled in the process and the water is treated in existing ETP for hexavalent chromium.
14. **Rainwater harvesting details:** They have 5 nos.of existing rainwater reservoir. The total harvestable rainwater is 7740Cu.m/Annum. They have proposed for another rain water reservoir of capacity 6064Cu.m/Annum. Water storage in the rain water harvesting pond is 8271cu.m which will be utilized as make up water requirement for the beneficiation plant. The rain water harvesting structure will provide the makeup water requirement for the plant upto 25 KLD. Total makeup water requirement will be 57 KLD and rest 32 KLD water will be sourced from ground water.
15. **Power Requirement & Solar power details:** The total power requirement for plant operation will be about 100kVA. The company proposed to utilize solar power for all the lighting within the plant by generating 5KW.
16. **Solid waste generation:** The major solid waste is the tailings generated from the beneficiation process. The quantity of tailings to be 30000 TPA having <10% Cr₂O₃. The tailing after passing through the filter press will be transported to the chrome monolithic unit where it will be used as raw material for monolithic plant.

17. **Mitigation of solid waste produced:** The amount of Tailing generated from the beneficiation plant will be 30,000 TPA from which 18,000 TPA will be utilized in the monolithic unit. Remaining Tailing (12,000 TPA) will be stored in the tailing disposal area. An area of 6000 sq.m has been allocated for tailing storage within the project site. An agreement has been made with M/s.Ramkey for tailing disposal of 3000 Tons per month. The plant has proposed to operate as zero solid waste generation. The tailing pond has been provided with of 200mm thick concrete wall. The concrete mixture added with special chemical to prevent any water seepage which ensures any leaching of hexavalent chromium to surrounding.
18. **Greenbelt Development:** The proponent has proposed for additional plantation area of 7221sq.mwith existing plantation area of 2938sqm thus, the total greenbelt area is 10149sq.m i.e., 33% after expansion.
19. **Total Employment:** The project generates employment opportunities for 70 personnel which includes operator -10, supervisor 6, 25 no of semi skilledlabour and 29 no of unskilled labour.
20. **Project Cost:** The project cost after expansion is ₹ 3.0 Crore. The Capital cost for EMP is ₹ 32.0 Lakhs and recurring cost is 5.0 lakhs. Cost allocated for implementation of public hearing issues is 30.0 Lakhs
21. **Environment Consultant:** The Environment consultant **M/s.Kalyani Laboratories Private Limited, Bhubaneswar**along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **M/s.Kalyani Laboratories Private Limited, Bhubaneswar**along with the project proponent, the SEAC decided to take the decision on the proposal after receipt of the following from the proponent:

- i) Land document of 2.2 acres of existing plant premises and additional land of 5.4 acres already acquired for proposed expansion.
- ii) Comparison statement of all parameters for existing and proposed expansion activities.
- iii) Agreement made with M/s. Ramkey (A Hazardous waste disposal TSDF facility) for disposal of tailings cannot be accepted and hence to Modify the proposal w.r.t. handling and disposal of entire tailings and Re-submit before the SEAC.
- iv) Revised waste management plan for handling total waste generated at the plant premises taking into consideration the enhancing the capacity of the plant and subsequent unit operations.
- v) Copy of traffic study report duly vetted by an institute of repute.
- vi) Details regarding parking plaza (how trucks will enter, exit, Slope, parking and turning area) and open space available for movement of vehicles to cater to the increased vehicular movement of Approx. 32 trucks/day.
- vii) Copy of revised layout of the total area including existing and proposed expansion activity with parking plaza.
- viii) Copy of material balance and water balance for the proposed project.

- ix) Details of the settling tanks with layout and proposal for removal of sludge from the settling tanks.
- x) Explore mechanised handling of slurry/tailings through clarifier/thickener instead of settling tank with filter press for de-watering of tailings.
- xi) Certified compliance report of conditions stipulated in earlier Environmental Clearance from Regional Office, MoEF&CC and certified compliance report of conditions of existing Consent to Establish and Consent to Operate order from SPCB.
- xii) Detailed analysis report of the composition of tailings generated from the process.
- xiii) Comparative table showing the present and proposed ore grade, recovery %, feed input into the spiral unit of beneficiation plant.
- xiv) Details of Plant machinery and equipment installed along with their capacities.
- xv) A comparison statement of the present and proposed equipments.
- xvi) In the public hearing, there was complaint regarding discharge of muddy water into the nearby agricultural land. Hence the proponent shall submit comprehensive action plan to address the issue of runoff management to avoid muddy water discharging into agricultural fields.
- xvii) Proposal to construct a holding pond for storage of run-off during monsoon and discharge after treatment.
- xviii) Proposal for utilization of surface run-off and process effluent and maintaining Zero Liquid Discharge (ZLD).
- xix) Detailed proposal for Surface Runoff treatment System and Effluent Treatment Plant within the plant premises.

ITEM NO. 06

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. ASHIANA REALTY LL FOR RESIDENTIAL PROJECT OVER AN BUILT-UP AREA 66,536.14 M² LOCATED AT PLOT NO.- 1113(PT), KHATA NO.- 516., MOUZA - DUMUDUMA, TEHSIL- BHUBANESWAR, DISTRICT- KHORDHA OF SRI BINOD KUMAR AGRAWAL – EC.

1. This proposal is for Environmental Clearance of M/s. Ashiana Realty LL for Residential Project over an Built-Up Area 66,536.14 m² located at Plot No. - 1113(PT), Khata No.- 516., Mouza- Dumuduma, Tehsil-Bhubaneswar, District- Khordha of Sri Binod Kumar Agrawal.
2. **Category:** This project falls under Category "B", Project or Activity 8(a) Building and Construction projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. **Location and connectivity:** Project site is connected through 18 m wide road. The Nearest Highway is NH-16 which is 0.8km in West direction from the project site, NH-316 is 7.4km towards East direction, SH-13 is 11.8km towards SSW direction, & OSHB Phase 5 Site connecting road is adjacent to the project site in south direction. The nearest Railway Station is Sarkantra Railway Station is about 2 km (SSE) away from the project site. Biju Patnaik International Airport is at 2.2 km (E) from project site.

4. Total Plot area measures 9,866.220 m² (2.438 acre) and the proposed built-up area is 66,536.14 m².

5. **Area Statement:**

S. No.	PARTICULARS	AREA (sq.m.)
i)	Total plot area	9,866.220
ii)	Permissible Ground coverage (@40% of plot area)	3,946.488
iii)	Proposed Ground coverage (@33.425% of the plot area)	3,297.770
iv)	Permissible FAR (@6.0 of the Net plot area)	59,197.32
v)	Proposed FAR (@ 4.68 of Net plot area)	46,177.530
vi)	Non-FAR area	20,358.610
vii)	Total Built-up Area	66,536.14

6. The total population of project after proposed will be 2,020 persons including Residents, maintenance staff & visitors.
7. **Water requirement:** The total water requirement will be met through Ground water and Bore well which is approx. 263 KLD. Total domestic water requirement is 253 KLD, out of which fresh water requirement is approx. 168 KLD, & flushing water will be 85 KLD.
8. **Wastewater details:** The project will generate approx. 219 KLD of wastewater. The wastewater will be treated in an onsite STP of 265 KLD capacity. The treated effluent will be reused for flushing & horticulture. Surplus treated effluent will be discharged to external sewer.
9. **Rainwater harvesting details:** Total 9 nos. of Rainwater harvesting pits will be provided for storage of rain water.
10. **Parking details:** Total parking are proposed is 13,347.99 m². The total parking area required is 11,213.688m².
11. **Power Requirement:** The requirement load for the project will be 1310 KVA. The power supply will be supplied by State Electricity Board. There is provision of 2 nos. of DG sets total 1500 KVA (2*750 kVA) capacity for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.
12. **Solid waste generation:** The total solid waste generation will be 985 kg/day for the proposed project.
13. **Greenbelt:** Total green area measures 2140.71 m² i.e. (22.74% of the net plot area). No. of trees required = 1 tree/80 sqm. of plot area = 9410.18/80 = 118 Nos. Total no. of trees proposed = 150 trees.
14. **Project cost:** Total estimated cost of the proposed project is Rs.159.12Cr. including land and development cost.
15. **Environment Consultant:** The Environment consultant M/s. **Grass Roots Research & Creation India(P) Ltd., Noida** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant M/s Grass Roots Research & Creation India (P) Ltd., Noida along with the project proponent, the SEAC recommended the following:

A. The proponent may be asked to submit the following for further processing of EC application:

- i) Permission from Bhubaneswar Municipality Corporation to discharge treated waste water to the nearby existing drain.
- ii) Details of exact nos. of felling of trees to be carried out as major area of the project site is covered with greenery. Accordingly, the project proponent shall transplant the greenbelt from the proposed site.
- iii) Source of the water used for construction and permission obtained regarding the same.
- iv) Details of Bottom RL, Ground RL of the Rainwater Harvesting pits during the summer and rainy season.

B. The proposed site shall be visited by Sub-Committee of SEAC to verify the followings


- i) Environmental settings of the project site.
- ii) Verify if the site is a flood prone area.
- iii) Construction activity if any started at the site.
- iv) Road connectivity to the project site.
- v) Drainage network at the site.
- vi) Discharge point for discharge of treated water and distance of the discharge point from the project site.
- vii) Nothing has been mentioned on treatment of solid Bio-Medical Wastes as special attention is required for this.
- viii) Any other issues including local issues.

ITEM NO. 07

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. JAI PRAKASH HOSPITAL AND RESEARCH CENTRE PVT. LTD FOR REGULARIZATION OF B+G+5 HOSPITAL BUILDING & AMPHITHEATRE LOCATED OVER A BUILT-UP AREA 21992.01 SQM AT BRAHMANI TARANG, TAHASIL - LATHIKATA, DIST – SUNDARGARH OF SRI SANJAY BANSAL – EC.

1. This proposal is for Environmental Clearance of M/s. Jai Prakash Hospital and Research Centre Pvt. Ltd for Regularization of B+G+5 Hospital Building & Amphitheatre Located over an built-up area 21992.01 sqm At Brahmanitarang, Tahasil - Lathikata, Dist – Sundargarh of Sri Sanjay Bansal.
2. **Category:** This project falls under Category "B", Project or Activity 8(a) Building and Construction projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. **TOR details:** Terms of Reference was issued by SEIAA, Odisha vide letter No. 5145/SEIAA (File No. SIA/OR/MIS/74534/2022), dated 17.08.2022 for the proposed project.

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Environmental Scientist, SEAC

4. **Location and connectivity:** The site is located at Brahmanitarang, P.S- Brahmanitarang, Tahsil- Lathikata, Dist-Sundargarh, Odisha. The Geographical co-ordinate of the project site is: Latitude - 22°13'28.78"N & Longitude - 84°47'48.64"E. The project site is well connected with National Highway-143 is about 0.26 Km away from the project site. The nearest railway station is Panposh Railway station at a distance of about 1 Km in East direction. The nearest airport is Rourkela Airport at a distance of about 8.00 Km in North-East direction from project site. The site is coming under which Rourkela Development Authority.
5. The Building Plan of M/s Jai Prakash Hospital & Research Centre Pvt. Ltd. over 1,99,821.17 sq. feet (B+G+3+Service) was approved on 24.04.2015.
6. List of Statutory Clearances:
- Consent to Establish was granted by SPCB, Odisha on 12.10.2018, vide letter no. 2629 for 307 bedded hospital.
 - Consent to Operate was granted by SPCB, Odisha on 26.04.2019, vide letter no. 1397 for 307 bedded hospital, which is valid upto 2023.
 - Authorisation under Biomedical Waste Rule, 2016 was granted by SPCB, Odisha on 15.05.2019 vide letter no. 4621/SPCB/Authorization (Biomedical Waste), which is valid upto 31.03.2023 for 307 beds.
7. The total plot area is 16895.6 sqm with total built-up area 26883.17 sq.m.
8. **Area Statement:**

Particulars	Existing	Expansion	Total
Hospital Bed	307	218	525
Plot Area	15195.94 SQ.M	1699.66 SQ.M	16895.6 SQ.M
Built up Area	21992.01 SQ.M	4891.16 SQ.M	26883.17 SQ.M
Total FAR Area	19957.08 SQ.M	4496.26 SQ.M	24453.34 SQ.M
Basement Parking	1282.78 SQ.M	--	1282.78 SQ.M
Stilt Parking	6547.96 SQ.M	--	6547.96 SQ.M
Total Parking Area	7830.74 SQ.M	--	7830.74 SQ.M
Height of the Building	--	--	30.7 m
Water Requirement	163.0 KLD	77 KLD	240.0 KLD
Bio-medical Waste	460.0 Kg/day	327.0 Kg/day	787.0 Kg/day
Solid Waste Generation	383 Kg/day	172 Kg/day	555 Kg/day
Power Requirement	--	1782 KVA	1782 KW
DG set	1x495 KVA	750 KVA	1740 KVA
Project Cost	--	93 Crores	93 Crores

9. The total population of project after proposed will be 2,020 persons.
10. **Water requirement:** Fresh make up of 240.0 m³/day will be required for the project which will be sourced from Ground Water.

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J Nayak
Environmental Scientist, SEAC

11. **Wastewater details:** Total waste water generated from the hospital building is 291.7 KLD which is treated in STP of Capacity 300 KLD & ETP of Capacity 29 KLD.
12. **Rainwater harvesting details:** Rain Water harvested through 13 nos. of Rain Water recharging pits. Total 179.0 cum Rain Water is harvested through 13 nos. of recharge pits.
13. **Parking Requirement:** Total parking area provided is 7830.74 Sq.mt. and total 302 nos. of ECS and location of parking area is Basement & Open.
14. **Fire fighting Installations:** Fire Fighting will be provided as per NBC Norms.
15. **Power Requirement:** Total Power requirement of the proposed building is 1782.0 KW, Source is NESCO, 2x495 & 1x750 KVA DG Sets are provided. Total 95.88 KW Solar Power Generation which is 5.3% of total power required in project.
16. **Solid waste generation:** The total solid waste generation and Bio-medical waste generation is as follows:

Solid Waste Generation

Sl. No.	Category	Counts (heads)	Waste generated (kg/day)
For Existing 307 beds			
i)	Domestic	450@ 0.45 kg/day/person	203 kg/day
ii)	Floating/ Visitor	1200 @ 0.15 kg/day/person	180 kg/day
For Proposed 218 beds			
i)	Domestic	250@ 0.45 kg/day/person	112 kg/day
ii)	Floating/ Visitor	400@ 0.15 kg/day/person	60 kg/day
Total Waste Generation			555 kg/day

Bio-Medical Waste Generation

Sl. No.	Category	Counts (heads)	Waste generated (kg/day)
i)	Patient 307 beds	307 @ 1.5 kg/day/bed	460 kg/day
ii)	Patient 218 beds	218 @ 1.5 kg/day/bed	327 kg/day
Total Waste Generated			787 kg/day

17. **Greenbelt:** Green belt is developed over an area of 3379.08 sqm which is 20% of the total plot area. Total 212.0 nos. of plants to be planted and 3 tier plantations.
18. **Project cost:** The estimated project cost is 93.0 Crores and cost for EMP is 4.17 Crores.
19. **Violation Details:** The total area of the proposed project is 21992m² (more than 20000m²) for which they had not obtained Environmental Clearance.
20. **Environment Consultant:** The Environment consultant M/s.Centre for Envotech & Management Consultancy Pvt. Ltd, Bhubaneswar along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant M/s Centre for Envotech & Management Consultancy Pvt. Ltd, Bhubaneswar along with the project proponent, the SEAC recommended the following:

A. The proponent may be asked to submit the following for further processing of EC application:

- i) Document certified by the Chartered Accountant regarding total project cost (Existing + Expansion) and annual turnover.
- ii) The EMP cost submitted needs to be revised taking into consideration the remedial measures for ETP & STP
- iii) Copy of microbiological analysis report of the wastewater generated from the hospital.
- iv) Copy of permission obtained from the competent authority for drawl of Ground water/Surface water.
- v) Calculate the total wastewater generation & copy of revised details of ETP and STP as installed ETP & STP needs to be upgraded to handle the enhanced quantity of wastewater.
- vi) Re-evaluate the rainfall data and maximum value should be taken into consideration.
- vii) Estimation of total amount of the solid waste to be generated.
- viii) The proponent shall justify the violation that is why there is delay in applying for Environmental Clearance.

B. The proposed site shall be visited by the local SEAC members with the help of officer of Regional Office, SPC Board, Rourkela to verify the followings

- i) Environmental settings of the project site.
- ii) Extent of construction activity.
- iii) Road connectivity to the project site.
- iv) Drainage network at the site.
- v) Discharge point for discharge of treated water and distance of the discharge point from the project site.
- vi) Greenbelt area.
- vii) Status of implementation of pollution control measures and other remedial measures as indicated in the cost for damage assessment
- viii) Any other issues including local issues


MEMBER SECRETARY, SEAC

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S ODISHA INDUSTRIAL INFRASTRUCTURE DEVELOPMENT CORPORATION (IDCO) FOR (LB+GB+G+12) OFFICE BUILDING AND SERVICE BUILDINGS (IT & ITES, INCUBATION CENTER) OVER PLOT NO. - 1288 (P) & KHATA NO-420, OVER AN BUILT-UP AREA OF 40229.635 SQM MOUZA – PATHARAGADIA, BHUBANESWAR, KHORDHA DISTRICT OF SRI JITENDRIYA JYOTIPRAKASH - TOR

- 1) Examine details of land use as per Master Plan and land use around 10 km radius of the project site. Analysis should be made based on latest satellite imagery for land use with raw images. Check on flood plain of any river.
- 2) Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/ villages and present status of such activities.
- 3) Examine baseline environmental quality along with projected incremental load due to the project.
- 4) Environmental data to be considered in relation to the project development would be (a) land, (b) groundwater, (c) surface water, (d) air, (e) bio-diversity, (f) noise and vibrations, (g) socio economic and health.
- 5) Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area. Any obstruction of the same by the project
- 6) Submit the details of the trees to be felled for the project.
- 7) Submit the present land use and permission required for any conversion such as forest, agriculture etc.
- 8) Submit Roles and responsibility of the developer etc. for compliance of environmental regulations under the provisions of EP Act.
- 9) Ground water classification as per the Central Ground Water Authority.
- 10) Examine the details of Source of water, water requirement, use of treated waste water and prepare a water balance chart.
- 11) Rain water harvesting proposals should be made with due safeguards for ground water quality. Maximize recycling of water and utilization of rain water. Examine details.
- 12) Examine soil characteristics and depth of ground water table for rainwater harvesting.
- 13) Examine details of solid waste generation treatment and its disposal.
- 14) Examine and submit details of use of solar energy and alternative source of energy to reduce the fossil energy consumption. Energy conservation and energy efficiency.
- 15) DG sets are likely to be used during construction and operational phase of the project. Emissions from DG sets must be taken into consideration while estimating the impacts on air environment. Examine and submit details.
- 16) Examine road/rail connectivity to the project site and impact on the traffic due to the proposed project. Present and future traffic and transport facilities for the region

- should be analyzed with measures for preventing traffic congestion and providing faster trouble free system to reach different destinations in the city.
- 17) A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.
 - 18) Examine the details of transport of materials for construction which should include source and availability.
 - 19) Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.
 - 20) Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster.
 - 21) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
 - 22) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
 - 23) The prescribed TOR would be valid for a period of **four years** for submission of the EIA/EMP report.