



Integrates Local Biodiversity in Campus Development

Manipal University Jaipur is leading the charge towards a more sustainable campus by emphasizing the importance of local ecosystem preservation, integrating wildlife-friendly elements, and promoting a culture of environmental responsibility. Through our initiatives in education, research, and community collaboration, we aim to inspire meaningful change among our students and the wider community, ensuring that the significance of local biodiversity is acknowledged and safeguarded for future generations. Like many progressive institutions, Manipal University Jaipur has committed to sustainability by actively incorporating local biodiversity considerations into the planning and development of new campus buildings.

Prior to initiating any construction project, the university performs comprehensive biodiversity assessments of the selected site. These evaluations help identify the current plant and animal life, including any species that may be threatened or endangered. The insights gained from these assessments are crucial for informing construction strategies. Our institution is resolute in its efforts to protect existing habitats whenever feasible, which allows for the preservation of green spaces, wetlands, and other essential ecosystems, thereby ensuring that local wildlife retains its habitat on campus. In the design of new outdoor areas, Manipal University Jaipur emphasizes the use of native plant species. Native vegetation demonstrates greater resilience and offers essential resources for local pollinators and wildlife. Our dedication to sustainability is further reflected in our building practices, as Manipal University Jaipur employs green construction methods that minimize environmental impact, including energy-efficient designs and materials with reduced ecological footprints. Our architects design features such as bird-friendly glass, rooftop gardens, and bat boxes, fostering a hospitable environment for local wildlife. These components play a crucial role in alleviating the potential adverse impacts of buildings on regional biodiversity.

Manipal University Jaipur acknowledges the educational significance of a campus rich in biodiversity. By sustaining varied ecosystems, students benefit from living laboratories that facilitate ecological and environmental studies. The integration of local biodiversity into campus planning presents numerous research opportunities for both students and faculty. Activities such as monitoring local wildlife and examining the impacts of green building practices transform our campus into a center for environmental research. By experiencing the significance of biodiversity directly, students and the broader campus community cultivate a profound appreciation for the natural environment. Manipal University Jaipur actively involves students in conservation initiatives, promoting a culture of environmental stewardship.

Recognizing the environmental implications of construction and development, Manipal University Jaipur is committed to local biodiversity, ensuring that we minimize and offset these impacts. We are dedicated to the ongoing enhancement of our biodiversity integration strategies, which includes exploring innovative technologies, refining our methodologies, and remaining updated on the latest advancements in biodiversity conservation. Our commitment extends beyond the confines of our campus, as Manipal University Jaipur seeks collaborations





with local environmental organizations and government entities to bolster biodiversity conservation efforts in our region. The approach taken by Manipal University Jaipur in incorporating local biodiversity into our planning and development is not merely about erecting buildings; it is about building a sustainable future.





List of Plants grown at MUJ campus

SR.No	Tree/Plant Name	Quantity
1	Gulmohar - Flame Delight	215
2	Champa - Golden Blossom	349
3	Termainlia - Royal Canopy	456
4	Bansh - Tranquil Bamboo	731
5	Tikoma - Forest Glow	416
6	Lagstomia - Whispering Willow	35
7	Meetha Neem - Sweet Neem	159
8	Beel - Serene Banyan	40
9	Karanj - Verdant Karanj	319
10	Molsari - Radiant Molsari	48
11	Ficus - Enchanted Ficus	12
12	Phonics - Melodious Phonic	23
13	Kerima Plant - Graceful Kerima	42
14	Trigal Palm - Majestic Trigal	44
15	Travelers Palm - Wanderlust Palm	8
16	Sisham - Sacred Sisham	2316
17	Neem - Healing Neem	1977
18	Bargad - Mighty Bargad	15
19	Mango - Tropical Mango	147
20	Jaamun - Deep Purple Jaamun	119
21	Guvava - Lush Guvava	105
22	Chiku - Sweet Chiku	60
23	Mousami - Citrus Mousami	18
24	Khajoor - Desert Gem Khajoor	114
25	Anar - Pomegranate Beauty	16
26	Karuja - Vibrant Karuja	11
27	Shadded Tree	512
28	Bakhan Millonetia	87
29	Rudarksha	2
30	Kadamb	1
31	Termainlia - Regal Canopy	199
32	Shisham - Sacred Shisham	47
33	Neem - Healing Neem	30
34	Koria - Serene Koria	22
35	Gulmohar - Flame Delight	11
36	Champa - Golden Blossom	17
37	Meetha Neem - Sweet Neem	9
38	Guvava - Lush Guvava	5
39	Beel - Majestic Banyan	4
40	Chiku - Sweet Chiku	5





41	Mousami - Citrus Mousami Nimbu - Zesty Nimbu	3	
43	Sadabahar Mango Plants	2	
44	Kathal - Tropical Kathal	4	
	Total Plant/Tree 8760		

Raiasthan State Pollution Control Board 4, Institutional Area, Jhalana Doongari, Jaipur-302 004



Phone: 0141-2716840

Registered

F(HDF)/JAIPUR(Sanganer)/6935(1)/2023-2024/5986-5988 File No :

Order No: 2023-2024/HBC/2809 **Dispatch Date:** Dec 14 2023 1:06PM

Unit Id: 27890

M/s Manipal University, Jaipur

Khasra No 467,469,474,458/1,473,475, 542, 544 Village Dehmi Kalan, Tehsil Sanganer, Ajmer Road, Dehmi Kalan Tehsil:Sanganer

District: JAIPUR

Consent to Establish under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under Section 21(4) of Air (Prevention & Control of Pollution) Act, 1981.

Ref: Your application(s) for Consent to Establish dated 16/06/2023 and subsequent correspondence.

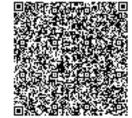
Sir,

Consent to Establish under the provisions of Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 (hereinafter to be referred as the Water Act) and under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981, (hereinafter to be referred as the Air Act) as amended to date and rules & the orders issued thereunder ,is hereby proposed granted for your Manipal University Jaipur plant situated / at **Khasra** 467,469,474,458/1,473,475, 542, 544 village Dehmi Dehmi Kalan Tehsil:Sanganer District: JAIPUR, Rajasthan under the provisions of the said Act(s). This consent is granted on the basis of examination of the information furnished by you in consent application(s) and the documents submitted therewith, subject to the following conditions:-

- 1 That this Consent to Establish is valid for a period from 16/06/2023 to 31/05/2028 or date of commencement of production / commissioning of the project or activities whichever is earlier.
- That this Consent is granted for manufacturing / producing following products / by products or carrying out the following activities or operation/processes or providing following services with capacities given below:

Particular	Туре	Quantity / Capacity
Gross Built up Area	Product	21,525.00 SQ. METER

That in case of any increase in capacity or addition / modification / alteration or change in product mix or process or raw material or fuel, the project proponent is required to obtain fresh consent to establish.





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⁴ That the control equipment as proposed by the applicant shall be installed before trial operation is started for which prior consent to operate under the provision of the **Water Act and Air Act** shall be obtained. This consent to establish shall not be treated as consent to operate.

5 That the quantity of effluent generation and disposal along with mode of disposal for the treated effluent shall be as under:

Type of effluent	Max. effluent generation (KLD)	Quantity of effluent to be recycled (KLD)	Quantity of treated effluent to be disposed (KLD) and mode of disposal
Domestic Sewage	24.000	16.000	5.000 Plantation and Horticulture within premises

6 That the sources of air emissions along with pollution control measures and the emission standards for the prescribed parameters shall be as under:





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Sources of Air Emissions	Pollution Control	Prescribed	
	Measures	Parameter	Standard
Dg set(1010KVA)	ACOUSTIC ENCLOSURE, ADEQUATE AIR POLLUTION CONTROL MEASURES, ADEQUATE STACK HEIGHT, ADEQUATE STACK HEIGHT OF 30 MTR.	NOx (as NO2) (at 15% O2) day basis in ppmv NMHC (as C) (at 15% O2) PM (at 15% O2) CO (at 15% O2)	710 mg/Nm3 100 mg/Nm3 75 mg/Nm3 150 mg/Nm3

That the Domestic Sewage shall be treated before disposal so as to conform to the standards prescribed Board notified under (Protection) by the as the Environment Act-1986 for disposal Into Surface The regular Inland Water. main parameters for monitoring shall be as under:





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Parameters	Standards
Oil and Grease	Not to exceed 10 mg/l
pH Value	Between 6.5 to 9.0
Biochemical Oxygen Demand (3 days at 27C)	Not to exceed 10 mg/l
Chemical Oxygen Demand	Not to exceed 50 mg/l
NH4 (N)	5 mg/l
N total	10 mg/l
Total Suspended Solids	Not to exceed 20 mg/l
Fecal Coliform (MPN per 100 ml)	Not to exceed 100

- 8 That the unit shall obtain all necessary permission from District Administration, Jaipur and Government of Rajasthan related to establishment of new academic block "Block-3" in "Manipal University", Khasra No 467, 469, 474, 458/1, 473, 475, 542, 544 Village Dehmi Kalan, Tehsil Sanganer, Ajmer Road, Tehsil: Sanganer District: JAIPUR, Rajasthan.
- 9 That this consent to establish is being issued for Academic Block-3 for Gross Built Up area: 21,525 Sq.m. For any change in area, the unit has to seek fresh consent to establish.
- 10 That if the project cost exceeds Rs. 104 Crore, the unit shall take/obtain modification in consent after paying fee as applicable.
- 11 That the unit shall provide adequate & safe infrastructure facility (step ladder) for monitoring at stack of D.G. set.
- 12 That the unit shall apply for CTO for Built up area @ 21,525 sq.m. within 15 days time period.
- 13 That the unit shall get amendment in all the previous CTOs for correct Built up area, where the same have been obtained for increased Built up area as compared to approved map.





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14 That unit shall comply standards as specified in Environment (Protection) Act,1986, (Limiting concentration in mg/l, except for pH):

i. pH: 6.5-9.0

ii. BOD 3days, 27 degree Celsius: 10

iii. COD: 50

iv. Oil & Grease: 10

v. TSS: 20 vi. N-total : 10

vii. Fecal Coliform: 100 MPN/100 ml

viii. NH4-N:5

- 15 That the unit shall comply with the standards as prescribed vide MOEF notification no. GSR 826(E) dated 16th November, 2009 with respect to National Ambient Air Quality.
- 16 That the unit shall ensure compliance of ambient air quality standard in respect of noise as prescribed under Environment (Protection) Act & Rules made therein.
- 17 That unit shall provide adequate stack height along with acoustic enclosures on one D.G. set of 1010 KVA. Further unit shall not allow installing any air pollution source i.e. Boiler/Hot water generation etc. without prior consent to establish from the Board under the Air Act 1981.
- 18 That the total water consumption shall not exceed 30 KLD. The ground water shall not be abstracted without prior NOC from Central Ground Water Authority.
- 19 That the water flow meters shall be provided at all suitable points to measure quantity of daily water consumption, waste water generation, waste water treated and treated waste water recycled and utilized for plantation/gardening purposes. Daily record of the same shall be maintained and to be submitted to the Board.
- 20 That the unit shall ensure proper recycling and reuse of domestic waste water after adequate treatment.
- 21 That the entire domestic waste water generated in tune of 24 KLD shall be treated through existing sewage treatment plant having capacity of 500 KLD (150 KLD +350 KLD).
- 22 That the unit shall maintain condition of STP of capacity 500 KLD (150 KLD +350 KLD) to achieve the standards prescribed under EP Act 1986 and the unit shall dispose the sludge of STP in scientific manner.
- 23 That the unit shall provide disinfection system for STP treated water before its utilization in plantation/horticulture purpose.
- 24 That the unit shall dispose the sludge of STP in scientific manner.
- 25 That the unit shall not allow making any obstacles to any natural water flow i.e. natural nallah/stream carrying rain water to any water body.



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- 26 That the unit shall install adequately designed rain water harvesting structure for prevention and recharge of ground water in and around the area.
- 27 That energy conservation measures like installation of CFLs/FLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.
- 28 That used CFL/FLs/LEDs should be properly collected and disposed off/sent for re-cycling as per prevailing rules/guidelines issued by regulatory authority. Use of solar panels also be done to the extent possible.
- 29 That the solid waste generated should be properly collected & segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off at approved sites for land filling after recovering recyclable materials.
- 30 That the unit shall comply with the provisions of Hazardous and Other Wastes(Management and Transboundary Movement) Rules, 2016; Solid Waste Management Rules, 2016; Plastic Waste Management Rules 2016; Construction And Demolition Waste Management Rules 2016; Bio-Medical Waste Management Rules, 2016 and E- Waste Management Rules, 2016.
- 31 That the unit shall ensure proper recycling and reuse of domestic waste water after adequate treatment.
- 32 That waste water shall always be conveyed/ carried through closed conduit pipe line and no other measure of carrying waste water such as tankers, flexible or temporary pipe line shall be used/practiced.
- 33 That water meters shall be installed at suitable locations at closed conduit pipe line to measure the quantity of effluent reaching to 500 KLD (150 KLD +350 KLD) STP for treatment.
- 34 That the surplus/excess/unutilized treated water shall be used for agriculture/plantation.
- 35 That unit shall utilize entire treated waste water for flushing/process/gardening/non-potable uses and other gainful purpose and zero discharge status shall be maintained outside the premises. No waste water shall be discharged on land/into sewer line/into natural nala/water body/drain
- 36 That the unit shall not allow making any obstacles to any natural water flow i.e. natural nallah/stream carrying rain water to any water body.
- 37 That this consent is being issued on the basis of information /documents submitted by the industry. In case, it is found during post inspection that, the unit has flouted the conditions of consent or provided inadequate control measures & wrong information, the consent may be revoked and action may be initiated under the Provisions of Water Act & Air Act without any further notice.





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- 38 That the industry shall comply provisions 9(4) & 13(2) of Plastic Waste Management (PWM) Rules -2016 and as amended & shall submit application for registration in form-I to State Board.
- 39 That no Single use Plastic (SUP) items, which are banned vide Ministry of Environment, Forest and Climate Change (MoEF& CC), Government of India notification dated 12/08/2021 shall be used in the unit premises.
- 40 That this consent to establish shall be subject to compliance of any direction or order passed by Court of Law/NGT/CAQM in the matter.
- 41 That the unit shall obtain necessary permission from National Board for Wildlife Clearance (NBWL), if the project falls in ESZ of Notified protected Area and the activity is not covered under permitted activity. The consent is granted under the provisions of Water Act, 1974 and Air Act, 1981 and any other permission/consent w.r.t. Environment Protection Act, 1986 and Forest Conservation Act, 1980, if required, shall have to be obtained before implementation of the project.
- 42 That all the green building concepts/ norms shall be adopted in all possible ways which includes Green walls, solar energy etc., and compliance of this condition shall be submitted along with photograph during the time of CTO application.
- 43 That proper C&D mechanism shall be adopted, and compliance of this condition shall be submitted along with photograph during the time of CTO application.
- 44 That proper wash disposal system shall be developed, and compliance of this condition shall be submitted along with photograph during the time of CTO application.
- 45 That water harvesting system shall be developed for maximum storage and moisture improvement, and compliance of this condition shall be submitted along with photograph during the time of CTO application.
- 46 That proper ventilation measures for energy saving, less toxic materials for reducing indoor pollution and usage of certified wood shall be considered, and compliance of this condition shall be submitted along with photograph during the time of CTO application.
- 47 That proper waste segregation system to be developed.
- 48 That the unit shall take steps to enhance landscaping and green cover in all possible spaces and develop green belt in at least 33% of the total project area.
- 49 That, notwithstanding anything provided hereinabove, the State Board shall have the power and reserves its right, as contained under Section 27(2) of the Water Act and under Section 21(6) of the Air Act to review anyone or all of the conditions imposed here in above and to make such variation as it deems fit for the purpose of compliance of the Water Act and Air Act.





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50 That the grant of this **Consent to Establish** is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility, to comply with the conditions laid down in all other laws for the time-being in force, rests with the industry/unit/project proponent.

51 That the grant of this **Consent to Establish** shall not, in any way, adversely affect or jeopardize the legal proceedings, if any, instituted in the past or that could be instituted against you by the State Board for violation of the provisions of the Act or the Rules made thereunder.

This **Consent to Establish** shall also be subject, besides the aforesaid specific conditions, to the general conditions given in the enclosed Annexure. The project proponent will comply with the provisions of the **Water Act and Air Act** and to such other conditions as may, from time to time, be specified by the State Board under the provisions of the aforesaid Act(s). Please note that, non compliance of any of the above stated conditions would tantamount to revocation of **Consent to Establish** and project proponent / occupier shall be liable for legal action under the relevant provisions of the said Act(s).

This bears approval of the competent authority.

Yours sincerely,

Group Incharge[HBC]

(A): **Copy to:-**

- 1 Regional Officer, Regional Office, Rajasthan State Pollution Control Board, Jaipur (south) with request to ensure compliance of consent conditions.
- 2 Master File.

Group Incharge[HBC]



For Academic Block -State Level Environment Impact Assessment Authority. Rajasthan 4, Institutional Area, Jhalana Doongri, Jaipur-302004 Phone: 0141-2705633, 2711329 Ext. 361 Jaipur, "lated: No: FI[4)/SELAA/SEAC-Raj/Sectt/Project/Cat 8(a)B1 (194) /08-09 M/s Manipal Universal Learning P. Ltd., Manipal Towers, 14-HAL Airport Road, Sub: EC for proposed Manipal Education Project village Dehmi Kalan, Teh. Sanganer, Jaipur by Mr. R.Shankar, V.P. (Project), Manipal Universal Learning P. Ltd., Manipal Towers, 14-HAL Airport Road, Bangalere. This has reference to your application No Nil dated 12-06-09 seeking environmental clearances for the above project under EIA Notification 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the ElA Notification 2006 on the basis of the mandatory documents enclosed with the application viz. the questionnaire, EIA EMP and additional clarifications furnished in response to the observation of the State Level Expert Committee Rajasthan, in its meetings held on 18/19.11.09. 8(a) Educational Project Village-Dehmi Kalan, Tehsil-Sangarer, Distt.-laipur. 2, 69,801.80 M2. (66.67 Acres / 26.98 Ha) Total Plot area

Brief details of the Project:

To.

Sir.

Bangalore

Category: -

2. Item No (in the Schedule ::

Purpose 3.

Location 5.

Built Up Area 2, 31,242.75 M2. 6 14.48 %. 7. Utilized ground coverage:

Achieved FAR 68% 8.

Not Provided 9. Maximum Building Height 10. No. of Floors Not Provided.

40.000 M2 under surface parking. Parking provided for 670 Cars, 536 11. Total Parking Area Two Wheelers, 135 Cycles. Rs. 583 Crores - Development Cost, Rs. 50.1944 Crores - Land Cost Expected Cost: -

8 MVA during I-Phase through SBB Installation of 4 DG Seis 13. Power Requirement proposed (2x2000 KVA, 2x1000 KVA; Diesel Tonsumption 4) 5.4 Itr/hour).

-923 KLD. Source: Tube Wells. 14 Water Requirement & A letter dt. 08.10.2009 has been sent by the P.P. to the Central Ground Source Water Authority for permission to install the required 6 nds. of tube

1) 52018.50 M2 (approx. 23 %) is available under parks and green belt. Environmental

2) 40,000 Sq. M. is available for surface parking. Management Plan 3) Rain Water Harvesting

4) A STP of 1075 KLD capacity.

The SEAC Rajasthan after due considerations of the relevant documents submitted by the project proponent and additional clarifications/documents furnished to it have ecommended for Environmental Clearance with certain stigulations. The SEIAA Rajasthan after considering the proposal and recommendations of the SEAC Rajasthan hereby accord Environmental Clearance to the project as per the provisions of Environmental Impact Assessment Notification 2006 and its subsequent amendments, subject to strict compliance of the terms and conditions as follows:

and Settings Administration Desitiopis Prasad SETAL SEACYEC Files SETA ASETA EC from Sept UV doc

04 01

Mis. Pollulion (All) PART A: SPECIFIC CONDITIONS CONSTRUCTION PHASE 1. "Consent to Establish" shall be obtained from Rajasthan State Pollution Cortrol Board and a copy shall be submitted to the SEIAA, Rajasthan before start of any construction work at the site and submit the following documents to RPCB at the time of applying for CTE Identification of re-cycling plant with its process. ii. For conservation of electricity and to reduce energy losses the manageria t should ensure that the electrical voltage is stepped down from 33 KV to 11 KV and distributed withis level and finally brought to 440 volts. ii. Provision shall be made for the housing of construction labor within the ite with all inecessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile ST safe drinking water, medical health care, creche etc. The housing may be in the form of lempo, ry structures to be removed after the completion of the project. All required sanitary and hygienic measures shall be in place before starting cons suction activities. The safe disposal of waste water and solid waste generated during the contraction phase should be ensured. Adequate drinking water facilities shall be provided for construction workers at the site Provisions should be made for the supply of fuel (kerosene or cooking gas); utensils such as pressure cookers etc. to the labourers. All the labourers engaged for construction should be screened for health and adequately treated before engaging them to work at the site. viil. For disinfection of waste water, appropr ate tertiary treatment may be given. ix. All the topsoil excavated during the construction should be stored for use is horticulture/lanc ape development within the project site. k. Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general sufety and health aspects of the people, only in approved sites with the approval of competent authority Soi and ground water samples will be tested to ascertain that there is no thieat to the ground water quality by leaching of heavy metals and other toxic contaminants. xii. Construction spoils, including bituminous material and other nazardous materials must not be allowed to contaminate water courses and the dump sites for such material must be secured so that they do not leach into the ground water. The diesel generator sets to be used during the construction phase should be low-sulphur-diesel type and should conform to Environment (Protection) Rules for air and noise emission standards. xiv. Vehicles hired for bringing construction material and labourers to the site should be in good conditions and should conform to applicable air and noise emission standards and should be operated during non-peak/approved hours. Ambient noise levels should conform to residential standards both during day and night Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction xvi. Fly ash should be used as building material in the construction as pet the provisions of Fly Ash notification of September, 1999 and amended as on August, 2003 (The above condition is applicable only if the project is within 100 km of Thermal Power Station) Ready mixed concrete must be used in building construction. xviii. Storm water control and its re-use as per CGWA and BIS standards for various applications. Water demand during construction should be reduced by the use of pre-mixed concrete, curing agents and other best practices. xx. Permission to draw ground water shall be obtained from the CGWA/CGWB prior to construction/operation of the project. xxi. Separation of grey and black water should be done by the use of cual plumping line for separation of grey and black water. Treatment of 100% grey water by decentralized treatment should be con xxiii. Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators of pressure reducing devices or sensor based control. Use of glass may be reduced by up to 40% to reduce the electricity consumption and load in airconditioning. If necessary, use high quality double glass with special reflective coating windows. Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement. C Docum mis and Serings Madministrato Deshiopis Prasatis ELAA-SEACYEC Files SELAA SELAA EC from Sept 09 d



Adequate measures shall be taken to reduce air and noise pollution during construction keeping in mind CPCB norms on noise limits. Opaque walls should meet prescriptive requirement as per Energy Conservar on Building Code for all air-conditioned spaces, whereas, for non-air-conditioned spaces, by use of appropriate thermal insulation material to fulfill the requirement. XXVII. A first Aid Room will be provided in the project both during donstruction and operation of the project. Any hazardous waste generated during construction phase should be disposed off as per applicable XXIX. rules and norms with necessary authorization of the Rajasthan Pollution Control Board. The approval of the competent authority shall be obtained for structural shiet; of the building due to earthquake, adequacy of fire fighting equipments, etc as per National Bullding Coce 2005 including protection measures from lightening etc. Regular supervision of the above and other measures for monitoring should be in place through out the construction phase, so as to avoid nu sance to the surroundings. Approved plan from competent Authority and position with reference to Master P.an. XXXX Copy of guidelines issued by concerned ministry for water scarge area is grovined. Ground water table to be shown along with source. Besides, permission of competent authority is XXXIV. obtained for withdraw al of ground water. Regalculate MSW quantity and revise disposal proposal. Composting of biodegradable waste shall be carried out with in the campus. XXXX Provision of solar water heating /chilling etc shall be explored. XXXVI Review and revise the requirement of DG set capacities for 100% power back up through to optimization of power back up in case of power failure and emergency. OPERATION PHASE An independent expert shall certify the installation of the Sewage Treatment Plant (STP) and a report in this regard shall be submitted to the RPCB, before the project is commissioned for operation. Discharge of treated sewage shall conform to the norms & standards of the Rajasthan State Pollution Control Board. For conservation of electricity and to reduce energy losses the management should ensure that the electrical voltage is stepped down from 33 KV to 1.1 KV and distributed at this level and finally brought to 440 volts. Rain Water harvesting (RWH) for roof run-off and surface run-off, as plan submitted shall be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The RWH plan should as per GOI mar ual The solid waste generated should be properly collected & segregated before disposal to the City Municipal Facility. The in-vessel bio-conversion technique may be used for composting the organic waste. Any hazardous waste including biomedical waste should be disposed of as per applicable Rules & norms with necessary approvals of the Rajasthan State Pollution Control Board. The green belt design along the periphery of the plot shall achieve attenuation factor conforming to the day and night noise standards prescribed for residential land use. The open space inside the plot should be suitably landscaped and dovered with vigetation of indigenous variety. The D. G. sets to be operated with stack height as per RPGB norms. vii. Incremental poliution loads on the ambient air quality noise and vater quality shall be periodically monitored after commissioning of the project ix. Application of solar energy should be incorporated to illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid system or fully solar system for a portion of the apartments should be provided.

Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internal zed and he public space should be utilized.

A Report on the energy conservation measures confirming to energy conservation norms finalize by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc. Quantify energy saying measures.

xii. Proper system c: channelizing excess storm water shall be provided

xiii. The power factor should be maintained near unity.

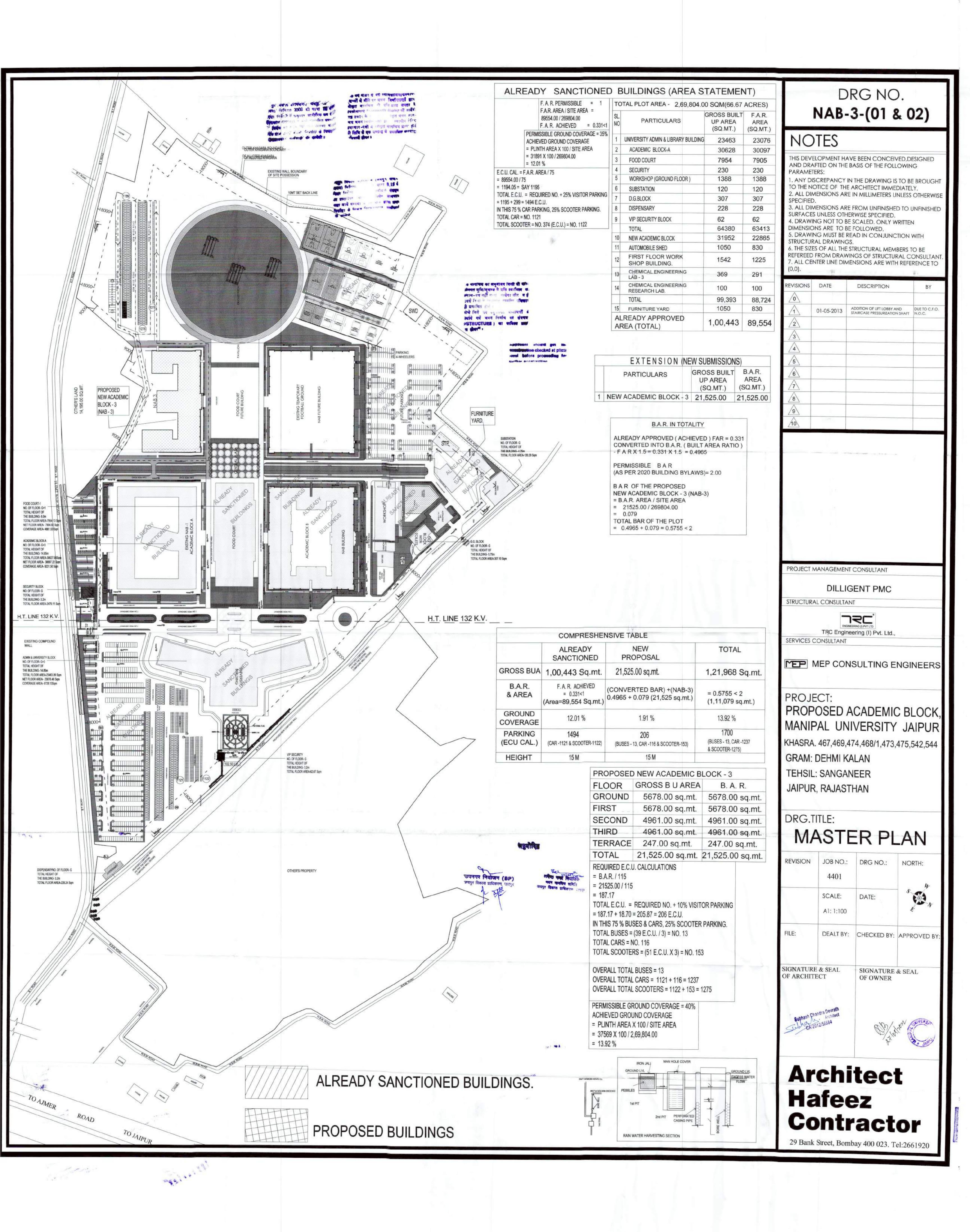
Trees and shrubs of local species should be planted to allow habitat for birds with appropriate distance from the boundary.

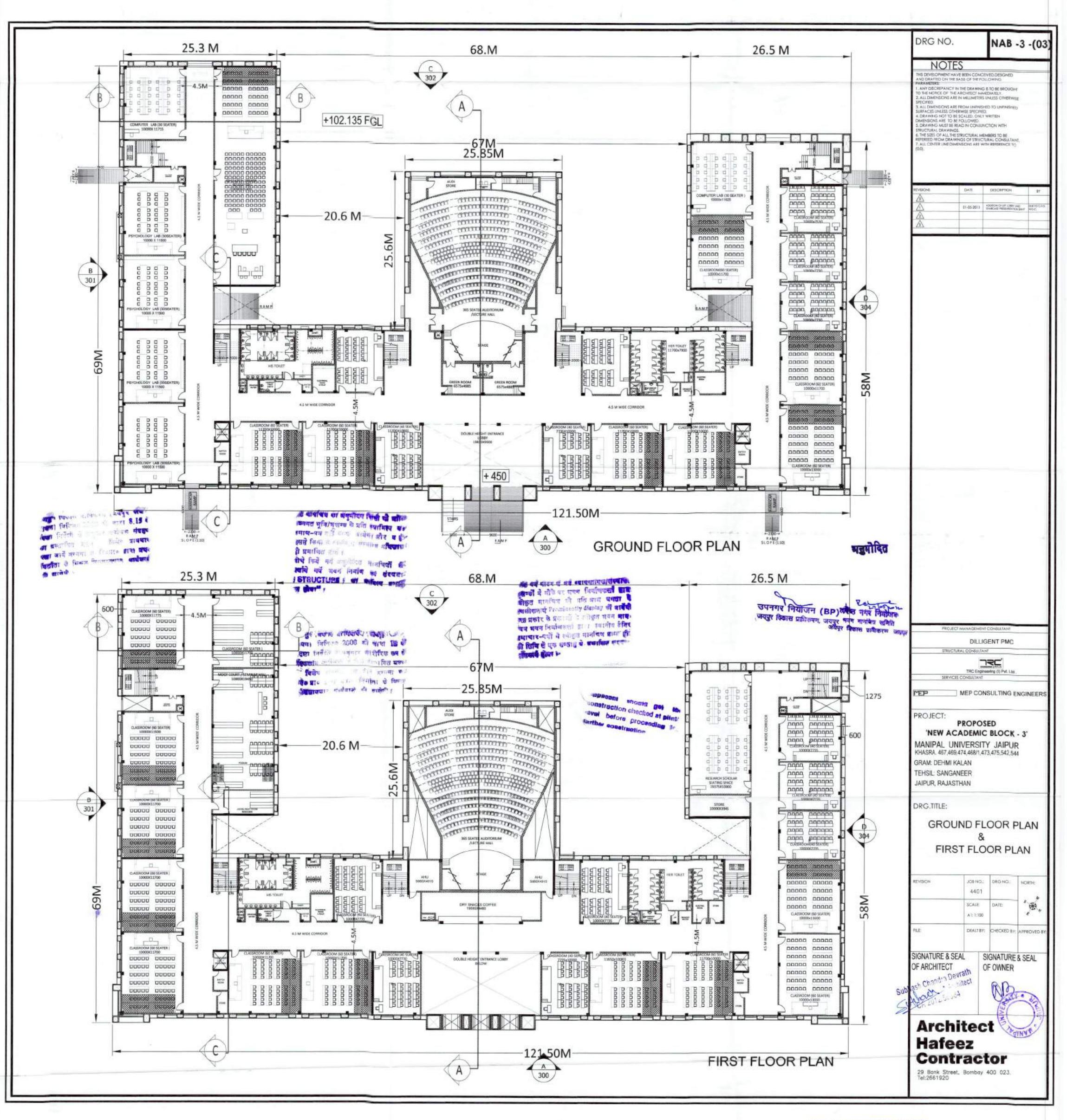
No puzzle parking shall be allowed.

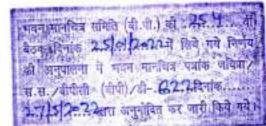
Re-cycled water to match standards for cooling water system. xvi.

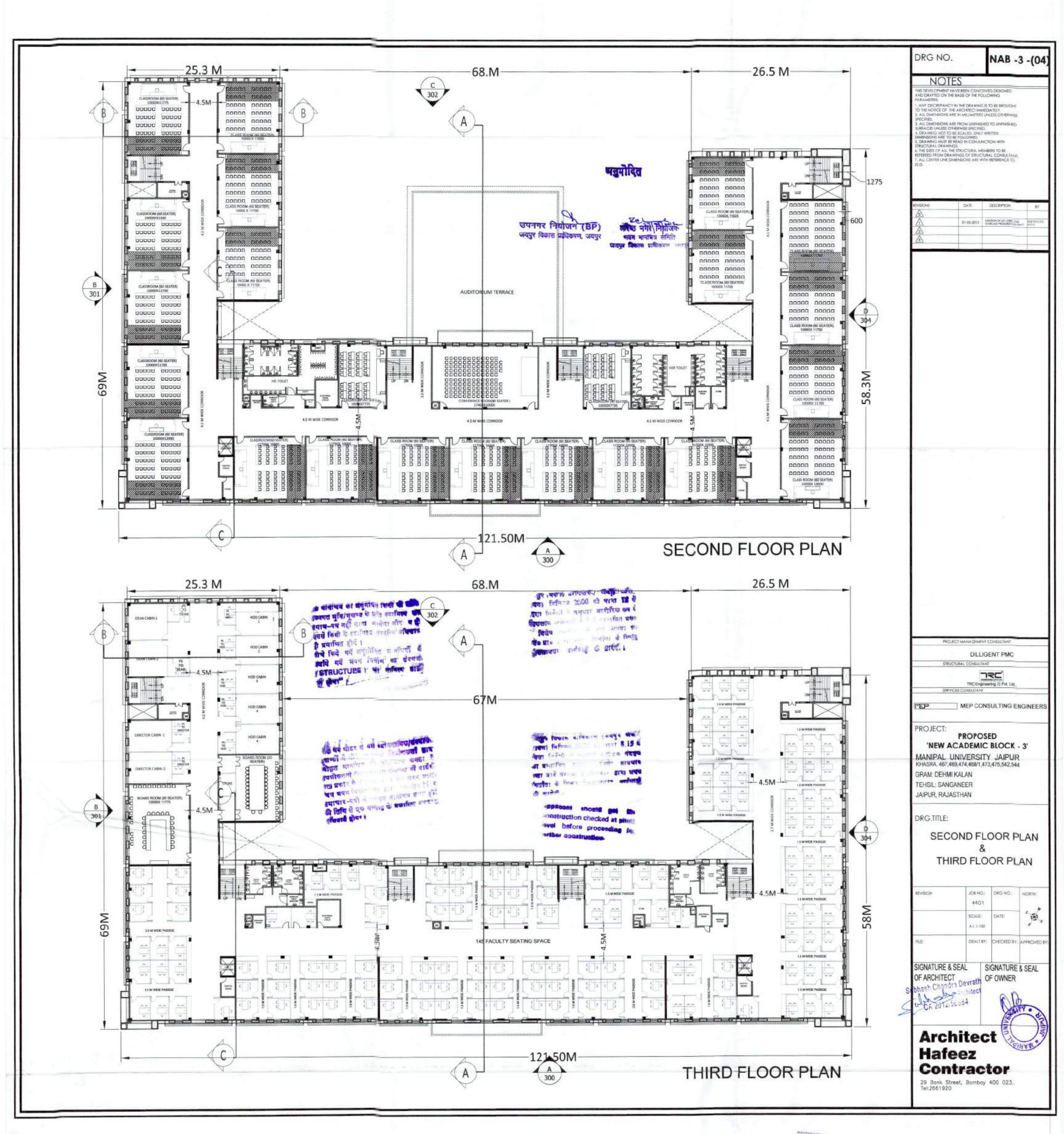
A dequate measures should be taken to prevent odor from solid waste precessing and STP.

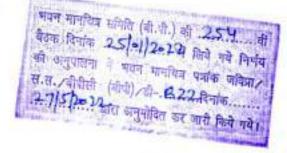
nutraior Destrop'S. Presad SEI. A. SEACYEC File SEIA A SEIA A EC from Sept 09. dog













https://youtu.be/kjR_V9YSEH4





https://jaipur.manipal.edu/blog/?url=engineering-for-a-sustainable-future-embracing-the-call-for-eco-friendly

	Manipal University Jaipur - Academic Block 3
	Project Name – Manipal University Jaipur - Academic Block 3
	Project Code – 22GR0118
	Address: - Jaipur, Rajasthan
	Site area: - 14,809 m² (As per online panel)
GRIHA	Total built-up – 21,525 m² (As per online panel)
	No. of buildings – 1 Building (Institutional)
	Compiled by GRIHA Council

General
Comments:

Criterion	Appraisal	Feedback Comments
	Air and Soil Pollution Control	
Criterion 4	 Partly Mandatory – 4.2.1 Adopt at least six measures to minimize air and soil pollution during construction, with the first three strategies being mandatory. Provide 3m high continuous barricading along the site boundary/virtual boundary. Provide wheel washing facility/gravel bed at all vehicular entrances and exits of the site. Ensure DG sets have an exhaust with stack height of at least 2m from the top of the generator with a cowl. Ensure DGs are in compliance with CPCB norms. 	 4.2.1 Submittal has been provided consisting of the following documents- Narrative, site visit reports, and compliance report have been submitted stating that the following strategies were adopted in the project to minimize air and soil pollution during construction: Provision of 3 m high continuous barricading is provided along the site boundary. Wheel washing facility is provided at the vehicular entry and exit of the site. DG sets were not used on site. The demand is being met through campus level facility. Hence this measure is not applicable for the project.

- Implement a spill prevention plan for storage of diesel, admixtures, curing compounds, bitumen, and other hazardous materials.
- Ensure that fine aggregate, excavated earth, and other construction materials with a tendency to get airborne are covered or are sprinkled regularly with non-potable water.
- Ensure sprinkling of water on unpaved pathways on the site with non-potable water.
- Limit the speed of vehicular movement on-site to 10km/hr.
- Ensure that vehicles carrying waste materials out of the site are covered

- Hazardous materials were stored in an enclosed space on an impervious surface.
- Fine aggregate, excavated earth, and other construction materials with a tendency to get airborne were covered.
- Speed limit on site has been restricted to 10km/hr. Signages for the same were displayed onsite.
- Vehicles carrying waste materials out of the site were covered.
- Photographs of the measures implemented onsite have been submitted.
- Site management plan has been submitted in Criteria 6. However, location of wheel washing facility, Diesel storage and storage of fine aggregate, excavated earth, and other construction materials were not highlighted in the same.

Required:

• Submit site management plan (during construction stage) highlighting location of DG, wheel washing facility, Diesel storage, soil erosion channels, sedimentation tank, storage of fine aggregate, excavated earth, and other construction materials.

4.2.2 Ensure that the soil erosion channels are constructed, and they are connected to a sedimentation tank in order to reduce movement of soil outside the site throughout the construction phase of the project.

4.2.2 Submittal has been provided consisting of the following documents-

- As per the site visit reports, and compliance report, soil erosion channels and sedimentation tanks were provided on site. Photographs of the soil erosion channels & sedimentation tank have been submitted in due diligence I & II compliance documents.

Site management plan highlighting location of soil erosion channels and sedimentation tanks provided on site has been submitted.

The documentation is complete.

Criterion 5

Topsoil Preservation

5.1.1 Ensure that topsoil from disturbed areas on the site is	5.1.1 Submittal has been provid
5.1.1 Ensure that topsoil from disturbed areas on the site is preserved, stabilized, and its fertility is maintained throughout the construction period. Additionally, ensure that 100% of the soil requirement for landscaping including roof garden(s) is met through this preserved soil.	documents Narrative has been submitted sta

ded consisting of the following

- ating the topsoil from the disturbed % of the soil requirement for project served soil.
- e been submitted.
- d in the online panel indicating the
 - 35.6 m³.
 - landscaping 572.6 m3.
 - oil was excavated 5,678 m². However, lighted in the site management plan.
 - ed in landscape 198.32 %.
- project from state level soil testing
- nting location of topsoil preservation location of topsoil excavation area has

t plan in .dwg format highlighting n/disturbed area for the project.

Construction Management Practices Criterion 6

6.1.1 Adopt construction management practices (e.g., stacking and storage of construction materials at different stages of construction) and ensure safe disposal of waste generated during construction.

6.1.1 Submittal has been provided consisting of the following documents-

- Narrative has been submitted stating that construction management practices such as stacking and storage of construction materials at different stages of construction were adopted on site and all the construction waste is safely disposed of through agreements with waste haulers and recyclers.
- As per the site visit reports compiled by GRIHA officials, staging was adopted on site.

6.1.2 Adopt at least two strategies from the list, as given below, to minimize water consumption during construction, with the first strategy being mandatory.

Mandatory -

- Use gunny bags, ponding technique, or curing compound.
- Meter and monitor the consumption of water during construction.
- o Use water-reducing admixtures in concrete mix.
- Use treated wastewater and/or captured storm water

- Photographs of construction management practices adopted on-site have been submitted.
- Site management plan has been submitted highlighting the locations of different material & waste storage.
- Log sheets of total quantities of waste generated on site as steel, wood, packaging materials, cement bags etc. have not been submitted.
- Challans/Sell invoices reflecting full quantities of waste such as MS scrap, wood, packaging materials, cement bags etc. sold to recyclers have not been submitted.

Required:

- Submit detailed narrative about quantum of waste generated during construction, storage facilities for inert and hazardous wastes and measures employed for its safe disposal/recycling.
- Submit Log sheets of total quantities of waste generated on site as steel, wood, packaging materials, cement bags etc.
- Submit challans reflecting full quantities of waste such as steel, wood, packaging materials, cement bags etc. sold to recyclers.

6.1.2 Submittal has been provided consisting of the following documents-

- As per the site visit reports compiled by GRIHA officials, the following measures were adopted in the project:
 - Use of gunny bags and ponding technique for curing of columns and slabs, respectively. Photographs of the same has been submitted.
 - Use of water reducing admixtures (SAINT GOBAIN CHRYSO Delta G6541C-ADS) in concrete. Batch mix report of M25, M30 & M40 concrete grades were shared during the visit indicating the use of admixture was submitted. However, purchase order and technical specification sheet of the admixture was not submitted which confirms water reducing properties. Further, design mix reports for M25, M30 & M40 concrete grades have not been submitted.

Criterion 23	Safety and Sanitation for Construction Workers	 Required: Submit purchase order and technical specification sheet of SAINT GOBAIN CHRYSO Delta G6541C-ADS confirming it's water reducing properties. Submit design mix reports for M25, M30 & m40 concrete grades highlighting the make and name of admixtures used in the concrete grades.
Criterion 23	Salety and Sanitation for Construction workers	23.1.1 Submittal has been provided consisting of the following documents-
	Mandatory – 23.1.1 Ensure compliance with the requirements of NBC 2016 for all the following: Part 1: Provision of necessary safety equipment and safety measures for construction workers. Part 2: Provision of clean drinking water, hygienic working and living conditions, and sanitation facilities for the workers. Part 3: Provision of crèche facility for children of construction workers in case their families are allowed to work/live at the construction site. Applicability check: If there are only male workers employed and residing on site, the project is exempt from Appraisal 23.1.1 - Part	 Narrative, drinking water test report and date stamped photographs have been submitted indicating the following: Construction workers were wearing hard-hats and safety boots. Temporary railings were provided on the staircases. Safety nets were provided in accident-prone areas as well as adjacent to the scaffolding. Safety equipment such as gloves and safety harnesses were provided to workers depending on the nature of their work. Safety signage in local languages were displayed at multiple locations on site. First aid facility was provided on site. Drinking water facility was provided on site and in the labour accommodation area. Drinking water test report was submitted by the project team along with the compliance report. Clean and hygienic toilets were provided for the construction workers on site and in the labour accommodation area.

• Clean and hygienic labour accommodation was provided for the construction workers. The hutments were made of GI sheets and

sharp edges of the same were secured.

23.1.2 Adopt one alternative out of the following for the construction workers on-site. Alternative 1: Provide a grocery store/canteen within the site premises and/or labour accommodation. Alternative 2: Organize at least two events during the entire construction phase to create environmental awareness among		 The hutments had provision for daylight and ventilation. General cleanliness was maintained in the area surrounding the labour accommodation. Dustbins were provided in the labour accommodation area. Creche facility was provided near the labour accommodation. Site visit reports confirm the same. The documentation is complete.
the construction workers. The documentation is complete.	construction workers on-site. Alternative 1: Provide a grocery store/canteen within the site premises and/or labour accommodation. Alternative 2: Organize at least two events during the entire construction phase to create environmental awareness among	- As per the due diligence II site visit, two environmental awareness programs were conducted for the construction workers during the construction phase. The photographs have been submitted highlighting awareness programs have been conducted among the construction workers.

	Positive Social Impact	
Criterion 26	Mandatory – 26.1.4 Ensure that tobacco smoking is prohibited on-site during the entire construction phase.	26.1.4 Submittal has been provided consisting of the following documents Photographs have been submitted indicating that tobacco is prohibited on site and 'no smoking' signages were displayed in multiple locations. Site visit report compiled by GRIHA Council officials and the compliance report submitted by the project team confirms the same. A non-smoking policy document highlighting prohibition of tobacco smoking within the site premises during the construction phase has been submitted.
		The documentation is complete.