

**STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT
AUTHORITY (SEIAA)- DELHI
OFFICE OF DELHI POLLUTION CONTROL COMMITTEE
5th FLOOR, ISBT BUILDING, KASHMERE GATE, DELHI-110006**

F.No. DPCC/SEIAA-IV/C-375(ToR)/DL/2022/ 258- 261

Date: 04/03/2022

To,

The Executive Engineer (Civil)
M/s All India Institute of Medical Sciences,
AIIMS, New Delhi, Ansari Nagar,
New Delhi 110029

Subject: Term of Reference (ToR) for Redevelopment of All India Institute of Medical Sciences Project (AIIMS) New Delhi

Sir,

This has reference to the online application filed on 17.01.2022 vide proposal no-SIA/DL/MIS/71147/2022 by you for seeking Term of Reference for the above mentioned project.

The requirements of the projects have been taken into account by SEAC during the appraisal of the project in its 98th meeting held on 02.02.2022. The SEIAA took into account of the discussions and environmental conditions imposed during the consideration of the project in the SEAC Meeting held on 02.02.2022.

Details of proposed project is as under:

1. The Proposal is for Amendment in ToR for Redevelopment of AIIMS obtained for total plot area of 121.65 acres and the built-up area of 14,70,000 sqm, vide File No. 21-29/2021-IA-III(I) dated 05.05.2021.

Reason for the Amendment in TORs: As per information submitted by the PP Masjid Moth area has been included within the Redevelopment project of AIIMS, which has led to increase in Plot area and change in Built-up area. There has also been change in plot area of East Ansari Nagar. Amendment in TOR has been applied to incorporate these changes and obtain amended TOR with revised configuration.

2. **Area Details:** The Total Plot Area of the project is 152.55 Acres i.e. 6,17,347.078 sqm (East Ansari Nagar (107.6 Acres), Trauma Centre Campus Extension (14.95 Acre) and Masjid Moth Campus (30 Acres)). The Total Built-Up Area for the proposed Redevelopment project would be 14,65,695 sqm (East Ansari Nagar: 1163497.69 sqm, Masjid Moth: 71638 sqm and Trauma Centre Extension: 230558 sqm). Total Existing Built up Area of the project is 548515 sqm and area to be demolished will be 138727.82sqm. After expansion the total BUA will be 18,75,481.69 sqm). Level of Basement is upto three. Maximum Heights of Building is 45 m. The Total nos. of Beds will be 5412 Beds (3000 new and 2412 existing)

3. Water Details :

Existing Phase: For the existing facility, the total water requirement and the gross fresh-water requirement is 1145 KLD for East Ansari Campus while the wastewater generation is in tune of approx. 9000 KLD

During Construction stage, Total Water requirement will be 2045 KLD. Approx. 45 KLD of fresh water will be required for drinking and domestic purpose which will be supplied through bottled cans from the local freshwater supplier during the days of construction and the balance water will be sourced from DJB. Domestic sewage generated by construction labourers will be 36 KLD. For Construction activities about 2000 KLD of water will be required which will be met by the treated water from the nearby CSTP and will be brought by the private water tanker.

During Operational Phase after Redevelopment, total water requirement of the project is expected to be 16212 KLD and the same will be met by 7470 KLD of Fresh water from Delhi Jal Board and 8742 KLD of Treated wastewater. Wastewater generated (8851.3 KLD) will be treated in proposed on-Site STPs of 850 KLD, 9000 KLD, 300 KLD and existing STP of 2000 KLD capacity. Additionally 200 KLD ETP is proposed to be installed to treat laundry and laboratory wastewater. The treated wastewater will be recycled and re-used for Flushing (3880.5 KLD), for Landscaping (1030 KLD), for AC Cooling Tower make up (3614 KLD Treated wastewater + 876 Fresh water). Excess Treated wastewater of 217 KLD after exploring all possible options of recycling will be disposed in municipal drain.

Rain Water Harvesting Tank of capacity 10,000 m³ is proposed and No. of Rainwater Harvesting Pits proposed are 117 nos.

4. Solid Waste Details :

During Construction phase, 110 kg/day of Municipal Solid Waste will be generated from the site. The Construction waste from new construction will be 73,285 Tons and from Redevelopment work will be 83,236 tons. C&D waste will be used for backfilling as much as possible while excess C&D waste will be disposed to C&D processing facility.

During the Operation phase, the total MSW generated from hostels, Type 3 DU/ 4 DU and by support staff and visitors, and from landscape will be in the tune of 6000 kg/day (approx. 3600 kg/day of biodegradable waste and approx. 2400 kg/day of non-biodegradable wastes).

The proposed development with approx. 3000 beds will generate approx. 9000 kg/day of MSW comprising approx. 5000 kg/day of biodegradable waste and approx. 4000 kg/day of non-bio-degradable wastes.

The cumulative MSW generation in future from the existing and proposed beds (with 5412 beds) will be in the tune of 17000 kg/day comprising of approx. 10000 kg/day of biodegradable waste and approx. 7000 kg/day of non-biodegradable waste

Biomedical Waste: The proposed redevelopment with approx. 3000 beds will generate approximately 4000 kg/day of biomedical wastes. The cumulative biomedical waste generation from the existing beds and the new beds (5412beds) will be in the tune of 8000 kg/day

The other categories of wastes are likely to be insignificant as compared to MSW and Bio-medical Wastes and will be determined during detail design stage

5. Power Details :

During Construction phase, The total power requirement will be 3200 KW. For Power Back up, DG sets of Total Capacity 2000 kVA (2 x 500 kVA and 4 x 250 KVA) will be installed

During Operation Phase, The total power requirement will be 58199 KW and the same will be met from NDMC. For Power Back up, DG sets of Total Capacity 51500 kVA (22 x 2000 kVA and 10 x 750 KVA) will be installed.

6. **Parking facility:** The Proposed Total Parking is 14,432 ECS (13,364 ECS in basement, stilts and MLCP and 1,345 ECS in Surface parking), presently, there is a provision of 440 ECS for the existing facilities.
7. **Eco-Sensitive Areas:** Distance from Asola Bird Sanctuary is 7.1 km South (ESZ of Asola Bhatti WLS is 6 Km South), and Okhla Bird Sanctuary is 7.6 km East from the project site.
8. **Plantation:** Total Green Area proposed is 143299 sqm & Tree felling will be carried out as per the norms and permission will be obtained from competent authority. No construction activity will be initiated before obtaining the requisite Tree felling permission. Compensatory plantation will be done as per the rules. Green belt will be developed along the periphery of the project area
9. **Cost of the project:** Total cost of the project is Rs. 15,500 Crores.

Environmental Clearances for Masjid Moth Campus was obtained on 13.08.2012 from SEIAA Delhi for Total BUA of 339368.9 (Plot Area: 129499.52 sqm i.e. 32 Acre) and proposed Trauma Centre is a green field project on a land under Trauma Centre Extension.

The site of Trauma Centre is located across the road/ others properties at a distance from existing AIIMS complex at East Ansari Nagar. Similarly, the land of Masjid Moth complex is also at different location adjacent to the existing AIIMS complex.

Based on information furnished, presentation made and discussions held, the SEAC in its 98th meeting held on 02.02.2022 recommended the Term of Reference for conducting Environment Impact Assessment Study by the project proponent.

The State Level Environment Impact Assessment Authority, Delhi (SEIAA-Delhi) in its 58th meeting held on 21.02.2022 hereby accords the Term of Reference as per provisions of Environment Impact Assessment (EIA) Notification, 2006 and its subsequent amendments for conducting Environment Impact Assessment Study and information to be included in EIA/EMP report for the proposed expansion of AIIMS at East Ansari Nagar for BUA 1163497.69 sqm (existing BUA 3,35,289 sqm out of which 133894 will be demolished), Masjid Moth (for BUA 71638 sqm i.e. existing: 213226 out of which 4833 sqm will be demolished) and for construction of Trauma Centre Extension proposed at Safdarjung Enclave (BUA 230558 sqm) as follows :

1. *The proposal has 03 separate deliverables for the each complex at East Ansari Nagar, Masjid Moth and Trauma Centre Extension land located at Safdarjung Enclave and*

accordingly required to carry out Environment Impact Assessment studies w.r.t. these 03 buildings separately for a quantifiable control of Environmental safe guards in each complex and submitted distinctly for easy comprehension.

2. Examine details of land use as per Master plan and land use around 10 km radius of the project site. Analysis should be made base on latest satellite imagery for land use with raw images. Share the elevation range of the site (minimum and maximum elevation above mean sea level) and the 10 year, 50 yr and 100 yr flood maps for the area and whether it is within the flood zone or directly on the flood plain of any river.
3. Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/ villages and present status of such activities.
4. Examine baseline environmental quality along with projected incremental load due to the project.
5. 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.
6. Submit a copy of the contour plan with slopes, drainage pattern and low-lying area of the site and surrounding area. If there is any obstruction of the drainage lines and low-lying area proposed by the project, then the rationale for the same may be stated along with any mitigation measures.
7. Submit the present land use and permission required for any conversion such as forest, agriculture etc. Submit the land type (kism) of each of the khasra numbers/plots of the site as per the revenue record/last jamabandi of the site. Is the site recorded as a low-lying area, waterbody, gairmunkinpahar, forest in the revenue record?
8. Submit Roles and responsibility of the developer etc for compliance of Environmental regulations under the provisions of EP Act.
9. Ground water classification (whether over exploited, critical, semi-critical or safe) 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. Segregated figures for potable and non potable water requirement during construction and operation phase.
11. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
12. 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.
 - a. Calculate runoff from (a) roof top, (b) other paved areas, and (c) green areas separately.

- b. Recent/Enhanced peak rainfall runoff data be used in the runoff calculation for designing storm water retention capacity, to make the site future ready – given the experience of last 5 years with extreme rainfall events and likely increase in frequency of such extreme events due to climate change.
 - c. Prepare management strategy for runoff for each of these (a) roof top, (b) other paved areas, and (c) green areas
 - d. Design natural storm water retention capacity in the green areas by marginal lowering, and gradient management to enhance natural retention and percolation, and indicate the natural retention capacity created in cubic metres.
 - e. Indicate rainfall retention capacity created via storage tanks/percolation pits
13. Examine soil characteristics and depth of ground water table for rain water harvesting along with actual percolation rate of soil at site.
 14. Examine details of solid waste generation treatment and its disposal
 15. 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.
 16. DG sets likely to be used during construction and operational phase of the Project. Emissions from DG sets must be taken into considered while estimation the impacts on air environment. Examine and submit details.
 17. 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.
 18. A detail traffic and transportation study should be made for existing and projected passenger and cargo traffic. Traffic Management Plan should take into consideration the latest traffic scenario. Detailed calculation of roads, bicycle paths, pedestrian spaces should be provided.
 19. Examine the details of transport of materials for construction which should include source and availability.
 20. Examine separately the details for construction and operation phases both for Environmental Management plan and Environment Monitoring Plan with cost and parameters
 21. Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster.
 22. Details of litigation pending against the project, if any, with direction/order passed by any Court of Law against the Project should be given.
 23. The Cost of the project (Capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

24. The Project Proponent should include a specific chapter for control of Dust Pollution during construction phase in the Environmental Management Plan incorporating the steps as per MoEF Notification No. GSR 94 (E) dated 25.01.2018/Hon'ble National Green Tribunal order in O.A. No.21 of 2014 and O.A. No. 95 of 2014 in the matter of Vardhaman Kaushik Vs. Union of India & others and Sanjay Kulshreshtha Vs Union of India & others, CAQM/CPCB/DPCC extant statutory orders/guidelines/directions issued time to time including registration on Dust Pollution Control Self Assessment Portal with provision of video fencing and low cost sensors for monitoring PM 2.5, PM 10.
25. Detail of Parking (ECS) as per requirement of Building Bye Laws/ EIA Manual.
26. In case the project involves diversion of forests land, guidelines under OM dated 20.03.2013 may be followed and necessary action taken accordingly.
27. Submit details of the trees to be conserved and trees to be felled / removed, if any, by ground coverage, and trees to be removed for other paved areas for the project including their species and whether it also involves any protected or endangered species
Prepare and submit an existing tree inventory of the site listing each tree along with its species name and girth, and a tree layout plan showing the location of each tree on the site and within 10 m of the site. Measures taken to reduce the number of the trees to be removed should be explained in detail. Submit the details of compensatory plantation.
28. Explore the possibilities of utilising the debris/waste materials available in and around the project area.
29. Submit Environmental Management and Monitoring Plan for all phases of the project viz. construction and operation.
30. Submit NOC of Airport Authority of India for proposed height of the building.
31. Detail of water requirement during construction phase and its source. Project Proponent is required to clarify the arrangement for reusing the STP treated water/similar other source along with the mechanism proposed for making this water fit for use in construction phase.
32. Outlet parameters of proposed STP during operation phase needs to be checked for the feasibility of its reuse in flushing, horticulture, HVAC etc.
33. Justification to achieve the standards with the proposed technology of STP is required to be given.
34. Proposal should be included for a provision of toxic gas (Combustible gas, Carbon dioxide and Hydrogen sulphide) detectors for STP area.
35. The cost of environmental monitoring projected in the proposal should be commensurate with the environmental safe guard proposed.
36. Details of all the outlets from the proposed building including the outlet of STP required to be submitted with a proposal to install flow-meters at each of the outlets.

37. Project is required to quantify the no. of labours and the detailed plan for the proposed labour camps and amenities for housing them during construction phase.
38. Landscape details to be provided with a measured impact on the micro-climate. Green area should be demarcated as per building bye laws and 25% green area and consolidated area of minimum 15 % of plot area should be kept as soft green area, so that there should be sufficient recharging of ground water.
39. Air quality pollution load and its negative impacts to be clarified along with mitigation options during the construction and lifetime of the project.
40. Give Typical Floor Plans with dimensions to demonstrate how natural ventilation & day lighting is being achieved supported with screenshots of suitable software based out puts.
41. Proportion wise step diagram to be provided showing the amount of Reduction in Net per capita Energy Demand achieved as compared to base case scenario, through (i) Load Reduction Strategies, (ii) Passive Strategies, (iii) Renewables, and (iv) Energy Recovery strategies. Atleast 2 % of total energy demand to be sourced from Renewables. Percentage reduction through each of the aforesaid strategies to be provided in a consolidated diagram format for easy comprehension.
42. Proposal for provisioning the energy audit during operation phase.
43. Proportion wise Step Diagram showing the amount of reduction in Net Per Capita Water Demand achieved through (1) Each Demand reduction strategy (eg. Low flow fixtures, Xeriscaping etc.), (2) Recycling and Reuse.
44. Elaborated effects of the building activity in altering the microclimates with self-assessment on the likely impacts of the proposed construction on creation of heat island & inversion effects.
45. Give plan for managing, conserving the top soil excavated during construction and for its reuse. Give the extent of total soil excavation (in m3) proposed and where the excavated soil will be gainfully used.
46. Proposal should include provision for electric charging of the e-Vehicles as per Building Bye Laws..
47. Typical Floor Plans with dimensions to demonstrate how natural ventilation & day lighting is being achieved supported with screenshots of suitable software based out puts. Energy Simulation Modeling for the entire complex using appropriate softwares to be submitted along with the proposal.
48. Ideally the environmental clearance application along with EIA study should be submitted after preliminary 'In Principle Approval' from the local bodies duly rooted through development authorities in accordance with approved master plan
49. The Project Proponent should include a specific chapter for control of Dust Pollution during construction phase in the Environmental Management Plan incorporating the provisions mentioned in the guidelines issued by committee Guidelines/ mechanism for using Anti Smog Gun in construction and Demolition projects having built-up area greater

than 20,000 sqm issued by Department of Environment, NCT of Delhi, vide letter no. F. No.DPCC/(12)(1)(285)lab2020/2790-2810 dated 16.09.2021 available at https://dustcontroldpcc.delhi.gov.in/Upload/GuidelinesPDF/43/FilePDF_43_723774.PDF. Besides use of Anti-Smog Gun the Project Proponent shall ensure that environmental friendly Dust suppressant and soil stabilising chemical would be sprayed at prescribed interval on unpaved area of the construction sites to agglomerate the fine dust particles into aggregate too large to become airborne. This must be done in all those areas where there is movement of trucks and other construction machinery at frequent intervals to prevent formations of fine dust particles.

50. Project proponent install reference-grade (USEPA approved system) Continuous Particulate Monitoring System consisting of three nodes capable of monitoring dust emission from the construction site. The system must have the capacity for simultaneous monitoring of PM2.5 and PM10 and equip for data transfer on a real-time basis to the server of DPCC.
51. Proper management strategy for Bio-medical waste/ Liquid effluent as per Bio-Medical Waste Management Rules, 2016 and relevant guidelines of MoEF&CC/ CPCB.
52. Any Further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model TOR available on Ministry website <http://moef.nic.in/Manual/Townships>.

GENERAL GUIDELINES

1. The EIA document shall be printed on both sides, as far as possible.
2. All documents should be properly indexed, page numbered.
3. Period/date of data collection should be clearly indicated.
4. Authenticated English translation of all material provided in Regional languages.
5. The letter/application for EC should quote the MOEF & CC file no. and also attach a copy of the letter prescribing the TOR.
6. The copy of the letter received from the SEAC on the TOR prescribed for the project should be attached as an annexe to the final EIA-EMP Report.
7. The final EIA-EMP report submitted must incorporate the issues in TOR. The index of the final EIA-EMP report, must indicate the specific chapter and page no. of the EIA-EMP report where the specific issue raised have been incorporated.
8. Grant of TOR does not mean grant of EC.
9. The status of accreditation of the EIA consultants with NABET/QCI shall be specifically mentioned. The consultant shall certify that his accreditation is for the sector for which this EIA is prepared.

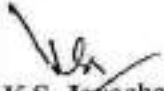
10. On the front page of EIA/EMP reports, the name of the consultant/ consultancy firm along with their complete details including their accreditation, if any shall be indicated. The consultant while submitting the EIA/EMP report shall give an undertaking to the effect that the prescribed TORs (TOR proposed by the project proponent and additional TOR given by the MOEF) have been complied with and the data submitted is factually correct (Refer MOEF office memorandum dated 4th August, 2009).
11. While submitting the EIA/EMP reports, the name of the experts associated with/involvement in the preparation of these reports and the laboratories through which the samples have been got analyzed should be stated in the report. It shall clearly be indicated whether these laboratories are approved under the Environment (Protection) Act, 1986 and the rules made there under (Please refer MOEF office memorandum dated 4th August, 2009). The project leader of the EIA study shall also be mentioned.
12. As stipulated in amendment notification No. S.O. 751(E) dated 17th February, 2020, the above ToR would be valid for a period of four years from the date of issue. The project proponent shall submit detailed final EIA Report and EMP prepared as per above ToR within the stipulated period of four years.
13. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India/National Accreditation Board of Education and Training (QCI/NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other Organization(s)/Laboratories including their status of approvals etc. vide notification of the MOEF dated 19.07.2013.
14. The Prescribed ToR would be valid for a period of four years for submission of the EIA/EMP Reports.
15. The EIA-EMP report submitted must incorporate the construction and demolition waste management plan with identification of waste disposal/ recycling site.

You are required to submit the detailed final EIA/EMP prepared as per ToRs to the SEAC for considering the proposal for environmental clearance. General guidelines shall also be considered for preparation of EIA/EMP.


(Dr. K.S. Jayachandran)
Member Secretary, SEIAA- Delhi

Copy to:

1. Member Secretary, Delhi Pollution Control Committee, 5th Floor, I.S.B.T. Building, Kashmere Gate, Delhi-110006.
2. Member Secretary, SEAC-Delhi, Delhi Pollution Control Committee, 5th Floor, I.S.B.T. Building, Kashmere Gate, Delhi-110006.
3. Master file EIA, DPCC.


(Dr. K.S. Jayachandran)
Member Secretary, SEIAA- Delhi