

# **BRIHANMUMBAI MUNICIPAL CORPORATION**

Chief Engineer (Solid Waste Management)Project

## **Expression of Interest - Sampling and testing of Legacy waste at Deonar Dumping Ground, for determination of Bio-mining potential**

1. Deonar dumping ground is operational since 1927. At present total area of Deonar dumping ground is about 120 Ha and quantum of waste accumulated is approximately 2 Crore CuM. The periphery of site is 6.5 km, having 2.5 km along habitant side (Landward side) and 4 km along non-habitant side (creek side). Daily about 1000 to 1200 MT waste is disposed at site in controlled manner.
2. BMC intends to bio-mine the accumulated legacy waste. For the purpose of Bio-mining, assessment to determine potential of Bio-mining of legacy waste needs to be carried out.
3. BMC intends to carry out sampling & testing of legacy waste on 32 ha land. The maximum height of the waste in this area is about 40 Mtrs. The Legacy waste for each 3 Mtr. depth will be collected as a batch and processed to obtain representative samples. Maximum 200 samples will be collected from about 15 bores depending upon site conditions.
4. The top surface of the Deonar dumping ground (DDG) would have altered due to compaction induced by the movement of heavy waste transportation trucks and frequent fires, which can result in erroneous sampling. Hence the contractor will scrap the top surface, which might have compacted over the years due to manmade activities.
5. The depth of the top surface that has to be scrapped, will depend upon the location of the borehole and will be decided in the most logical and scientific way during site investigations.
6. After scraping the top surface, a flight auger attached to a pile-driving unit will be gradually inserted into the landfill by providing mild steel casing protection. The diameter of the auger will vary between 150 and 200 mm based on site condition.
7. The drilling of boreholes need to be carried out without adding water. Further Sampling of decomposed municipal solid waste from landfills is challenging owing to the release of combustibile (CH<sub>4</sub>) and odorous (H<sub>2</sub>S and NH<sub>3</sub>) gases, which can possibly catch fire and release foul odour during sampling.

8. Moreover, such sampling might lead to the collapse of the borehole and caving in if waste is loosely compacted in the past.
9. The sample needs to be prepared following the standard quartering method, followed in the waste management sector.
10. Thereafter various tests must be performed in order to assess the bio-mining potential like TOC, Organic Matter, Silt-sand-gravel fraction, Plastic contents, Calorific value, pH value, moisture content, Heavy Metals, etc. through labs accredited by MoEF&CC or NABL.
11. If any leachate is generated, it will be separately collected, as per the standard procedure.
12. The complete procedure adopted for such sampling and testing will be given to BMC with the final report along with conclusion regarding bio-mining potential from MoEF&CC's empaneled environmental expert.
13. The bores shall be backfilled.
14. Interested entities, who have carried out such type of sampling & testing of Legacy waste are eligible to submit response to this document.
15. The response shall include details of entity, supporting documents demonstrating work experience in the format as in Annexure 1 & 2. The financial credentials shall be provided as per the format given in Annexure-3.
16. The brief write-up on proposed methodology shall be provided with EoI.
17. Interested entities need to submit response/ application to EoI in an envelope clearly marked "Expression of Interest - Sampling and testing of Legacy waste at Deonar Dumping Ground, for determination of Bio-mining potential" not later than 23.01.2023, 5:30 PM either by hand or by couriers or by email to the address given below.

Address: Brihanmumbai Municipal Corporation

Office of Chief Engineer (Solid Waste Management-Project), Bai  
Padmabai Thakkar Marg, Kotwadi, Mahim (Shivaji Park), Mumbai

– 400016, India, Ph. +91-22- 24320665

Email ID : che.swmproject@mcbgm.gov.in

18. Interested Parties may obtain further information from the below mentioned BMC Officer on working days between 11:00 Hrs. and 16:00 Hrs., excluding Saturdays and Sundays:

Mrs. Varsha Athalye, Executive Engineer (Solid Waste  
Management-Project) Mobile No.: +91-9833899436

19. BMC reserves the right to cancel this process of EoI at any stage without assigning any reason.
20. Anybody may please submit Suggestions/ Opinions/ Feedback to this EoI by email or at the address given above on or before 18.01.2023, 5:30PM.
21. Entities applying/ qualifying for EoI will be eligible for bidding for RFP.

**Sd/-**

**Dy. Municipal Commissioner (SWM)**

## Annexure-1

### Details of the Entity

Please provide details of the entity which is submitting an EoI for the project as follows

Name of Entity	Legal Status (Public/ Private Limited/ Proprietorship etc	Date of Establishment	PAN No	Contact Details			
				Name	Designation	Phone No	Email ID

## Annexure-2

### Details of work experience

Sr. No.	Name of Client	Description of project	Cost of Work	Work Status (completed/on-going)
1				
2				

All supporting documents to be submitted with EOI

### **Annexure-3**

#### **Details of Financial Credential**

FY	Turnover (INR)
2019-20	
2020-21	
2021-22	

All supporting documents to be submitted with EOI