Action Plan for Restoration of Illegal Municipal Dumping Site at Harda

In the Matter of

Original Application No.81/2023(CZ) (O.A.No.523/2022 - PB)
Sayed Mehmood Ali Chisti Vs State of Madhya Pradesh & Ors.

w.r.to

Hon`ble National Green Tribunal Central Bench order dated 23.08.2023

Date of Visit: 17th October 2023

Location: Municipal solid waste dump site Harda
District - Harda

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Action Plan for Restoration of Illegal Harda Dumping Site at Harda

Identification of Problem

Hon'ble NGT (CZ), Bhopal vide its order dated 2nd September, 2022 in the OA no. 523/2022 "Sayed Mehmood Ali Chisti Vs State of Madhya Pradesh & Ors" directed in para 1 and 3 as under:

1. *Mr. Sayed Mehmood Ali Chisti, a Senior Journalist, has sent the present letter petition, which is treated and registered as original application, complaining that hundreds of tonnes of garbage generated from Harda town, is being thrown out on the empty space between Muktidham and Kabristan located at Khandwa – Indore Bypass road. Dead bodies of animals including cows are also dumped, instead of cremating the same, at the above said dumping site. Old Basti named Khedi Mehmoodabad is also located near by the garbage dumping site. Every day garbage is being burnt causing serious health hazards to the local residents. Municipal Council, Harda is not taking requisite action.*

3. *Prima facie, the allegations made in the application raise questions relating to environment arising out of the implementation of the enactments specified in Schedule I to the National Green Tribunal Act, 2010. In view of the allegations made in the application, we consider it appropriate that a Joint Committee be constituted to verify the factual position. Accordingly, we constitute a Joint Committee comprising of representative of the State PCB Executive Officer, Municipal Council, Harda, and Collector, Harda and direct the same to meet within two weeks, undertake visits to the site, look into the grievances of the applicant, associate the applicant and other residents of the locality, verify the factual position and submit its report within one month by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Supported PDF and not in the form of Image PDF. The State PCB will be the nodal agency for coordination and compliance.*

The main issues raised in the petition by the Applicant

As contended by the Applicant the potential environmental and health risks posed by this non-treated waste and the dump - site in Harda are as under:

- *Hundreds of tonnes of garbage generated from Harda town, is being thrown out on the empty space between Muktidham and Kabristan located at Khandwa – Indore Bypass road. Dead bodies of animals including cows are also dumped, instead of cremating the same, at the above said dumping site. Old Basti named Khedi Mehmoodabad is also located near by the garbage dumping site*
- *Every day garbage is being burnt causing serious health hazards to the local residents. Municipal Council, Harda is not taking requisite action.*

Hon'ble NGT constituted a joint committee consisting of District Collector, Harda or his representative, Chief Municipal Officer, Harda Municipal Council, Harda and One representative from Madhya Pradesh Pollution Control Board, vide order dated 02.09.2022 for the proper investigation and to know the factual status. In compliance of the order, the joint committee conducted inspection of the

Municipal solid waste dumpsite on 28.09.2022 and submitted report.

Hon'ble NGT (CZ), Bhopal vide its order dated 23rd August 2023, imposed Environmental compensation of Rs. 102 lakhs on Municipal Council of Harda. Vide the same order directed in para 14 as under:

That being so, we direct Municipal Council, Harda to pay the said amount of Rs. 1.02 Crores within two months failing which action shall be taken for recovery of said amount in accordance with law. After collection of said amount, the same shall be utilized for remediation, rejuvenation and restoration of environment in accordance with the plan which shall be prepared by a Joint Committee comprising Madhya Pradesh Pollution Control Board, Collector, Harda and Divisional Forest Officer, Harda who shall prepare plan within two months and execution thereof shall be completed within four months thereafter.

Copy of the Order is enclosed at **Annexure I.**

Meeting of the joint Committee

In compliance of the above order, a meeting of all members of Joint Committee and Chief Municipal Office, Municipal Council Harda District Harda was conducted on 17/10/2023 in the office of District Collector Harda to discuss the direction given by Hon'ble NGT in para no. 14 & deliberation were made to finalize the steps to taken on the compliances in the order.

Following officers were present during meeting:-

1. *Shri Rishi Garg, District Collector Harda*
2. *Shri Anil Chopra, District forest officer Harda, District Harda*
3. *Shri Abhya Saraf, Regional Officer, Regional Office, M.P. Pollution Control Board, Mandideep, District – Raisen.*
4. *Shri Sanjeev Kumar Nagu, Deputy, collector Harda.*
5. *Shri Kamlesh Patidar, Chief Municipal Officer, Municipal Council Harda, District- Harda.*

After the meeting municipal solid waste dumping site, Harda was inspected on dated 17/10/2023 by the following Officers:-

i. *Shri Sanjeev Kumar Nagu, Deputy, collector Harda.*
ii. *Shri Abhya Saraf, Regional Officer, Regional Office, M.P. Pollution Control Board, Mandideep, District - Raisen*
iii. *Shri Kamlesh Patidar, Chief Municipal Officer, Municipal Council Harda, District- Harda.*
iv. *Shri Aditya Lange, Assistant Engineer (C) Regional Office, M.P. Pollution Control Board, Mandideep, District – Raisen.*
v. *Smt Neha, Assistant Engineer, Municipal Council Harda, District- Harda,*
vi. *Shri Shrikishna Bohre, Sub Engineer, Municipal Council Harda, District- Harda*

The photographs taken during the site visit are enclosed as **Annexure II.**

Factual Status

i. At the site municipal solid waste was found to be dumped in an un-scientific manner without any storm water drain, leachate collection system, approach road to reach the end point, fire safety system and security arrangement. Partial fencing was found only in some part of

disputed dumping site. The Google map showing the illegal MSW dumpsite is enclosed at **Annexure III**.

ii. As per DPR, the waste spread area to be reclaimed is 22403 Square meter land of Municipal Council Harda (as per column no. 12 of khasra) and total quantity of waste is about 14678 metric ton. Copy of the DPR collected from the Municipal Council, Harda is enclosed as **Annexure IV.** As informed by the CMO of Municipal Council Harda that total generation of municipal solid waste from 35 wards is about 20 MT/day.

iii. The deposited waste also was not covered or compacted and most cases in these open dump sites waste remains susceptible to open burning.

iv. The existing dump site pose significant health hazards both to the people involved in the operations and to the general public living in the neighbourhood, as there was no arrangements to control odour nuisance and pest infestation in disputed site.

v. The Municipal Council Harda is continuously dumping/ disposing/ storing of municipal solid waste at disputed land.

vi. CMO Municipal Council Harda informed that, the DPR for processing and disposal of legacy waste has already prepared & tendering process has been completed and awarded the work to M/s Altech Enviro Pvt. Ltd on dated 04/05/2023. Copy of the work order issued by the Municipal Council, Harda is enclosed as **Annexure V.**

vii. As per the Municipal Council Harda, new site has been identified at Khasra no.- 27/4 & 27/5, area- 6.07 Ha. in Village- Nahadiya Tesile- Harda District- Harda for disposing of municipal solid waste collected from Harda City. The demarcation of said land still awaited. Copy of land allotment letter enclosed as **Annexure VI.**

viii. At the time of inspection burning of solid was observed at the site and fire brigades were also engaged for extinguishing the fire. However, CMO of Municipal Council Harda has informed that some anti-social element/rag pickers burned the solid waste during the last night.

ix. The Municipal Council Harda has provided material recovery facility which was found non operational during the visit due to heavy flood in the Ajnal river in last month i.e. September 2023. Composting facility at the dumping site was operational during the visit.

x. There is no mechanism of fire safety arrangement at the MSW site but municipal council has fire fighting vehicles which are used at the time of fire at dumping site.

xi. The ambient air quality monitored around the MSW dumpsite at two locations i.e. at upwind and downwind directions by MPPCB. The copy of the monitoring report is enclosed as **Annexure VII.**

xii. At present there is storm water & leachate was found accumulated in open area at the site and joining to river through nallah. MPPCB has carried out water samples from three locations (Leachate/storm water, nallah joining to Ajnal river and after mixing of nallah into river) and analyzed for the relevant parameters. The copy of the monitoring report is enclosed as **Annexure VIII.**

xiii. The site is affected by foul odour and several animal and pests were observed in and around which can further act as vectors to the surrounding people. Dead bodies of animals were also observed being disposed.

Proposed Plan for Remediation/ Restoration/ Recovery of site Dispute

Identification of Problem	Adverse effect on environment	Proposed Action	Responsible Agency	Impact
Very Short-Term Action Plan				
Insect, animal vectors and pest infestation in and around the trenching area and odour nuisance due to accumulation of legacy waste.	Increasing the likelihood of fly-breeding and rodent infestation.	The site must be covered with proper but temporary fencing.	Municipal Council, Harda	Further scattering of waste, unauthorised entry of rag pickers and entry of cattle and other animals which may act as vectors of diseases and pest infestation, will be avoided.
	Unhealthy atmosphere due to generation of foul odour.	To adopt latest control measures for abatement of odour nuisance/ pollution at the dumping site during treatment of waste. If felt necessary, herbal/ biological sanitizers may be used for control of odour.	Municipal Council, Harda	The problem of foul odour will be minimized.
Oozing out of leachate	Contamination of air, surface & ground water and soil of adjoining farms and River Ajnal.	Pre- monitoring of pollution Air, water (ground & surface)) and Soil quality, of Bio- Mining & Bio- remediation and summit the monitoring reports to ROMPPCB. During preparation of wind rows, if any dead animals is found will be send for incineration for proper disposal.	Municipal council, Harda	The level of contamination may be determined properly and based on the outcomes of the monitoring reports if required further remediation/ restoration plan may be revised and implemented accordingly.

Short-Term Action Plan				
Accumulation of legacy waste in the site As per DPR prepared by Municipal Council, Harda around 14678 metric tons of legacy waste is dumped illegally and in unscientific manner in an area of about 22403 Square meters.	Produces leachate (liquid generated by anaerobic environment) which pollutes groundwater. Generated Methane etc. which may cause frequent outbreaks of fire at the dumpsites may lead to air pollution. Odour nuisance and pest infestation at the dumping site.	**<u>First Phase of restoration:</u>** 1. To conduct survey or drone mapping of disputed dump site. 2. It is needed to stop further disposal and dumping of waste in the illegal site. 4. Site environment parameters such as baseline study of heavy metals in surface and subsurface soils and water, rainfall, soil type, surface hydrology, topography, wind direction etc. must be studied prior to the bio-remediation and bio-mining process. 6. The legacy waste need to be loosen and make windrows (Proper gap to make small heaps of waste) so as the leachate can be dried of through solar exposure and all the entrapped methane is removed from the heap. Air drying of the waste also reduces the volume up to 30 to 40%.	Municipal Council, Harda	Reduction of all the waste dumped in volume by bio-remediation and bio-mining and waste processing.
Inadequate fire safety mechanisms.	Occasional outburst of fire incidents due to anaerobic condition or public nuisance resulting to burning of combustible plastics, cloth and oily rags. Sometimes digging into the dump during	Adequate arrangements of fire-fighting system/ fire extinguisher may be made instead of using water for fire-fighting, which may increase the generation of both methane and leachate. Using of soil cover to control the flames is also not suggested as soil will increase the material to a heap.	Municipal Council, Harda	

	bio-mining also awakens hidden fires.			
Pollution of water bodies due to leachate and surface runoff. Contamination of surface and ground water of adjoining farms and River Ajnal.	Probable contamination of ground water in agriculture field and drain joining to river Ajnal.	The probability of leachate generation is very less as the waste is spread in a wide area rather than formation of heap. However, during treatment the waste proper leachate collection and treatment system must be installed. In case of generation of Leachate it must be treated in collection ponds by underwater composting. Intermittent aeration is very necessary using small compressor pumps or aerators or airlift aeration or even simple manual or mechanical agitation.	Municipal Council, Harda	After treatment leachate can be used as bio-cultures and can be sprinkled onto the leachate pools.
Long-Term Action Plan				
Emission of Methane, NO_2, SO_2, CO, H_2S, NH_3 and Volatile Organic Compounds (VOCs) from unregulated burning of the dumped waste.	Air quality of the area and around the area will degrade resulting in health risk of workers and residents around the site.	Proper precautions like wind breaking sheets should be used while processing/ treatment/ handling/ transportation of waste at the site to prevent the fugitive emissions/ air pollution. An onsite emergency plan should be prepared and made available on site prior to commencement of dumpsite bio-remediation & bio-mining. Assessment of soil quality in and around dumpsite must be done.	Municipal Council, Harda	Following these steps pollution load on air may be reduced which may generate from the treatment process.

Accumulation of legacy waste in the site: As per DPR prepared by Municipal Council, Harda, around 14678 metric tons of legacy waste is dumped illegally and in unscientific manner in an area of about 22403 Square meters.		**<u>Second Phase of restoration</u>**: Stabilized waste must be screened out according to different size fractions that can be usefully used off-site or disposed of scientifically following the guidelines of CPCB without affecting the environment. Commonly 150 mm. 80 to 100 mm, 24 to 50mm, 12- 16 mm and 4-6 mm screen sizes are used.	Municipal Council, Harda	After completion of this step complete waste can be get rid of and the space can completely be cleaned up.

The following recommendations may be implemented during the bio-mining and bio-remediation of MSW dumpsite at Harda for restoring the environment in total:-

1. Further disposal of the waste collected must be done only in the newly allotted landfill site after taking necessary statutory permissions and the disposal of waste in other illegal sites must be restricted.
2. The materials recovered from the bio-mining process i.e. RDF, C&D waste, inert material, Bio-compost and other recyclable materials should be disposed as per the CPCB guidelines.
3. The recovered earthy fines (bio-earth) shall preferably be used for landscaping or gardening or road medians etc.
4. The bio-mining/ bio-remediation work may be done under the supervision of Municipal Council, Harda with intimation to RO, MPPCB, Mandideep. The work may be completed within four months' time as per order passed by Hon'ble NGT.
5. The Municipal Council Harda shall also carry out environmental pollution (Air, water (ground & surface)) and Soil quality Pre, during and Post duration of Bio- Mining & Bio-remediation and summit the monitoring reports to ROMPPCB. Based on the outcomes of the monitoring reports if required further remediation/ restoration plan may be revised and implemented.
6. The Municipal Council Harda shall carryout thick plantation all around the disputed dumping site.

(Abhay Saral)
Regional Officer
M.P. Pollution Control Board,
Mandideep

(Anil Chopra)
District Forest Officer Harda

(Rishi Garg)
District Collector Harda

Item No.02

BEFORE THE NATIONAL GREEN TRIBUNAL
CENTRAL ZONAL BENCH, BHOPAL

(By Virtual Mode)

Original Application No.81/2023(CZ)
(O.A.No.523/2022 - PB)

Sayed Mehmood Ali Chisti Applicant(s)

Versus

State of Madhya Pradesh & Ors. Respondent(s)

Date of hearing: 23.08.2023

CORAM: HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER

For Applicant(s) : None

For Respondent(s): Ms. Parul Bhadoria, Adv. for State of M.P.
Mr. Raghav Sharma, Adv., MPPCB
Mr. Abhay Saraf, RO, MPPCB, Mandideep

ORDER

1. This case shows a really unfortunate and condemnable State of Affairs in the area of operation of Municipal Council Harda, District Harda, where huge quantity of solid waste is being dumped illegally and unscientifically on open land without having any proper arrangement for segregation, processing etc., and in utter violation of provisions of Solid Waste Management Rules, 2016 (hereinafter referred to as '**SWM Rules, 2016**').

2. Facts in brief are that taking *suo-moto* cognizance, a letter petition dated 28.04.2022, sent by Mr. Sayed Mehmood Ali Chisti, a Senior Journalist, complaining about dumping of solid waste near Muktidham

and Kabristan on open land at Khandwa Indore by-pass in utter violation of SWM Rules, 2016, was registered as Original Application (hereinafter referred to as '**OA**') by this Tribunal and vide order dated 02.09.2022, it constituted a Joint Committee comprising (i) Representative of State PCB, (ii) Executive Officer Municipal Council, Harda (iii) Collector, Harda to visit site, collect information in association with the applicant and other residents of the locality, verify factual position, and submit a factual Report.

3. Pursuant thereto, Joint Committee inspected the site on 28.09.2022 and has submitted Report confirming dumping of solid waste on open land in an unscientific manner and in violation of SWM Rules, 2016. The observations, conclusions and recommendations made by Joint Committee in its Report, filed vide letter dated 07.11.2022, reads as under:

"***Observations***:

1. *GPS location of the dumping site of Municipal Council Harda, District Harda has been recorded using a mobile-based GPS application. The google map of the site and photographs taken during the inspection are enclosed as Annexure-0l. The geographical coordinates of dumping site Harda are 22.336506 N,77.078254 E and marked on google map. The residential area is located adjacent to site in North-West direction.*

2. *As informed, the site was around 70-80 years old dumping site existing in an area of 1.09 hectare where the complete solid wastes generating from the Harda city is being dumped unscientifically manner. Approximate 16000 Tons olMunicipal waste has been dumped at this site.*

3. *The land of this site belongs to Municipal Council Harda. The land documents are enclosed as Annexure-02.*\

4. *During the inspection it has been observed that Municipal Council Harda is not comply with the Solid Waste Management Rules, 2016 and directly dumping through tractor trolley at the dumping site without segregation of the waste. No barbed fencing around the site has been provided.*

5. *At the time of inspection buming of solid was not observed at the site by the committee members. However petitioner inform that during the summer season some anti-social elements/Rag*

pickers bumed the solid waste which may causes health issue to local residents but no such kind of information given by the local residents. CMO of Municipal Council Harda has also filed the FIR against such kind of burning activities. The copy of FIR is enclosed as Annexure-3.

6. *The Municipal Council Harda has provided material recovery facility and composting facility near by the dumping site which was found non-operational during the inspection. The above facilities has established at the adjacent to river Ajnal. CMO, Harda informed that due to heavy flood in the river in this rainy season the nearby area submerged. Due to this MRF centre and composting facility has been discontinued and is going to start shortly.*

7. *Present site is not suitable for the disposal of Solid waste so that CMO Harda has requested to commissioner, UADD for allotment of suitable site. The copy of request letter is enclosed as Annexure-04.*

8. *As informed by the CMO Harda, dead body of animals including cows are being disposed in proper manner by using deep burial method and during the inspection no dead animals were found at the site.*

9. *This has been informed by the CMO Harda that Municipal Council Harda, under SBM 2.0 has drafted action plan for Dumpsite Remediation as per Govt norms and DPR for the same has been prepared and has been submitted to the Division for approval, upon which the tenders will be floated for the same. The copy of Action plan and DPR is enclosed as Annexure-05.*

Conclusion:-

The solid waste of the Harda city is continuously being dumped unscientifically in the open land and the arrangements for segregation, processing of waste and sanitary landfills are not available at the site for the disposal of solid waste as mentioned in the SWM Rule 2016."

Recommendations:

1. *According to the Solid Waste Management Rules 2016, the responsibility of collection, segregation, storage, transportation, treatment and disposal of Municipal solid waste lies with the local body hence Municipal Council, Hard should comply with the Solid Waste Management Rules, 2016.*

2. *Site should be immediately fenced & movement of animals should be restricted. The petitioner Mr. Sayed Mehmood Ali also requested the same for immediate action.*

3. *Municipal council, Harda shall immediately start the material recovery facility and composting facility at the site.*

4. *Municipal council, Harda should take immediate initiation with district administration for the allotment of new landfill site & shall all provisions of Solid Waste Management Rules 2016."*

4. Report was considered by Tribunal on 14.12.2022 and in the light of the findings recorded by Joint Committee, Tribunal impleaded (i) State of Madhya Pradesh through Chief Secretary, Government of Madhya Pradesh, (ii) Principal Secretary, Urban Development and Housing Department, Government of Madhya Pradesh, (iii) Executive Officer, Municipal Council, Harda, (iv) MPPCB and (v) Collector, Harda as respondents no. 1 to 5, issued notices to them and directed them to file their responses.

5. Pursuant to order dated 14.12.2022, respondents 3 and 5 i.e., Executive Officer, Municipal Council, Harda and Collector, Harda have collectively filed their reply dated 14.03.2023, stating that recommendations of Joint Committee and deficiencies/violations noted therein were communicated by Regional Officer, Madhya Pradesh Pollution Control Board (hereinafter referred to as '**MPPCB**'), District Raisen to Chief Municipal Officer (hereinafter referred to as '**CMO**') Municipal Council, Harda vide letter dated 21.10.2022. In reply, Chief Municipal Officer, Municipal Council, Harda sent letter dated 24.11.2022 stating that from 2017, for disposal of solid waste, a temporary MRF Centre and composting unit has been established where segregated dry and wet waste received from the city, is disposed and the inert is sent to dump site. Due to increase in population, quantity of waste has increased, hence, additional land is required for constructing another landfill for which at village Rahnai Kalan, 10 acres land has been identified, and letter has been sent to Collector, Harda for allotment of the said land. It is expected that the said land shall be allotted very soon. Besides, for dumping site remediation work, tenders has been invited and

after completion of tender proceedings, solid waste collected at the dumping site shall be processed. Further for collection of solid waste from city, 24 vehicle are being used in which segregated dry and wet waste is transported and brought to MRF Centre and Composting unit. For removal of legacy waste of 14678 metric tonnes, in consultation with State Governments selected Consultant, Detailed Project Report with the estimate of 80.72 lacs has been prepared and further proceedings including tendering is under consideration. After completion of the proceedings and bio-remediation and bio-mining of legacy waste, 22403 sq. meter of land shall be free of the waste.

6. With regard to closure of MRF Centre and composting shed, it is said that during July to October, there was extra-ordinary rain in the city which caused flood situation which compelled closure of MRF Centre for some time but now after repair, it has been made functional. Respondents no. 3 and 5 have also given point-wise reply to the deficiencies/violations found by Joint Committee, in para 7, as under:

> ***"7. Point wise response to the short comings/deficiencies found during inspection and observations made by the committee:-***
>
> ***i. The Municipal Solid Waste Approximate 16000 Tons is being dumped in unscientific manner at the dumping site existing since last 70-80 years.***
>
> ***In Response:***
>
> *It is submitted that for the purpose of disposal of solid waste a temporary M.R.F Centre has been established and Composting Facility has also been arranged by the Municipal Council Harda whereby the solid waste collected from District Harda is properly segregated meaning thereby the dry waste is properly segregated from wet waste for its composting and accordingly the remaining inert is sent to the dumping site.*
>
> *It is further noteworthy to mention over here that due to the expansion of the city and increase in population, the Municipal Council Harda needs adequate and suitable land for create landfill facility for solid waste management and for which 10 acres of land has been identified in village Ranhaikalan and an online application has been made in the office of Collector*

District Harda which is registered as application number 0550030101013-APP -15405335. The above mentioned land is likely to be allotted soon, after which proper arrangements will be made for the scientific solid waste management as per the instructions of the State Government. A copy of the online application form is marked and filed herewith as ANNEXURE R-3/3.

Further, Municipal Council Harda, under SBM 2.0 has drafted action plan for dump site remediation as per Government norms and DPR for the same has been prepared and also been submitted to the Division for approval, upon which the tenders will be floated for the same. The copy of the DPR and NIT is marked and filed herewith as ANNEXURE R-3/4

ii. The Municipal Council was found dumping solid waste without segregation directly through tractor trolley at the dumping site.

In Response:

It is submitted that the Municipal Council Harda uses 24 garbage collection vehicles for collection of domestic solid waste in which dry waste and wet waste, harmful infectious waste are collected and segregated, proper arrangements for processing of waste and the waste collected from the city is sent to M.R.F Centre and Composting Facility. The photographs depicting the subjective dumping site is marked and filed herewith as ANNEUXRE R-3/5

iii. As security measures no barbed fencing and security guards was provided at dumping site and due to which the previous complaints of burning of solid waste were received.

In Response:

The Municipal Council Harda for the removal of the already dumped solid waste of 14678 metric tonnes has allotted the remediation work to the consultant appointed by the State Government and for the purpose of carrying out the dumping site remediation work, the amount of Rs 80.72 Lakhs is invested for preparation of Detail Project Report (In short DPR). The said DPR is approved by the State Level Technical Committee and in pursuance of the approval the Tender was floated by the Municipal Council Harda on 03/02/2023 and the bids were made, the technical bid is already opened on 09/03/2023 and the financial bid will be opened shortly, after the tender process is completed the consultant appointed will ensure the work of Bio Remediation and Bio Mining and will also ensure the security measures and barbed fencing around the dumping site and accordingly 22403 sq mt of land will be garbage free.

It is further submitted that Chief Municipal Officer Municipal Council District Harda has also lodged the FIR on 27/10/2021 at Civil Line Police Station District Harda against Rag Pickers

which got registered as FIR No. 0526 for the offences under section 270, 285 and 34 of IPC for burning solid waste and thereby causing health hazard to the local residents. The copy of the FIR is marked and filed herewith as ANNEXURE R- 3/6.

iv. The Established Material Recovery Facility Centre Composting Shed was found non-operational.

<u>In Response</u>:

It is most respectfully submitted that the M.R.F Center Composting Shed established for the disposal of solid waste is operational. it will not be out of place to mention that due to the heavy rainfall in 2022 between July to October, flood situation aroused in the several areas of the city due to which the M.R.F Centre was closed for some time as the same was damaged due to the natural calamities but now at present, all the necessary repair work has already been carried out by the Municipal Council Harda and the M.R.F Centre has been made functional. The copy of photographs of M.R.F Center is marked and filed herewith as ANNEXURE R-3/7"

7. Regional Officer, MPPCB, Mandideep filed an updated status of dumping site vide letter dated 20.03.2023, which shows current situation as under:

"1. डम्पिंग साईट वार्ड क्र.-31, मुक्ति धाम के पास स्थित है। डम्पिंग साईट के चारों ओर आवारा जानवरों की आवाजाही को रोकने के लिए कटीले तारों की फेंसिंग की गयी है।

2. डम्पिंग साईट के निकटस्थ स्थित मटेरियल रिकवरी सेंटर जिसकी क्षमता 12 टन/ दिन की है, जोकि पूर्ण रूप से कार्यरत पाया गया। डम्पिंग साईट में अपशिष्ट के भंडारण के पूर्व हरदा नगर से एकत्रित किये जाने वाला नगर अपशिष्ट पृथक करने के पश्चात् बायोकम्पोस्टिंग के माध्यम से खाद तैयार किया जाना पाया गया।

3. मटेरियल रिकवरी सेंटर में कम्पोस्टिंग करने के पश्चात् इनर्ट कचरे को ही डम्पिंग साईट में डम्प करने हेतु भेजा जाना पाया गया।

4. निरीक्षण के दौरान डम्पिंग साईट पर किसी भी जानवरों को नहीं देखा गया तथा मटेरियल रिकवरी सेंटर में कार्यरत कर्मियों की सुरक्षा का ध्यान रखते हुए गम-बूट, हेलमेट तथा हैंडग्लोब्स प्रदान किये गये।

5. डम्पिंग साईट पर तथा साईट के निकटतम किसी भी प्रकार के अपशिष्ट का जलाना नहीं पाया गया।

6. निरीक्षण के दौरान लिए गये फोटोग्राफ्स संलग्न है।"

"1. Dumping Site of Ward No.-31 is situated near Mukti Dham. Fencing of barbed wire has been done to stop the movement of stray animals around the dumping site.

2. The Material Recovery Center located near the dumping site with a capacity of 12 tones was found fully functional. Fertilizer was prepared through biocomposting after separating the municipal waste collected from Harda town before storing the waste in the dumping site.

3. After composting in the Material Recovery Center; inert waste was sent for dumping at the dumping site.

4. No animals were seen at the dumping site during the inspection and keeping in mind the safety of the personnel working at the Material Recovery Center, gum boots, helmets and dust gloves were provided.

5. No burning of any kind of waste was found at the dumping site and near the site.

6. Photographs of the inspection are attached."

(English Translation by Tribunal)

8. Reply of respondent no.3 and 5 along with Joint Committee Report was considered on 21.03.2023 by this Tribunal. It was observed that general averments have been made regarding remedial measures which are in fact yet to be taken, land for creating landfill facilities for solid waste management is yet to be allotted, tender for bio-remediation and bio-mining of legacy waste is yet to be awarded and material recovery facility and composting shed which were non-operational are yet to be made fully operational for effective processing of solid and liquid waste. Consequently, Tribunal directed respondents 3 and 5 to file additional reply, giving action plan with specific timelines, budgetary allocations and all requisite details regarding solid and liquid waste management.

9. An additional reply dated 25.07.2023 has been filed by respondents no. 3 and 5, stating that vide order dated 24.07.2023, land for construction of landfill site at Khasra no. 27/4 and 27/5, total area 6.070 hectares at village Nahadiya, Tehsil Harda and District Harda has been allotted. Land allotment process has been carried out under Swachh

Bharat Mission 2.0, scheme of State Government to prepare solid waste processing centre and district level sanitary landfills. Municipal Council, Harda has allotted work order of Rs.80,92,900/- in favour of M/s Altech Enviro Private Limited with regard to bio-remediation work of legacy waste at dump site. Consultant will also ensure security measures and covering the dump site by raising barbed fencing around the area. Total land of solid waste and bio-degradable waste generated in District Harda is 8-10 tons per day and 10-12 tons per day respectively and further present treatment facility available for disposal of municipal solid waste is 12 tons per day and for bio-degradable waste it is 19-20 tons per day. Municipal Council, Harda has issued work order in favour of Shankar Ganga Ram Harda for the purpose of solid waste segregation and composting work at waste processing set up. Material Recovery Facility Centre and Composting Facility at Harda is operational where solid waste collected from city is properly segregated i.e., dry waste is segregated from wet waste for its composting and inert is sent to dumping site.

10. It is said that respondents no. 3 and 5 are duly complying and adhering to SWM Rules, 2016 and work of municipal solid waste collection, segregation, storage, transportation, treatment and scientific disposal of municipal solid waste is continuously being carried out by the concerned authorities.

11. Learned Counsel appearing for State of Madhya Pradesh and Collector, Harda stated that substantial progress in compliance of SWM Rules, 2016 has already been shown and whatever work is remaining, the same shall be completed within four months i.e., by 31.12.2023.

12. With regard to past violation, however, when questioned, Learned Counsel for respondents could not dispute that Municipal Council, Harda

is liable to pay 'environmental compensation' on the Principle of 'Polluter Pays'. Total quantity of legacy waste/solid waste illegally dumped and collected on the open land in utter violation of SWM Rules, 2016 was about six thousand metric tonnes.

13. We are informed by Shri Abhay Saraf, Regional Officer, Mandideep who is present, that environmental compensation of Rs.1.02 Crores has already been assessed and imposed upon Municipal Council, Harda vide MPPCB's order dated 24.12.2021.

14. That being so, we direct Municipal Council, Harda to pay the said amount of Rs. 1.02 Crores within two months failing which action shall be taken for recovery of said amount in accordance with law. After collection of said amount, the same shall be utilized for remediation, rejuvenation and restoration of environment in accordance with the plan which shall be prepared by a Joint Committee comprising Madhya Pradesh Pollution Control Board, Collector, Harda and Divisional Forest Officer, Harda who shall prepare plan within two months and execution thereof shall be completed within four months thereafter.

15. We also direct that on and after 31.12.2023, no solid waste shall be dumped or collected at the site in dispute. Strictly, provisions of SWM Rules, 2016 shall be followed and complied with by Municipal Council, Harda.

16. Monitoring of this direction shall be the responsibility of MPPCB and its officials and if they find any further violation, appropriate legal action which shall include criminal action as well as imposition of environmental compensation, be taken against defaulters/violators including Municipal Council, Harda.

17. With the above directions, this application is disposed of.

Sudhir Agarwal, JM

Dr. Afroz Ahmad, EM

August 23, 2023
Original Application No.81/2023(CZ)
MK

Illegal MSW dumpsite of Municipal Council Harda located near Muktidham and Kabristan Khandwa – Indore Bypass road.

Visit of officer at illegal MSW dumpsite of Municipal Council Harda on dated 17.10.2023.

Composting facility at illegal MSW dumpsite of Municipal Council Harda

Material recovery facility at illegal MSW dumpsite of Municipal Council Harda

Nallah joining to Ajnal river near the illegal MSW dumpsite of Municipal Council Harda

Storm water & leachate accumulated in open area near the illegal MSW dumpsite of Municipal Council Harda

Annexure III

Detailed Project Report (DPR)
for
Processing & Disposal of Legacy Waste in Harda

[Division Bhopal, District Harda]

(Draft Stage)

Submitted To
Nagar Palika Parishad Harda
Harda,
Madhya Pradesh 461331

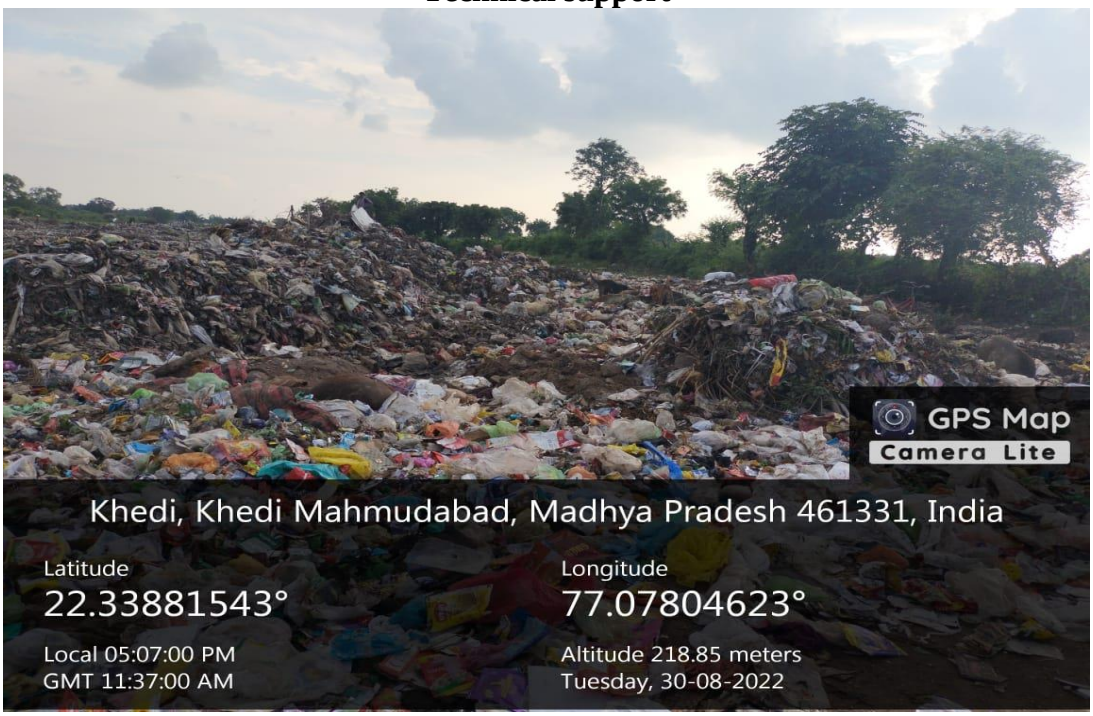
Submitted By
MaRS Planning & Engineering Services Pvt. Ltd. In consortium with Pivotal Planning Services
#309, "ARISTA", Sindhu Bhavan Road,
Off SG Highway, Bodakdev,
Ahmedabad - 380 059. Gujarat (INDIA)

September 2022 / REVISION 0/Slot 0

Detailed Project Report (DPR)

Name of Project	:-	**Processing & Disposal of Legacy Waste at an existing dumpsite in Harda** [Division Bhopal, District Harda]
Estimated Legacy Waste	:-	**~0.15 Lakh MT**
Estimated Time of Completion	:-	**~ 4 Months**
Estimated Project Cost	:-	**₹ 80,72,900.00** **(~Rs. 80.72 Lakhs)**

Technical support



MaRS in joint venture with PIVOTAL PLANNING SERVICES

Disclaimer

This report is prepared on the basic data produced, analysed and obtained from the secondary sources like CDP, DPR, site visit and consultation with the stakeholder & ULB Officials. Every effort has been taken to check the accuracy of the data source however this cannot be construed as fully reliable. The objective of the report is to firm up the policy level decision making for the project. However, Consultants cannot be held responsible for the decision taken solely based on this report.

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A. Project Background

1. Introduction

1. The most prevalent method of disposal of Municipal Solid Waste has been open dumping, for most of India's history. The accelerated growth of urban population and increasing economic activities rule out the viability of this method any longer.

2. Swachh Bharat Mission since 2014 has introduced several scientific methods in MSWM. Environmental adjudication has also mandated the scientific remediation of dumpsites. The fact that many old dumpsites and landfills in the country pose threat to public health and the environment necessitates action to remediate dumpsites and reclaim the land being degraded.

3. After decades of use, the open dumps have grown larger and higher, becoming huge point sources of pollution. Waste rotting in these dumps produces leachate, a foul dark liquid concentrate that kills vegetation in its path and irreversibly pollutes groundwater. The heaps of garbage also produce methane, a greenhouse gas that causes 21 times more global warming than carbon dioxide. Methane often auto-ignites, causing fires in the dumpsites, generating smoke and emissions thereby severe air pollution.

4. It is estimated that more than 10,000 hectares of urban land is locked in these dumpsites in India. In the absence of exposure to air, these dumpsites in the absence of oxygen generate methane (a greenhouse gas) and other landfill gases, which contribute to global warming. They also produce leachate (liquid generated by dumped) waste) which pollutes groundwater. Frequent outbreaks of fire at the dumpsites lead to air pollution. The presence of these dumps encourages further dumping at these sites, even though they are filled beyond capacity to take any more waste.

5. The Directorate, Urban Administration and Development (UADD) has appointed MaRS Planning & Engineering Services Pvt. Ltd. in consortium with Pivotal Planning Services for Preparation of Detailed Project Report (DPR), Transaction Advisory and Provide Supervision & Monitoring Services for Implementation of Solid Waste Management Projects for ULBs in the State of Madhya Pradesh for **Bhopal Division under SBM-Urban 2.0 vide Letter of Empanelment (LoE) No. 7615 Dated 22/04/2022 for Bhopal Division.**

6. The Consultant has undertaken the field survey and data collection on 30/08/2022**.** This report outlines the survey data, analysis, methodology and finally gives the quantity of waste which needs to be cleared through bioremediation / capping.

2. Project formulation Justification (need for the project)

7. The Government of India has notified the Solid Waste Management Rules (SWM) Rules, 2016 for proper and effective management of municipal solid waste (MSW). Under the SWM Rules, 2016, following provisions have been made to manage old dumps of MSW.

Rule 15 - Duties and responsibilities of local authorities and village Panchayats of census towns and urban agglomerations. *- The local authorities and Panchayats shall,*

- *investigate and analyze all old open dumpsites and existing operational dumpsites for their potential for bio-mining and bio-remediation and wherever feasible, take necessary actions to bio-mine or bioremediate the sites;*
- *in absence of potential of bio-mining and bioremediation of dumpsites, they shall be scientifically capped as per landfill capping norms to prevent further damage to the environment.*

Further, provisions under Schedule I (j) are given below:

- ***Schedule-I*** (j) – Closure and Rehabilitation of Old Dumps-Solid waste dumps which have reached their full capacity or those which will not receive additional waste after setting up of new and properly designed landfills should be closed and rehabilitated by examining the following options:
  - *i. Reduction of waste by bio-mining and waste processing followed by placement of residues in new landfills or capping as in (ii) below.*
  - *ii. Capping with solid waste cover or solid waste cover enhanced with geomembrane to enable collection and flaring / utilization of greenhouse gases.*
  - *iii. Capping as in (ii) above with additional measures (in alluvial and other coarse-grained soils) such as cut-off walls and extraction wells for pumping and treating contaminated ground water.*
  - *iv. Any other method suitable for reducing environmental impact to acceptable level.*

8. The Advisory on Landfill Reclamation released by Central Public Health and Environmental Engineering Organization (CPHEEO) in June 2020 clearly suggest to undertake a total station survey or drone mapping of all dumping site for estimating the quantity of Dump prior to start of the project.

9. The major deficiencies associated with the dumpsite in **ULB** are as under.

- The current dumpsite is growing in size, becoming an eyesore for these cities, causing considerable social, economic and environmental losses to surroundings.
- The Municipal administration will soon have to deal with the fact that these dumpsites will soon be unable to take in any more waste, and it is imperative that they are proactive in tackling this issue.
- The current dumpsite has neither a lining nor a daily covering and receive mixed and untreated waste which has a large organic fraction. The open dumpsites pose serious health risks such as groundwater pollution caused by leachate seeping into the ground, air pollution, vector-borne diseases, hazardous landfill fires, and unaesthetic appearance. in addition to the environmental losses, the dump site causes social and economic losses to the nearby people due to the stigma around dumpsites.

3. Project Objective

10. The following are the project objectives-

- To study the existing legacy dump and its surroundings and delineate the area for undertaking a topography survey in consultation with ULB Officials.

- To take a sample of waste and undertake waste characterization.
- To undertake a Topographical and Contour Survey at the delineated site.
- To Generate Contour Maps and Relevant Drawings
- To undertake required analysis for estimating the Quantity of Legacy Waste
- To clear legacy waste dumps in as per Government guidelines and to reclaim the land for other infrastructure creation.

4. Consultant Scope of Work

11. The following are the scope of work for the assignment-

a) Preparation of Detailed Project Report (DPR)

- Quantifying the complete waste at the legacy site
- Description/ estimates of volume, area, average heights, type of waste
- Carryout total station survey of complete project site including area earmarked in which reclamation is to be done.
- Take relevant sample of waste and undertake waste characterization for resource recovery estimations
- Prepare preliminary assessment of dumpsite on the basis of the data obtained from survey
- Provide maps, calculations of legacy waste at site
- Present technical solutions for the reclamation of Land.
- Prepare Detailed Project Report (DPR) for chosen technology option with timelines, steps, Engineering Design, Requirements, detailed costs and implementation models etc.
- Guide the ULB on the future course of action

b) Tender Preparation, Evaluation and Awarding of work Contracts

- Prepare Tender Document in consultation with the official in charge.
- Prepare & assist in finalization of Bid Documents for Uploading on e-procurement portal of Government of Madhya Pradesh (GoMP) or GeM portal.
- Answering the technical queries raised by the contractors in the pre bid meeting.
- Preparing all the pre bid questionnaire and clarifications.
- Assisting in evaluation of bids received by ULB.
- Recommendation for award of work contracts.
- Issue of letter of intent, preparation and signing of contract for appointment of contractors for goods and services.

c) PMC services for Project Monitoring and Supervision during Implementation period

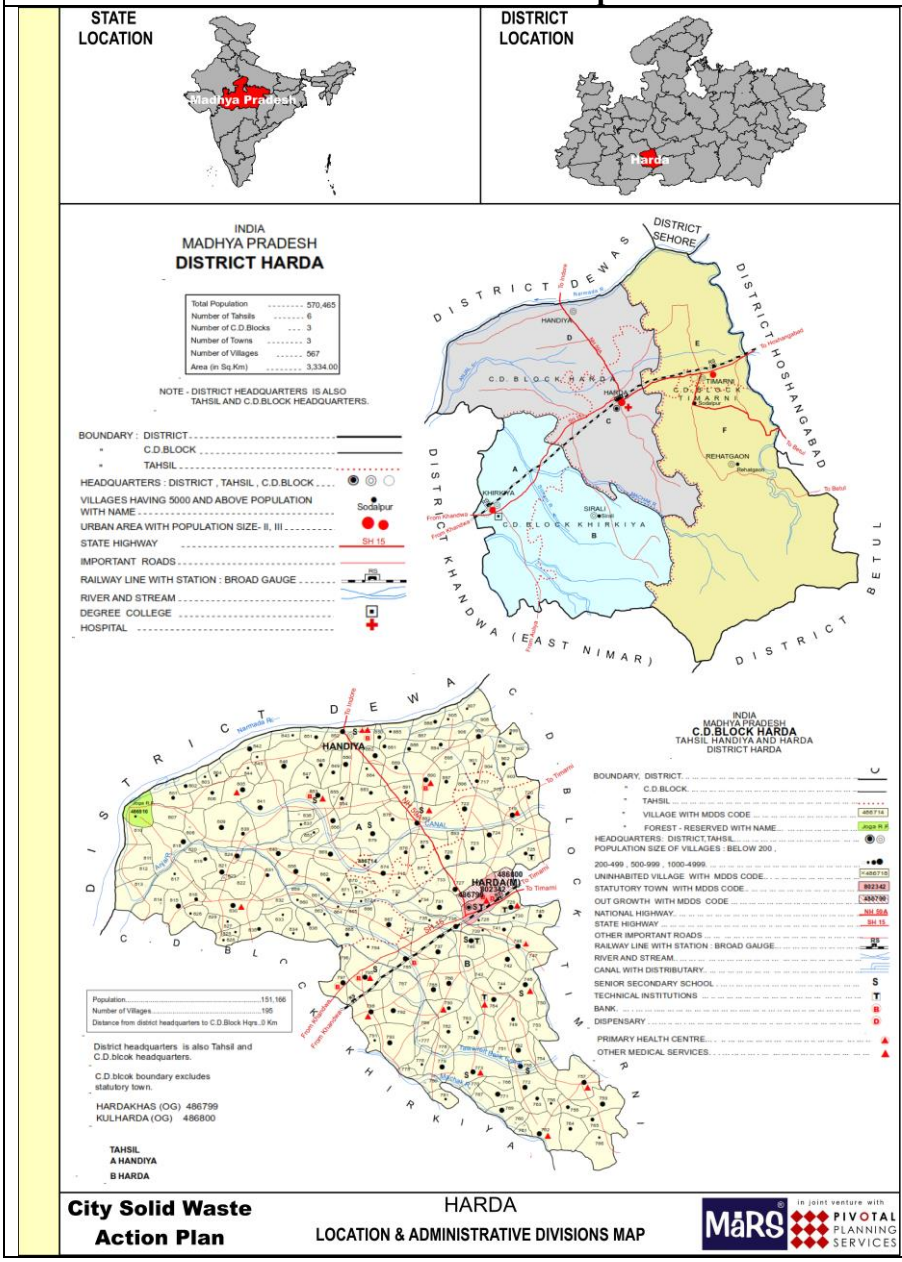
- Review and approve all the Contractor's design, drawings and implementation schedules.
- Visit the site of works, at intervals and as instructed, and collect information with photographs related to physical progress of implementation.
- Undertake Proof checking of designs or completed works with scrutiny of supporting documentations etc. in order to make a compliance report and grant approval on completed works.
- Prepare and submit progress report on progress of works.

B. Details of Existing Dumpsite and its surroundings

1. City profile

12. Harda is a City in Harda District of Madhya Pradesh State, India. It belongs to Narmadapuram Division. Harda City, Seoni-Malwa City, Itarsi City, Sehore City are the nearby Cities to Harda. Harda consists of 176 Villages and 76 Panchayats. It is in the 289 m elevation(altitude). Bhopal are the nearby Important tourist destinations to see.

Table 1: Location Map



13. As per the Census India 2011, Harda city has population of 68162 of which 38224 are males and 36044 are females. The population of children between age 0-6 is 9112 which is 12.27% of total population.

2. Details of existing Waste Dumpsite

14. The following is the location details of the existing Waste Dumpsite-

Table 2: Location of Existing Waste Dumpsite

Site Name	Location	Area	Revenue Details	Ownership	Current Dumping
Harda Dumpsite	22°20'17.32"N 77° 4'41.37"E	0.769	56(S)	Harda Nagarpalika	Yes

Source: ULB

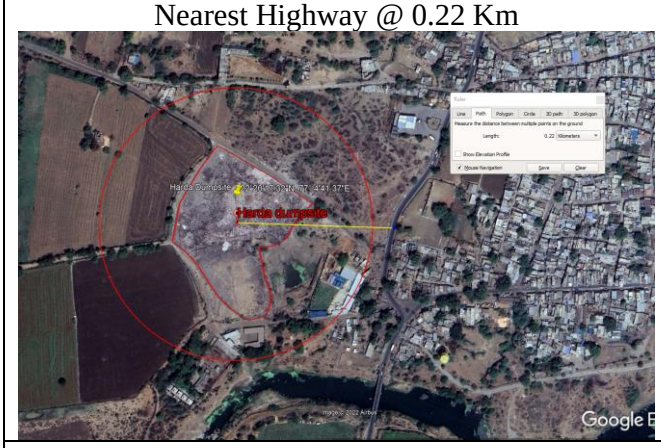
15. The following are the details of site surrounding and its distances to the existing dumpsite.

Table 3: Surrounding Site Environment around Existing Dumpsite

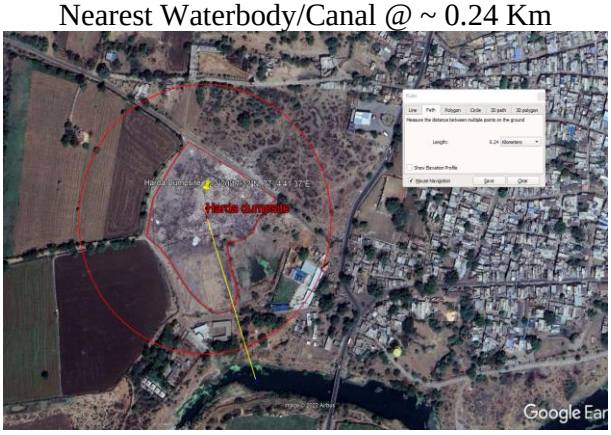
Nearest Residential Settlement @0.22 Km	Nearest Urban Settlement @ 1.75 Km
	

Table 3: Surrounding Site Environment around Existing Dumpsite

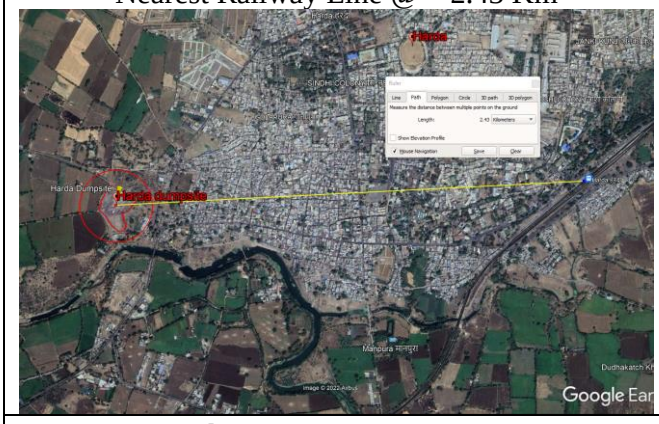
Nearest Highway @ 0.22 Km



Nearest Waterbody/Canal @ ~ 0.24 Km



Nearest Railway Line @ ~ 2.43 Km



Source:- Consultant

3. Historical Imagery of Existing Dumpsite

16. The following are the details of details of Historical imagery of the existing dumpsite.

Table 4: Historical imagery of the existing dumpsite

Year 2013 (Starting Year of Crude Dumping)

Year 2015

Table 4: Historical imagery of the existing dumpsite

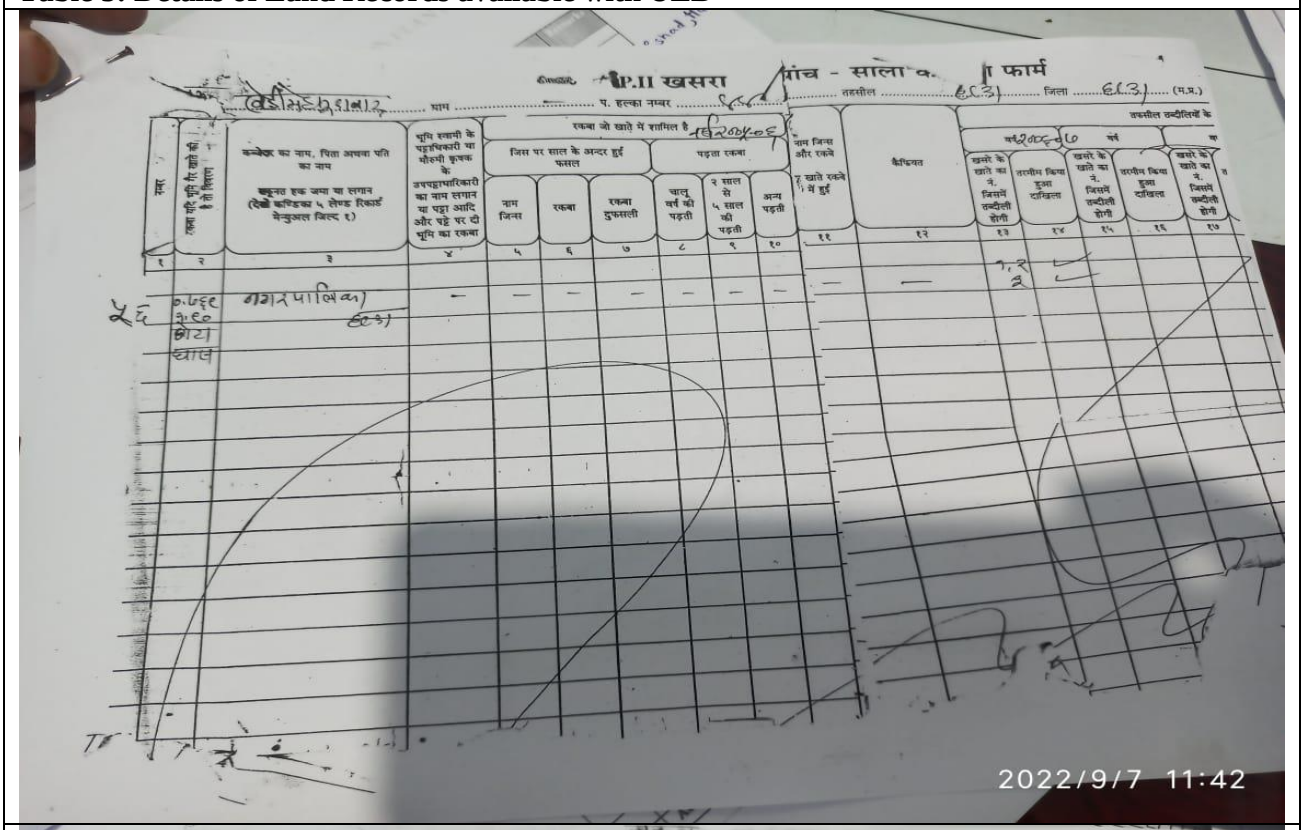
Year 2016 	**Year 2017** 
Year 2018 	**Year 2019** 
Year 2020 	**Year 2021** 
Year 2022 	

Source: Consultant

4. Land Records

17. The following are the details Land records available with the ULB.

Table 5: Details of Land Records available with ULB



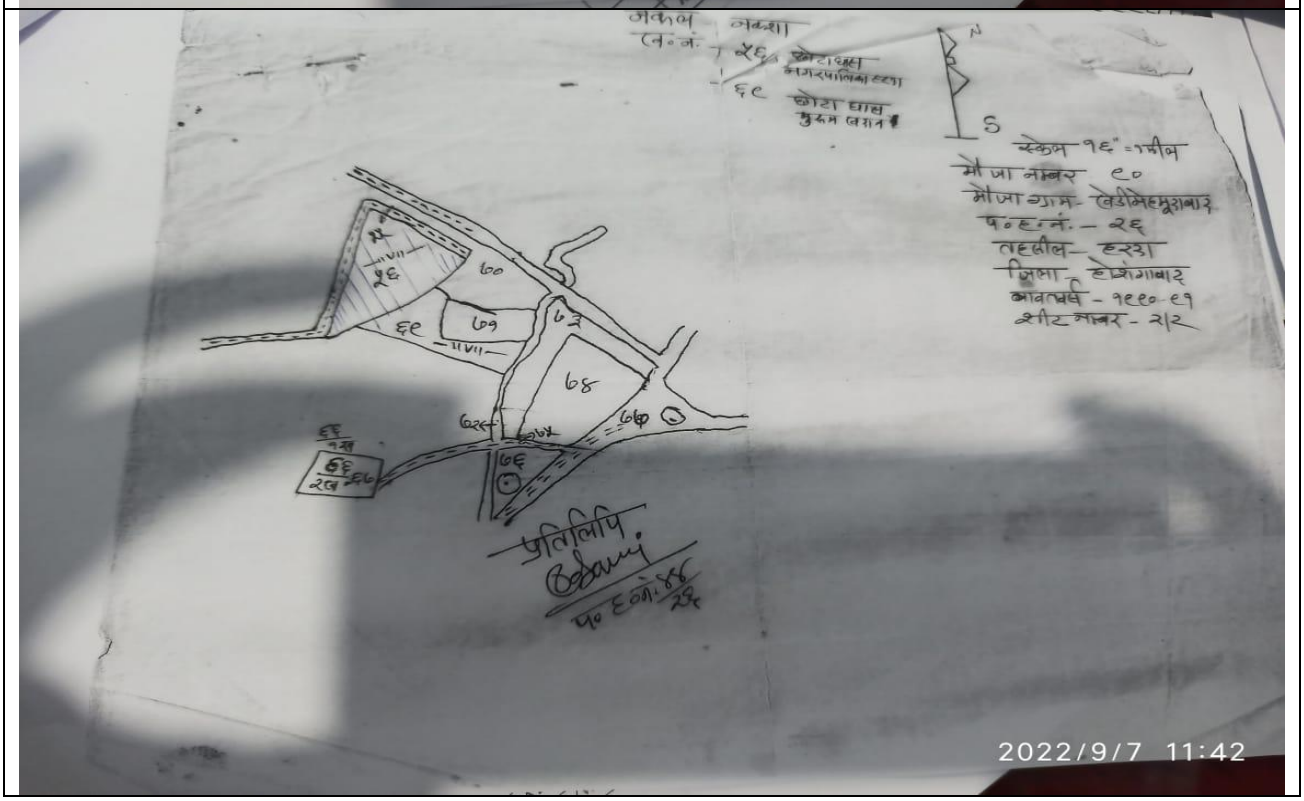


Table 5: Details of Land Records available with ULB

Madhya Pradesh Computrised Land Records

Khasra

Format 1 (See rule 6)

The Madhya Pradesh Bhu-Rajsva Sanhita (Bhu-Servekshan Tatha Bhu-Abhilekh Niyam 2020)

Village:खेड़ीमहमूदाबाद			Halka:बैरागढ़			Tehsil:हरदा			District:हरदा		Year: 2022-2023
Unique ID of part of parcel of Land	Type of land parcel (Survey Number/ Block Number)	Plot Number (In caseof a Block)	1. Area (in ha./sq. metre) 2. Land use for which assessed 3. Land Revenue/ Lease Rent (in Rs.)	1.Name of Bhumiswami, his mother's/ Father's/ Husband's name and address of residence 2. Govt. land	Share of each Bhumiswami (in cae of joint holding)	1. Name of Government lessee, his mother's/ father's/ husband's name and address of residence 2. Period of lease 3. Area under lease	Name of occupancy tenant (if any), his mother's/ fathers' husband's name and address of residence	Encumbrances and charges on land 1. Mortgage 2. Hypothecation 3. Ongoing land acquisition process	Crop details: Crop 1. Khari 2. Rabi 3. Jayad 4. Other	Area under crop	1. Irrigation status of land 2.Structures/trees on land 3. Other remarks 4. Orders for correction of entries during year in column no (1) to 9
1	2	3	4	5	6	7	8	9	10	11	12
80AY79DA2DPTH0	56 (S)		0.7690 हेक्टेयर चरागाह .769 रु.0.00								चरागाह 0.7690 नगरपालिका हरदा

Note :-

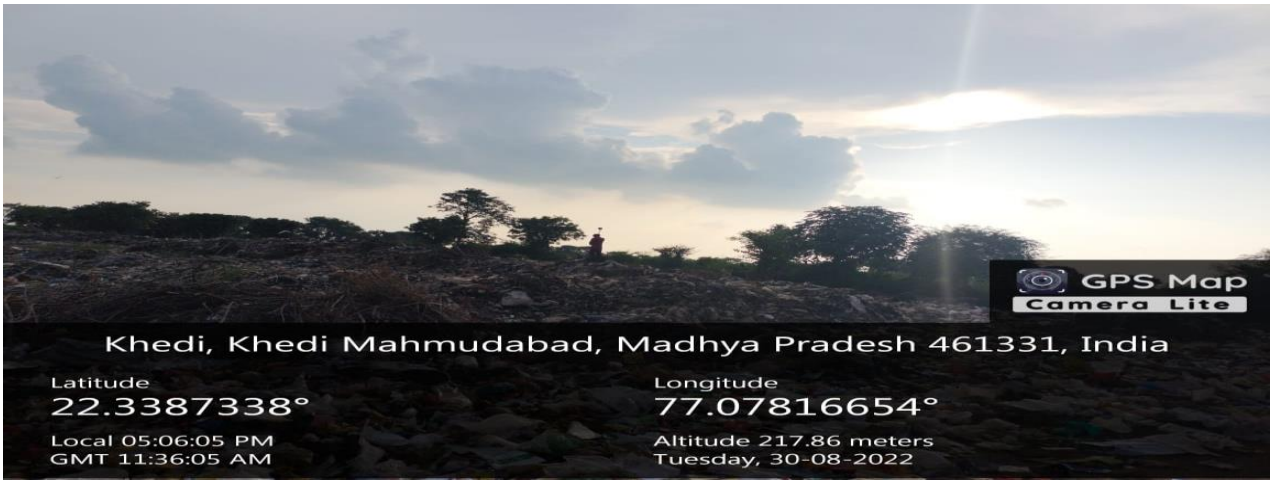
1. This form is only for the information of the applicant.
2.It cannot be used as evidence in any court of law.
3. For digitally signed copy please apply through IT Center, LSK, MPOnline or online.
4. For correction/amendment in entries, contact the concerned district/tehsil office.

Source: ULB

5. Existing Situation of Dumpsite and its surrounding

18. The general field observations made during the site visit are as under-

- Present open dumpsite consists of waste from several sources.
- The waste deposited is also not covered or compacted and in most cases in these open dumpsites, waste remains susceptible to open burning.
- The existing dumpsite pose significant health threats both to the people involved in the operations and to the general public living in the neighborhood.
- Large number of animals are attracted around the dumpsite, many times purposefully by their owners, in order to have access to food, for free. That usually results in food-chain pollution.
- Fauna, plants or vegetation are impacted directly from the direct contamination by waste or leachate, the migration of gases, or as a result of burning or smoke.
- The dumped waste is not engineered at all, with no leachate management and no landfill gas (LFG) collection. in Addition, they are poorly managed without any controls on accepting incoming materials or record keeping. Exposed wastes are open to all weathers and needless to say are often not engineered at all, with no leachate management and no landfill gas (LFG) collection.
- The site permits scavengers or waste pickers for collecting recyclables without any protection measures and in most cases allowing even living within dump sites or sometimes even scavenging for food leftovers.



19. The following is the status of infrastructure available at the existing dumpsite-

Table 6: Status of Infrastructure at the existing Dumpsite

No.	Details	Available	Functional	Remarks
1	Electricity Connections	Yes	Yes	
2	Water Connection	No	No	
3	Processing Infrastructure	Yes	Yes	MRF Shed
4	Boundary Wall	No	No	
5	Office cum Security Cabin	No	No	
6	Gate	Yes	Yes	
7	Faecal Sludge Treatment Plant	No	No	
8	Composting Pit	No	No	

Source: Field Survey by Consultant

Material Recovery Facility Unit

Dumpsite Entry gate

C. Waste Quantity Estimates & Field Investigations

1. Adopted Approach and Methodology

20. Two major activities were undertaken during field investigations i.e. (1) Estimations of Quantity of Legacy Waste and (2) Waste Characterisation and Resource Recovery Estimations. The following are the step-by-step approach and methodology adopted for both the activity.

a) Approach for Estimation of Quantity of Legacy Waste

21. The following step by step approach and methodology adopted for volume estimation of the legacy waste by DGPS Survey.

Table 7: Step by step Activities undertaken for Estimation of Quantity of Legacy Waste

Original Ground Contour Map Generation

The first step is to derive the original ground level (OGL) profile of the identified area before the beginning of dumping of waste. This is done by preparing a contour map using DEM (Digital Elevation Model) derived from SRTM-3 data available as open access. After the Generation of Contour Map Natural Ground Profile of the site is prepared. UTM Projection used are [a]. Code Type-EPSG; [b]. Category- UTM, WGS84 Datum; [c]. Code- UTM84-44N; [d]. Categories-UTM, WGS84 Datum; [e]. Unit -Meter; f. Description-UTM-WGS 1984 datum, Zone 43 North, M cent. Meridian 81d E. The existing contour drawings are attached in the report.

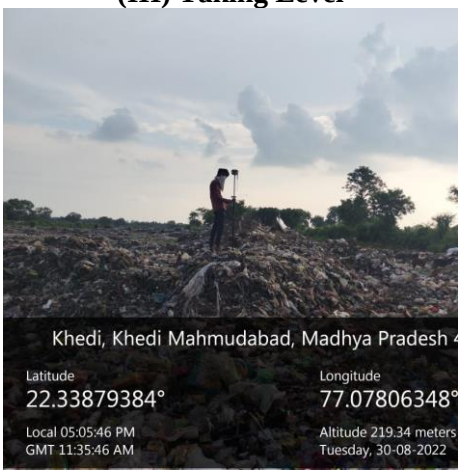
Existing Ground Contour Map Generation

The second step is to derive Existing Ground Level Profile of the identified area. This is done by undertaking a **Differential Global Positioning System (DGPS) survey** on field by using the same UTM projections which were used to derive Natural Ground Profile.

(I) Instrument Set Up	**(II) TBM Marking**
	
Differential Global Positioning System (DGPS) Instrument called Base with an accuracy of 3 mm + 0.6 ppm for long lines long observations was set on field for receiving data from receiver instrument called Rover.	Fixed the TBM on permanent stone for continue survey and will consider during the time of next survey work in future.

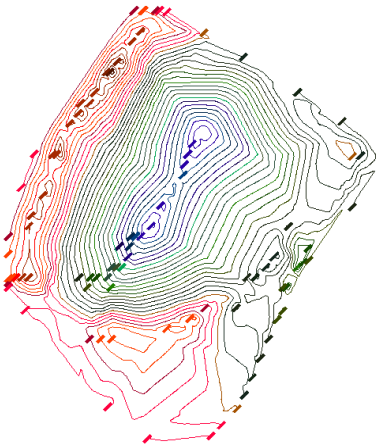
Table 7: Step by step Activities undertaken for Estimation of Quantity of Legacy Waste

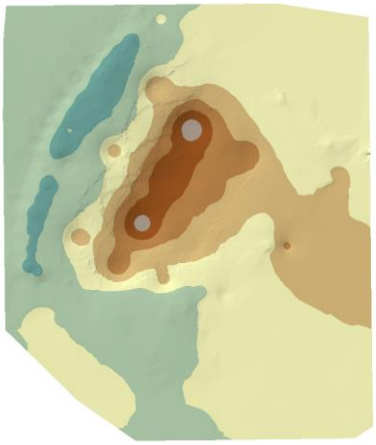
(III) Taking Level



Level was taken at different height of existing dump heap with the Rover. Around **276 levels** were taken from various location of dump site.

(IV) Existing Ground Contour Map Generation





After the field survey, contour map and 3d Model of existing site was generated with **0.5-meter** interval

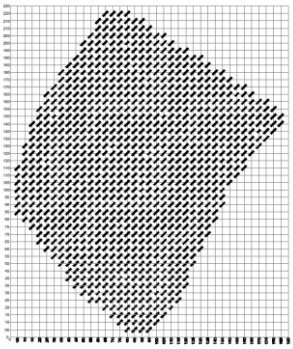
Deriving Original Ground & Existing Ground Profile of Site

The next step is to derive the following

a. Original Ground Profile (OGP): Contours from DEM Based on SRTM 3 data.

b. Existing Ground Profile (EGP): Contours from Survey Data.

(I) Grid and Spot Map Generation



Using contour line extract 5m x 5m spot level and finalize the Grid with respect to chainage.

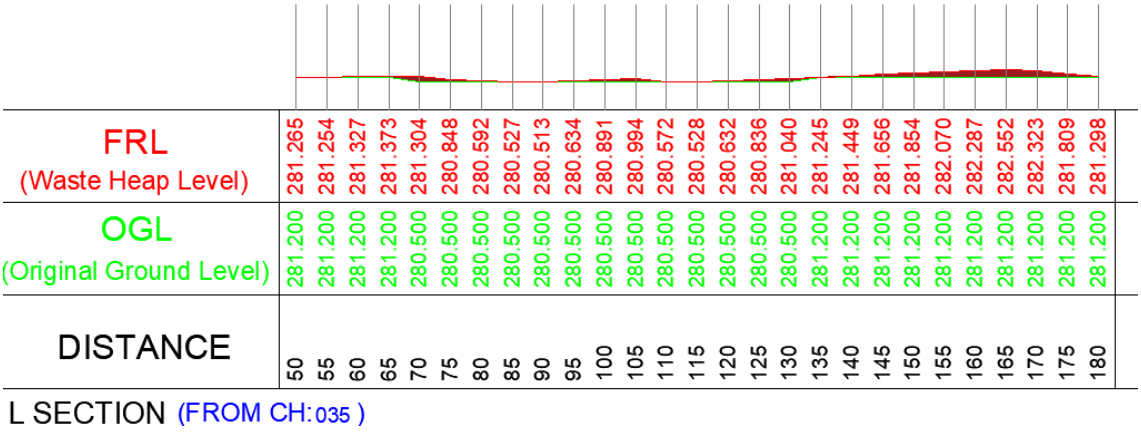
(II) Level data sheet

Ch. Itarsi	130 Dist.	G.Ls.	F.L.	Length		Ch. Itarsi	135 Dist.	G.Ls.	F.L.	Length		Ch. Itarsi	140 Dist.	G.Ls.	F.L.	Length	
	80	358.484	358.933		0.449		80	358.484	359.07		0.586		80	358.484	359.207		0.723
	85	358.484	359.887	5	1.403		85	358.484	359.37	5	0.886		85	358.484	359.719	5	1.235
	90	358.484	361.197	5	2.713		90	358.484	360.953	5	2.469		90	358.484	360.617	5	2.133
	95	358.484	361.938	5	3.454		95	358.484	362.369	5	3.885		95	358.484	362.308	5	3.824
	100	358.484	362.094	5	3.61		100	358.484	362.586	5	4.102		100	358.484	362.544	5	4.06
	105	358.484	362.311	5	3.827		105	358.484	362.803	5	4.319		105	358.484	362.779	5	4.295
	110	358.484	362.528	5	4.044		110	358.484	363.02	5	4.536		110	358.484	362.929	5	4.445
	115	358.484	362.6	5	4.116		115	358.484	363.074	5	4.59		115	358.484	362.832	5	4.348
	120	358.484	362.606	5	4.122		120	358.484	363.081	5	4.597		120	358.484	362.644	5	4.16
	125	358.484	362.736	5	4.252		125	358.484	363.029	5	4.545		125	358.484	362.72	5	4.236
	130	358.484	362.214	5	3.73		130	358.484	362.281	5	3.797		130	358.484	362.165	5	3.681
	135	358.484	361.692	5	3.208		135	358.484	361.481	5	2.997		135	358.484	361.385	5	2.901
	140	358.484	360.966	5	2.482		140	358.484	360.684	5	2.2		140	358.484	360.314	5	1.83
	145	358.484	360.42	5	1.936		145	358.484	360.063	5	1.579		145	358.484	359.663	5	1.179
	150	358.484	359.906	5	1.422		150	358.484	359.607	5	1.123		150	358.484	359.476	5	0.992
	155	358.484	359.6	5	1.116		155	358.484	359.492	5	1.008		155	358.484	359.423	5	0.939
	160	358.484	359.588	5	1.104		160	358.484	359.488	5	1.004		160	358.484	359.39	5	0.906
	165	358.484	359.49	5	1.006		165	358.484	359.46	5	0.976		165	358.484	359.405	5	0.921
	170	358.484	359.372	5	0.888		170	358.484	359.466	5	0.982		170	358.484	359.752	5	1.268
	175	358.484	359.657	5	1.173		175	358.484	359.95	5	1.466		175	358.484	360.237	5	1.753
	180	358.484	360.149	5	1.665		180	358.484	360.435	5	1.951					95	
				100						100							

The Level data sheet was generated for preparing L sections for each chainage

Table 7: Step by step Activities undertaken for Estimation of Quantity of Legacy Waste

(III) L Section Generation



L SECTION (FROM CH:035)

Around 35 L sections were prepared from the data with OGL, FRL level data with respect to various distance. Grid elevations were generated using Interpolation Method.

Waste Volume Calculation

The final step is to calculate the Waste Volume on the following approach-

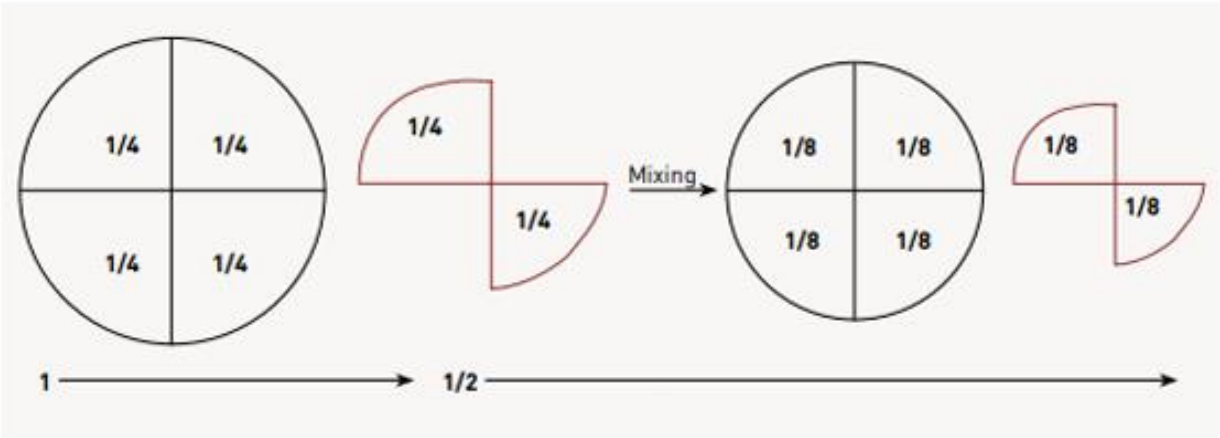
- Area comprising Old dumped waste is demarcated and corresponding data is selected for further process.
- Considering Original Ground Profile (OGP) as baseline and Overlaying Existing Ground Profile (EGP) as stacked, each projected UTM grid in the corresponding area of waste spread is considered as section for Area and Volume calculation.
- Cumulative calculation of Volume is done based on Tripozoidal Rule's i.e. V=L/2[A1+A2] Where L is Distance in meters & A1 and A2 are area in Square meters

Source: - Consultant

b) Approach for Waste Characterisation and Resource Recovery Estimations

22. Two activities were undertaken for resource recovering estimations i.e. one Physical and chemical characteristic of waste and second grain size distributions.

23. Quartering and coning method is one of the best techniques for determining the composition and characteristic of municipal waste. The sample is reduced to a more manageable size as the actual classification is carried out by hand. Selection of sampling sites is a critical first step in this process.



24. The following aspects shall be considered: Take 10 kg of municipal waste mixed from outside and inside of the waste pile, sourced from random entities in an identified sampling location at dump site. Samples from all heterogeneous sampling points shall be mixed thoroughly. The sample is placed as a uniform heap. The heap is divided into four portions using straight lines perpendicular to each other. Waste from opposing corners of the divided heap is removed to leave half of the original sample. The remaining portions are again thoroughly mixed and the quartering process is repeated until a desired size is obtained (10 kg of waste can be handled or segregated efficiently). The last remaining opposing fractions of waste shall be mixed and analysed for identifying physical and chemical properties of the waste. Chemical analysis of the waste sample follows the physical constituent analysis and shall be performed in a laboratory accredited by the Ministry of Environment, Forests and Climate Change (MoEFCC).

Table 8: Step by step Activities undertaken for Waste Characterisation study

(I) Sample collection	**(II) Sample Preparation**
 3 sample was taken at dumpsite from different location (Near about 10 kg of waste sample was taken)	 Quartering and coning method was done
(III) Fraction Segregations	**(IV) Fraction Weighing**
 All the waste were segregated into various fractions and weighments were done for each of the fractions	 All the segregated fractions were weighed for each samples for physical and chemical composition
Source: Consultant	

25. Step by step activity undertaken for Resource Recovery estimation is as given in below table.

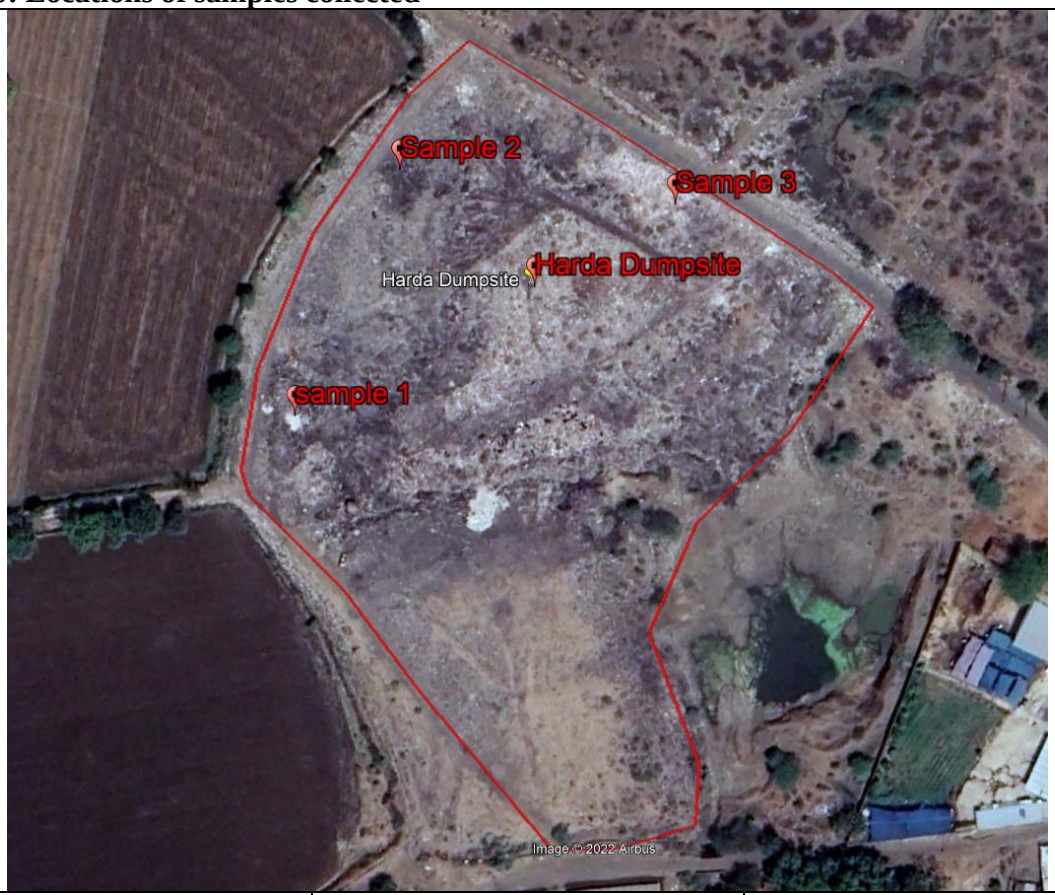
Table 9: Step by step Activities undertaken for Resource Recovery Estimations

(I) Sample collection	(II) Sieve Analysis	(III) Weighing of fractions from sieves
		
3 sample was taken at dumpsite from different location (Near about 10 kg of waste sample was taken)	Sieve Analysis was done for various seizes of sieves for 3 samples of 10 KG each	All the fractions were weighed above and below from each size of sieve.

Source: Consultant

26. The following are locations of samples taken for the study.

Table 10: Locations of samples collected



Sample 1 Location	Sample 2 Location	Sample 3 Location
22°20'16.06"N 77° 4'38.93"E	22°20'18.43"N 77° 4'40.02"E	22°33'38.37"N 77° 4'42.90"E

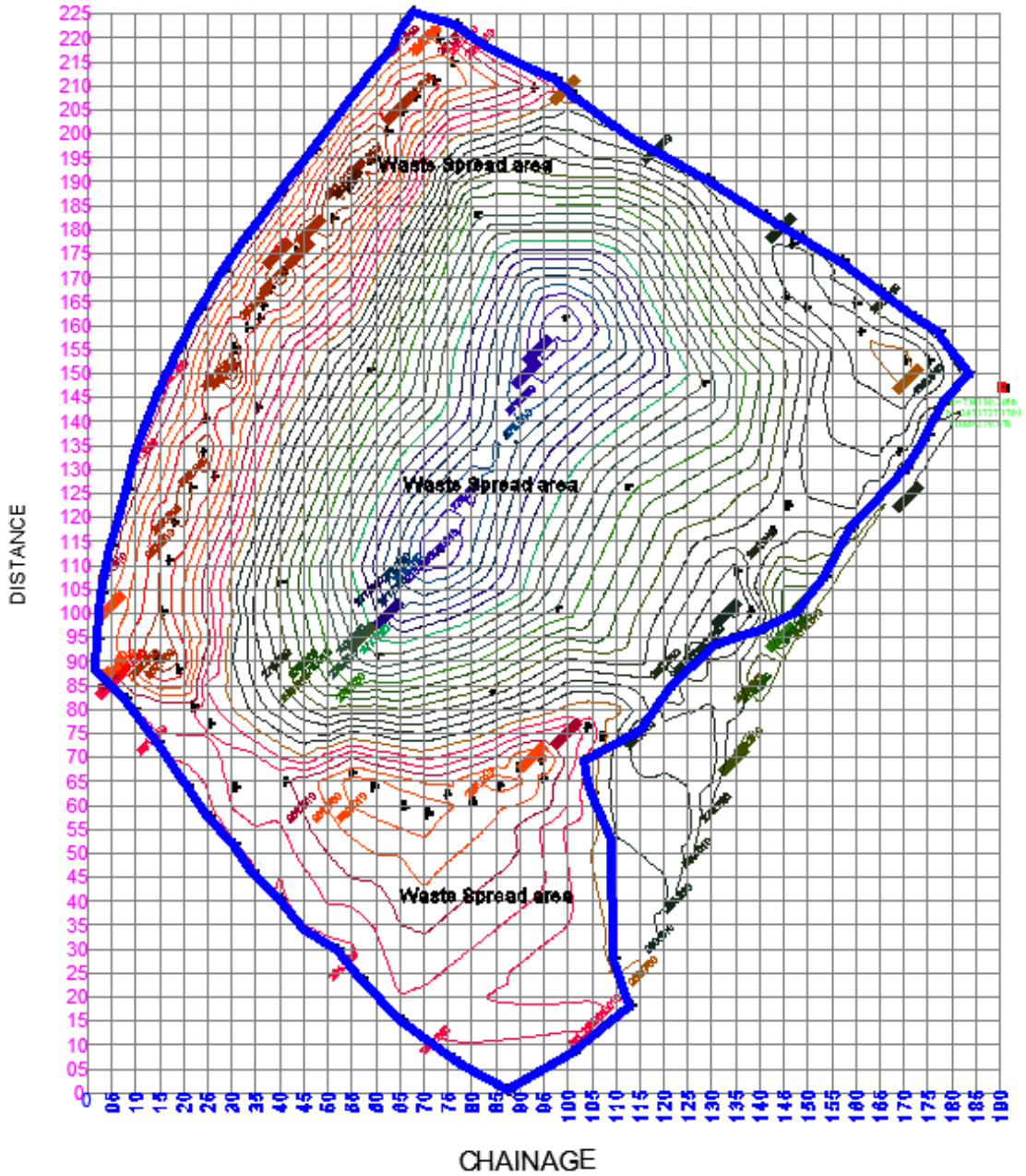
2. Estimation of Quantity of Legacy Waste

27. The present site has started receiving crude waste **since 2013** as per the discussion with officials of Harda. However, Harda don't have data on the amount of waste dump at site.

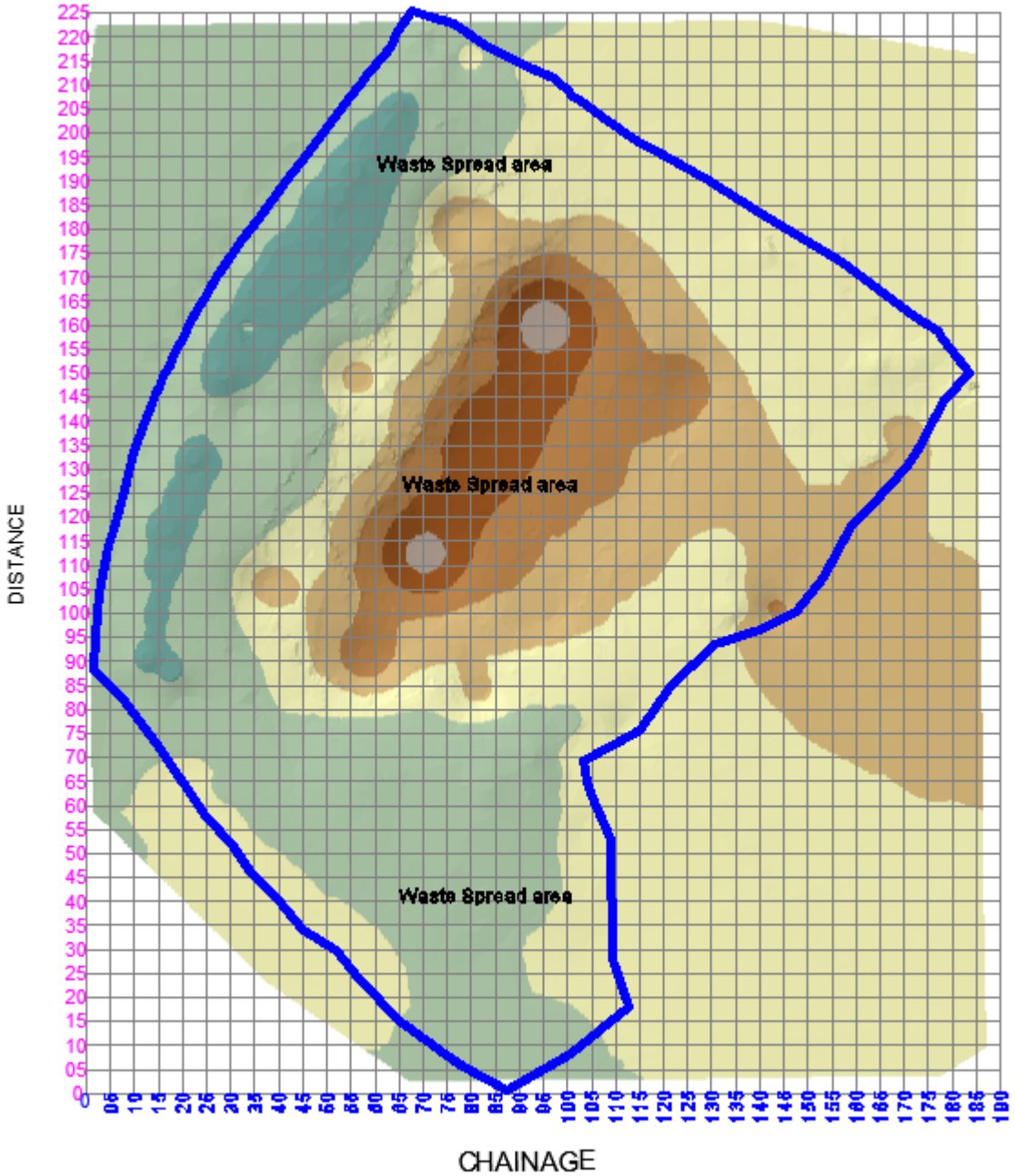
28. The density of the legacy waste is required to be derived or assumed for calculating the weight of the legacy waste in terms of Metric Ton. Based on the field observations and the height of the heap, it is presumed that most of the waste is highly compacted and higher density is assumed for calculating the Weight of the Legacy Waste. Further, the density is assumed with average moisture content during dry season except monsoon season.

Delineation of Waste Spread Area

Drawings of Survey conducted on 30 August 2022



3d Imagery Generated



29. The following is the overall Area and Volume Calculation for each chainage (Refer Drawings for each Chainage L section) as per undertaking the Field Investigations and Survey.

Table 11: Area and Volume Calculation for Each Chainage

Sr No	Chainage	Previous Chainage	Difference	Width	Area in Sqm	Previous Area in Sqm	Average area in Sqm	Volume in Cum	Density	Quantity in Metric Ton
A	B	C	D	E	F	G	H F+G/2)	I (H X D)	J	K (I X J)
1	5	0	0	30	14.1	0.0	7.0	0	0.95	0
2	10	5	5	50	36.2	14.1	25.1	125.63	0.95	119
3	15	10	5	70	65.0	36.2	50.6	252.85	0.95	240
4	20	15	5	90	69.9	65.0	67.4	337.08	0.95	320
5	25	20	5	105	60.9	69.9	65.4	326.88	0.95	311
6	30	25	5	115	66.1	60.9	63.5	317.35	0.95	301
7	35	30	5	130	51.5	66.1	58.8	293.8	0.95	279
8	40	35	5	145	65.6	51.5	58.5	292.5	0.95	278
9	45	40	5	155	105.2	65.6	85.4	426.83	0.95	405
10	50	45	5	170	119.6	105.2	112.4	561.9	0.95	534
11	55	50	5	180	116.9	119.6	118.3	591.28	0.95	562
12	60	55	5	190	116.8	116.9	116.9	584.3	0.95	555
13	65	60	5	200	106.2	116.8	111.5	557.48	0.95	530
14	70	65	5	30	100.1	106.2	103.1	515.63	0.95	490
15	75	70	5	210	88.5	100.1	94.3	471.25	0.95	448
16	80	75	5	215	130.8	88.5	109.6	548.03	0.95	521
17	85	80	5	30	113.9	130.8	122.3	611.7	0.95	581
18	90	85	5	210	107.0	113.9	110.5	552.28	0.95	525
19	95	90	5	30	128.1	107.0	117.6	587.8	0.95	558
20	100	95	5	200	167.6	128.1	147.9	739.4	0.95	702
21	105	100	5	190	97.5	167.6	132.6	662.78	0.95	630
22	110	105	5	125	96.6	97.5	97.0	485.08	0.95	461
23	115	110	5	125	124.0	96.6	110.3	551.33	0.95	524
24	120	115	5	110	151.8	124.0	137.9	689.45	0.95	655
25	125	120	5	100	173.9	151.8	162.8	814.2	0.95	773
26	130	125	5	100	206.4	173.9	190.1	950.65	0.95	903
27	135	130	5	90	57.0	206.4	131.7	658.5	0.95	626
28	140	135	5	85	45.8	57.0	51.4	256.95	0.95	244
29	145	140	5	80	63.3	45.8	54.5	272.58	0.95	259
30	150	145	5	80	76.5	63.3	69.9	349.45	0.95	332
31	155	150	5	65	45.0	76.5	60.8	303.78	0.95	289
32	160	155	5	50	42.9	45.0	43.9	219.73	0.95	209
33	165	160	5	45	39.0	42.9	40.9	204.7	0.95	194
34	170	165	5	30	29.1	39.0	34.0	170.1	0.95	162
35	175	170	5	25	16.1	29.1	22.6	112.8	0.95	107
36	180	175	5	10	5.3	16.1	10.7	53.53	0.95	51
							Total Volume	**15,450**	**Total Quantity**	**14,678**

Source: Field Survey
*- The above Volume are for the Heaps only

30. The following is the summary of Legacy Waste Dump Quantity Estimates at the presented site based on the Topographical and contour Survey. The presented waste in Metric Ton is

calculated based on densities analyzed as per Legacy waste sampling during field survey. Due to high height of the heap, it is difficult to measure the density in the inner core. Further, the densities also vary based on weathering effect. Hence, it is recommended to consider the volume of the heap for any actions to be taken through this survey. The following estimates are presented just for an understanding based on certain assumptions.

Table 12: Summary of Legacy Waste Quantity Estimates		
Volume (In CuM)	**Quantity (In Metric Ton)**	**Waste Spread Area (in SQM)**
15,450	**14,678**	**22,403**
Source: Consultant Derived through testing of samples		

3. Waste Characterisation and Resource Recovery Estimations

31. The following are the finding of waste Characterization study conducted on site.

Table 13: Findings for Waste Characterisation study						
Type		**Sample 1**	**Sample 2**	**Sample 3**	**Average at Dumpsite**	
Organic Fractions	Biodegraded Fraction	18.24%	16.64%	25.13%	20.00%	**20.00%**
Combustible	Plastic, Polythene, Tetra Packs Etc	3.33%	8.01%	3.87%	5.07%	**11.05%**
	Paper and Card Board	4.47%	1.35%	2.43%	2.75%	
	Horticulture Waste & Wooden Piece	1.24%	4.77%	3.69%	3.23%	
Recyclables	Metal	0.86%	0.42%	0.39%	0.56%	**10.35%**
	Textiles	2.43%	4.77%	5.13%	4.11%	
	Glass	4.18%	1.62%	2.61%	2.80%	
	Leather, Rubber Etc	3.52%	3.87%	1.26%	2.88%	
Stone/Silt/ Debris etc.	Heavy Fractions	25.56%	26.00%	22.25%	24.60%	**58.60%**
	Coarser fraction	15.49%	11.96%	17.47%	14.97%	
	Fine Fractions/ Balance Material	20.71%	20.60%	15.76%	19.02%	
Total		**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Source: - Consultant						

32. The following are the findings of Resource Recovery estimations.

Table 14: Findings for Resource Recovery estimations				
Sample Number	Sample 1	Sample 2	Sample 3	**Average**
Total Sample Weight (in kg.)	10.53	11.12	11.10	**10.92**
> 100 mm	3.3	2.83	2.43	**3.15**
	31.34%	25.45%	21.89%	**26.23%**
Below 100 mm & Above 35 mm	2.01	2.29	2.32	**2.21**
	19.09%	20.59%	20.90%	**20.19%**
Below 35 mm & Above 16 mm	1.12	1.14	1.24	**1.17**
	10.64%	10.25%	11.17%	**10.69%**
Below 16 mm & Above 4 mm	1.05	1.34	2.13	**1.34**
	9.97%	12.05%	13.45%	**11.82%**

Table 14: Findings for Resource Recovery estimations				
Sample Number	Sample 1	Sample 2	Sample 3	**Average**
< 4 mm	3.05	3.52	2.98	**3.18**
	28.96%	31.65%	26.85%	**29.16%**
Source: - Consultant				

D. Proposed Approach for Dumpsite Remediation

33. The remediation of dumpsites leads to the following advantages:

- Elimination of foul odour to benefit the citizen living nearby
- Decline in vector borne diseases arising out of the dumpsite
- Significant Reduction in Air pollution of the entire area
- Elimination of dump fires and leachate generation
- Uplifting of the environmental, aesthetic and social parameters of entire area
- Reduction in Green House Gas Emissions, soil pollution and Ground water contamination
- Increase in nearby real state value and rental values.
- Dumpsite land becomes available for other use

1. Options available for Dumpsite Remediation

a) Capping Model without Land Recovery

34. The dumpsite is profiled, covered with soil, surface drainage system, leachate management and gas collection systems and capped. The land becomes a green space. Has environmental monitoring systems. This is adopted in absence of viable reclamation options.

Table 15: Advantages & Disadvantages for Capping Model without Land Recovery	
Advantages	**Disadvantages**
- Can be completed fast - Process requires less environmental clearances - Relatively cheaper - Land capped can be developed into parks /recreational areas	- No land recovery, no financial benefit from land capped (except parks/ recreation) - Regular operation and maintenance required, thus recurring expenditure. - Problems with leachate collection and gas generation - Post closure O&M

Partial land reclamation and capping project carried out at Nashik, Maharashtra.

Source: Advisory on Landfill Reclamation issued by CPHEEO, Ministry of Housing and Urban Affairs Government of India

35. Although capping is mentioned as a method in this advisory, it must be noted that SWM Rules 2016 and NGT have mandated that for remediation of legacy waste dumpsites Bioremediation is preferred over Capping.

b) Bioremediation and Capping model with part Land recovery

36. In this process, approximately **50- 60 % waste is excavated,** which is then processed as per CPCB guidelines. The useful fractions derived from this process can be sold to relevant buyers and the inert material with rest of the dumpsite will be capped to prevent further degradation of the environment.

Table 16: Advantages & Disadvantages for Bioremediation and Capping model with part Land recovery

Advantages	Disadvantages
- Cheaper than 100% reclamation & can be faster than 100% reclamation - Waste segregated is utilized onsite - Disposal of segregated portions becomes easy - Land capped can be developed into parks /recreational areas	- No 100% land recovery - Difficult to quantify the waste - Less Post closure O&M compared to 100% capping

Source: Advisory on Landfill Reclamation issued by CPHEEO, Ministry of Housing and Urban Affairs Government of India

c) Reclamation with complete Land recovery

37. This refers to the excavation of old dumped waste and making windrow of legacy waste to stabilize of the waste through bio-remediation i.e. exposure of all the waste to air along with use of composting bio-cultures, followed by screening of the stabilized waste to recover all valuable resources (like organic fines, bricks, stones, plastics, metals, clothes, rags etc.) followed by sustainable management through recycling, co-processing, road construction etc.

Table 17: Advantages & Disadvantages of Reclamation with complete Land recovery

Advantages	Disadvantages
- 100% Land recovery - Volume of waste is reduced - Waste segregated is utilized onsite - End to Environmental management (air,water, soil) and Compliance to SWM Rules & NGT orders	- Expensive, requires heavy machinery - Methodology is time taking, extensive work - Disposal of segregated portions is a challenge (transportation etc.) - Difficult to quantify the waste. Expensive to weigh all recovered fractions

Complete land recovery project at Poonamallee, Tamil Nadu

Source: Advisory on Landfill Reclamation issued by CPHEEO, Ministry of Housing and Urban Affairs Government of India

38. The SWM Rules 2016 and NGT clearly mandate clearing of sites as a first option, by bio-mining and bio-remediation. Still, capping is often proposed or considered an option in India merely because it is done in the West. But clearing a dumpsite almost to ground level rather than capping is a far better option for permanent pollution prevention, as well as for the following additional reasons:

- Clearing by bio-mining recovers the entire base area of a dump at almost ground level. Capping gives only one-third of the base area as usable area at an inconvenient height for future use.
- Cleared sites require no after-care. Capping requires at least 15 years of continuous leachate pump-out and treatment in a dedicated effluent treatment plant nearby. Gas extraction is very difficult and inefficient when attempts are made to insert suction pipes into dumped waste instead of before dumping begins.
- Capping of open dumps (wrongly called SLFs or Sanitary Landfills) requires intake of fresh waste to be stopped and permanently diverted to a fresh site before capping begins. With increasing protests against fresh waste disposal sites, getting started elsewhere can often delay capping plans indefinitely. Bio-remediation and Bio-mining to clear a site can start immediately at one part of an actively used dump while fresh waste continues to be received and stabilized at another part. Clearing can be done in phases to match available funds.
- Bioremediation and reclamation of part of land by utilizing part of retrieved fractions and the leftovers heaped in stable profile and capped appropriately. In this process, approximately 50- 60 % waste is excavated, which is then processed as per CPCB guidelines. The useful fractions derived from this process can be sold to relevant buyers and the inert material with rest of the dumpsite will be capped to prevent further degradation of the environment.

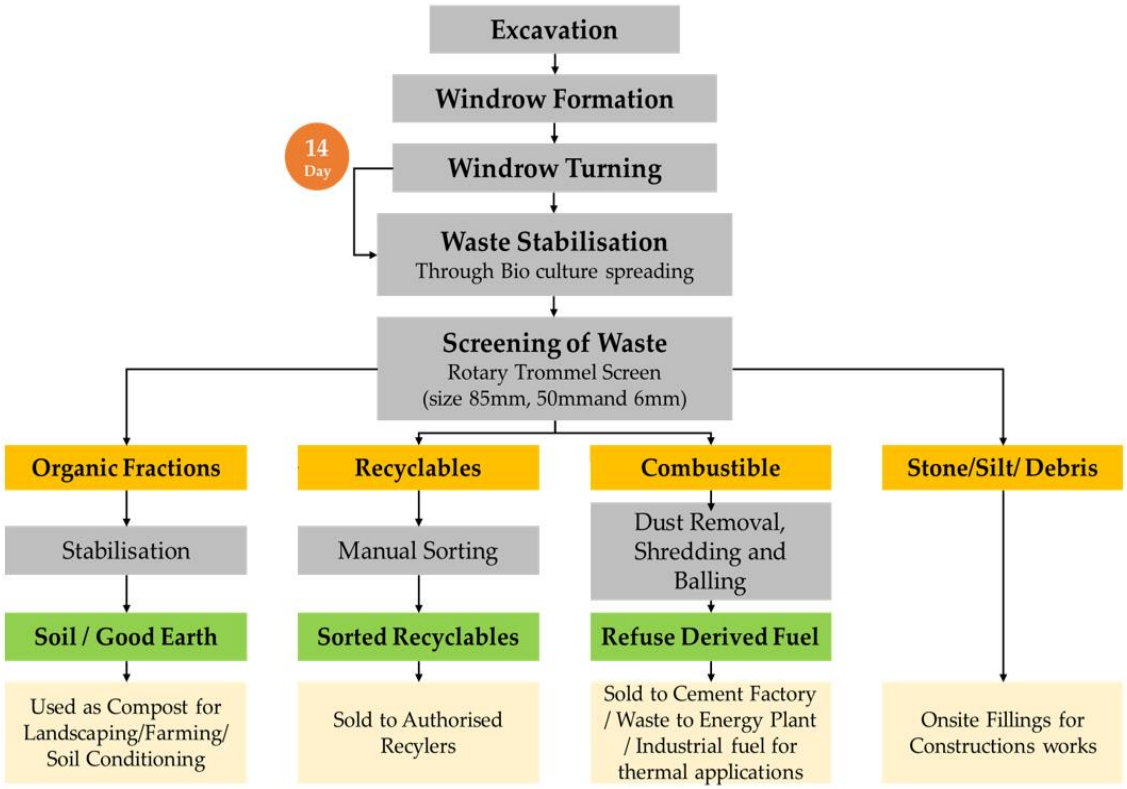
2. Proposed Approach for Dumpsite Remediation

39. 100% Bioremediations and resource recovery and its utilization is possible. Henceforth it is proposed to undertake a Bioremediation. Bioremediations of the waste needs to be done for the entire quantity of waste. Efforts should more be focussed to recover maximum resources from the legacy waste and utilise them for various purpose.

40. The proposed project adopts an integrated approach (Bioremediation) with the following objective-

- Valuable land **(Minimum 80%)** of the waste spreader on site shall be reclaimed through the approach.
- Lowest Natural Ground Level is proposed to be reached.
- Raking of garbage layer through long spike harrow operating in cross directions shall be done regularly to pull out rags, plastic, rubber, textiles etc.
- Legacy waste shall be screened through rotary/ horizontal screens. The recovered fractions shall be put to use onsite only to the maximum extent possible.

41. Below is the indicative overview of dumpsite remediation process.



3. Material Balance & Disposal Strategies

42. A materials balance is prepared for each fraction required for to be managed for dumpsite reclamation is given in the following table.

Table 18: Material Balance and disposal strategies for fractions recovered

Type		Average at Dumpsite		Estimated Quantity of Products (in MT)		Disposal Strategy
Organic Fractions	Biodegraded Fraction	20.00%	**20.00%**	2936.00	**2963.00**	Soil / Good Earth: - To be used for Landscaping/ Farming / Soil Conditioner On site
Combustible	Plastic, Polythene, Tetra Packs Etc	5.07%	**11.05%**	744.00	**1621.00**	Combustible: - RDF Preparation or to be sent to Cement Factory for Co-processing
	Paper and Card Board	2.75%		403.00		
	Horticulture Waste & Wooden Piece	3.23%		474.00		
Recyclables	Metal	0.56%	**10.35%**	81.00	**1519.00**	Recyclables: - To be
	Textiles	4.11%		603.00		

Table 18: Material Balance and disposal strategies for fractions recovered						
Type		**Average at**		**Estimated Quantity**		**Disposal**
	Glass	2.80%		412.00		Directly sent to authorize recyclers
	Leather, Rubber Etc	2.88%		423.00		
Stone/Silt/ Debris etc.	Heavy Fractions	24.60%	**58.60%**	3611.00	**8601.00**	Used for Onsite Construction plinth filling
	Coarser fraction	14.97%		2198.00		To be Used as filling Material
	Fine Fractions / Balance Material	19.02%		2792.00		To be Used as filling Material
Total		**100.00%**	**100.00%**	**14678.00**	**14678.00**	
Source: Consultant						

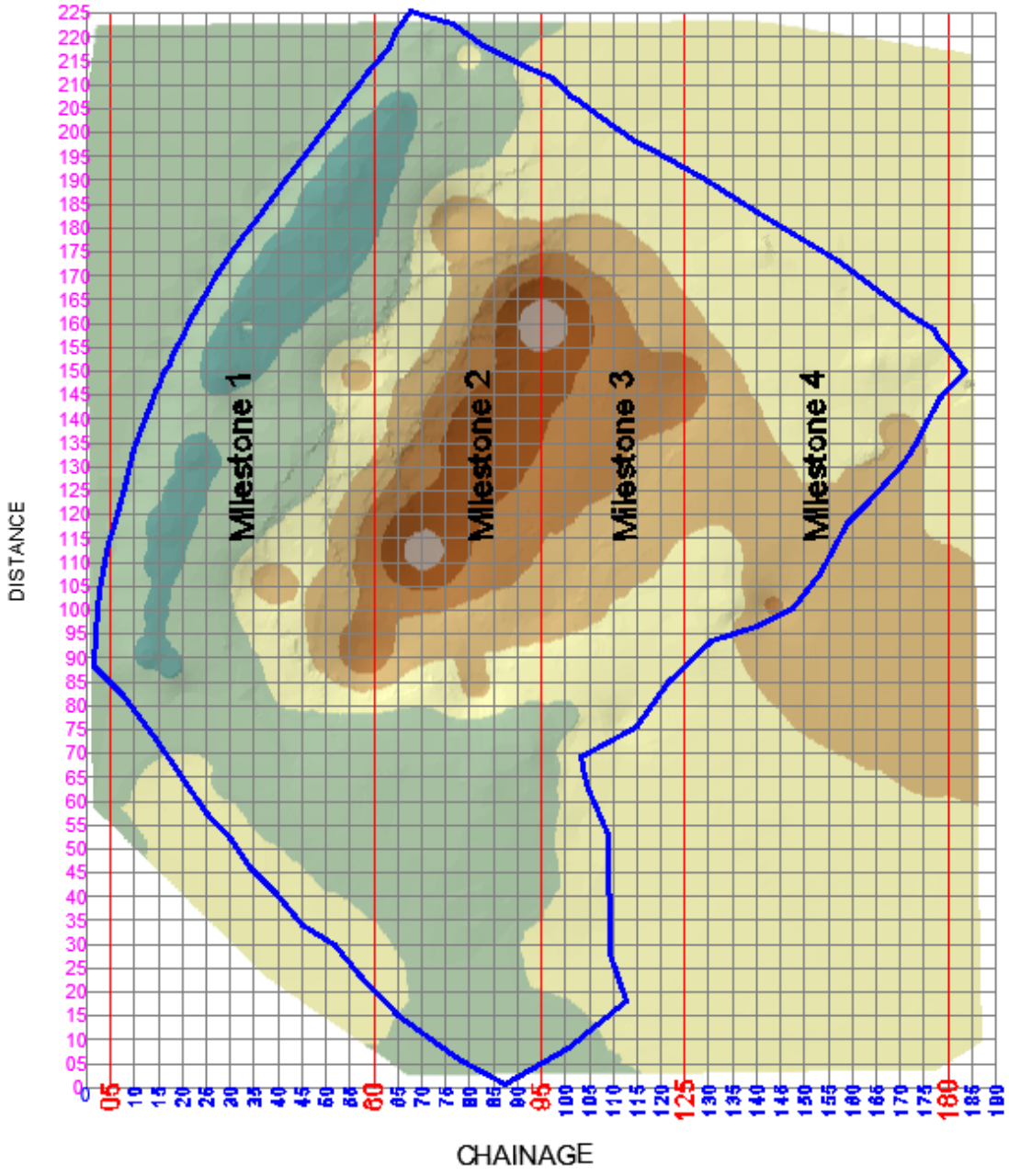
4. Proposed Outputs to be achieved in the project

43. The following are the output to be achieved through the proposed project-

Table 19: Output proposed to be achieved			
No.	**Details**	**Output**	**Remarks**
1	Total Area of Dump Site	7690	
2	Waste Spread Area	22403 Sqm	*~ Waste Spread area is greater than total dumpsite area*
3	Area to be Reclaimed	22403 Sqm	*~ 100% of the Waste Spread Area*
4	Proposed area to be Capped	NA	*NA*
5	Maximum quantity of Inert/Rejects to be Scientifically capped	NA	*NA*
Source: Consultant			

44. The dumpsite reclamation is divided into **4 Milestone** as under-

Table 20: Proposed Milestones to be acheived						
Milestone No.	**Chainage Nos.**		**Quantity of Waste**		**Area to be Cleared through Bioremediation***	
	From	**To**	**In CuM**	**%age of total**	**In SQM**	**%age of total**
1	5	55	3526	22.82	6863	30.63
2	60	90	3841	24.86	7400	33.03
3	95	120	3716	24.05	4622	20.63
4	125	180	4367	28.27	3518	15.70
		Total	**15,450**	**100.00%**	**22,403**	**100.00%**
*- includes open areas within delineated area. And not the capping area. Source: Consultant						



Phases of Land Reclamations

E. Requirements for Bioremediation

1. Proposed Approach

45. The step-by-step activities for Bioremediation is shown below:

Table 21: Step by step proposed activities for Bioremediations

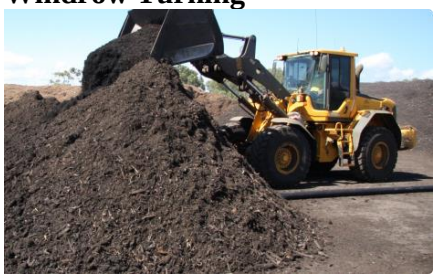
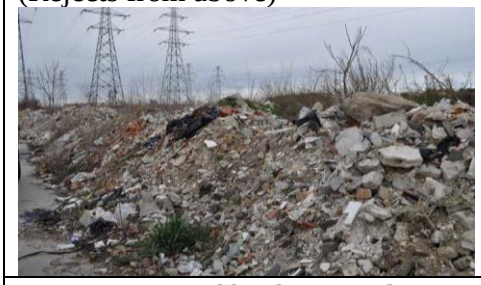
Excavation  **Windrow Formation** 	The first step is to excavate legacy waste, loosen it and make windrows so as the leachate can be dried of through solar exposure and all the entrapped methane is removed from the heap. All biodegradable waste, like discarded food, fruit, flower and garden waste, needs air to decompose it in an odourless way without producing leachate. So, the first step in stabilizing and bringing down airless legacy waste is to expose as much of it as possible to air.
Spreading Bio culture  **Windrow Turning**  **Waste Stabilisation** 	Addition of composting bio-cultures speeds up decomposition and rapidly creates biological heat within the waste that helps to dry it out and reduce its volume by 35-40%. This happens through loss of moisture and by decomposition of some of the aerated waste to carbon dioxide and water vapour. This is called bio-remediation and makes the waste dry enough for screening. Waste is called stabilized when there is no more generation of heat or landfill gas or leachate, and seeds are able to germinate in it. *i. Sprinkle the newly exposed surfaces with a composting bio culture solution or a dilute solution of 5% fresh cow dung in water. This will control smell and speed up decomposition. With the help of Back Hoe loader, the waste in the demarcated area should be loosened up.* *ii. Usually, the top layer has several materials in the active biological state. This layer shall be stabilised through composting bio-cultures, as well as herbal/biological sanitizers if found necessary for odour control.* *iii. Raking of garbage layers by a long spike harrow operating in cross directions may be done as needed to pull out large rags, plastic, rubber, textiles etc.* *iv. Waste pickers or labour will manually pick out bulky waste like coconut shells, banana stems, tyres and rocks prior to screening for bio-mining. Store in separate heaps for sale or use.* v. *Turn the windrow heaps once a week until no more volume reduction is observed in the heaps and no more heat is generated. If the garbage is stabilized, there will be no smell or leachate formation and the material will be dry enough for sieving.*

Table 21: Step by step proposed activities for Bioremediations	
Waste Screening 	It means the screening of such stabilized waste into different size fractions that can be usefully used off-site or disposed of without affecting the environment. Screen sizes commonly used are one or more of the following: 150 mm. 80 to 100 mm, 24 to 50mm, 12-16 mm and 4-6. The finest fraction is called bio-earth or good earth. It contains a mixture of humus-rich organics which improve soil fertility along with a high proportion of soil or sand, which is why it cannot meet FCO standards for compost. The coarsest fraction contains bricks, stones, coconut shells, footwear, cloth and larger plastics. *vi. Deploy Trommels and/or Horizontal Screens or other types of screens for the purpose of screening. Screen the stabilized waste in a rotary screen or gravity screens of different size openings, preferably 25 mm. A fan can blow out the plastic fraction for use by recyclers.*
Use of Screened Fraction (Bio Earth / Good Soil / Good Earth) 	*vii. Usually, the finest fraction will be organic matter plus fine soil, called 'bio-earth', which can be used as soil improver, especially for restoring alkaline or saline soils to fertility, or to grow some vegetation for erosion control. It is also useful to develop green areas or by farmers.* *viii. In very old garbage layers with high debris content, most of the organic matter may have already been decomposed. Do a seed germination test to ensure it is stabilised. Add bio culture to fully stabilise it if heat is still generated in windrow heaps or volume reduction is observed.*
Use of Screened Fraction (Combustible to RDF) 	*ix. The recyclables like plastic, glass, metals, rags and cloth recovered from the waste during screening shall be sorted out and preferably cleaned before sending to recycling industries or as RDF. The recyclables shall also be randomly sampled by an NABL lab and tested for heavy metals, salinity/electrical conductivity and leachability to ensure no environmental harm during use. FCO standards for pH and contaminants will be provisionally used as a benchmark.* *x. The coarser fraction will have a lot of combustibles (cloth etc.) which can be baled and supplied as Alternate Fuel Resources in cement kilns or boilers.* *xi. Recyclable waste is sent to authorize recyclers.* *xii. Bio-medical waste, hazardous waste, e-waste, construction and debris waste, etc. should be sent to respective authorized disposal sites.*
Use of Screened Fraction (Rejects from above) 	*xiii. The coarser fraction will be gravel and coarse organics, which can be used for road and railway embankments the coarsest fraction may have a lot of combustibles (cloth etc.) which can be baled and supplied as Alternate Fuel Resources in cement kilns or boilers.* *xiv. The heavy fractions may be sand and gravel usable for road shoulders or for plinth filling. Stones and concrete if any can be used for road sub-grade, or for crushing, recycling and reuse for construction industry.*
Source: Proposed by the Consultant	

2. Proposed Requirements for Bioremediation

46. The following are the detailed calculation for requirements of infrastructure for Bioremediation.

Table 22: Detailed Calculation of Infrastructure Requirements for Bioremediation

No.	Details			
1	**Excavation & Loading / Excavator**			
Purpose Excavation and Windrow Formations, Windrow Turning & Loading of material into Dumpers for transportation to screening unit	**Assumption & Calculations**			
	Quantity of Crude Waste	15,450.00	CuM
	Capacity Proposed	**30.00**	CuM/Hour
	Total Requirement	**515.00**	**Hours**
		12.00	Hours/Day
	Nos. of Units Proposed @ 12 Hours/Day / Unit	**1.00**	**Nos.**
2	**Transportation / Dumper**			
Purpose Transportation of material to screening unit with lead of 0.5 to 1.5 Kms	**Assumption & Calculations**			
	Material Transport (Before Screening)	14,678.00	MT
	Material Transport (After Screening)	-	MT
	Total	**14,678.00**	**MT**
	Capacity Proposed	**18.00**	MT/Hour
	Total Requirement	**815.00**	**Hours**
		19.00	Hours/Day
	Nos. of Units Proposed @ 10 Hours/Day / Unit	2.00	Nos.
3	**Stabilization / Biocultural Preparation & Spraying**			
Purpose Preparation & Spraying on the Crude waste for stabilisation and soil enrichment	**Assumption & Calculations**			
	Material of Waste to be screened	13,211.00	MT
	Solution Quantity Required	**1.00**	Liter/MT
	Total Requirement	**13,211.00**	**Liter**
	Water @85%	11,229.00	Liter
	Biocultural @15%	1,982.00	Liter
4	**Screening / Rotary Trommels with Vibrating Screen**			
Purpose Separate the soil material, Combustibles and inerts	**Assumption & Calculations**			
	Material (After Stabilisation / Screening)	13,211.00	MT
	Capacity Proposed	**300.00**	MT/Day/Unit
	Total Operational Requirement	44.00	Days
	@ 25 Days per Month	2.00	Month
	Total Requirement	**2.00**	**Months**
	No. of Units Proposed	**1.00**	**Nos.**
	Each Trommel sets consist of Screens of sizes 85 MM, 50 MM and 8 MM		
5	**Loading / Backhoe Loader**			
Purpose Loading of material in Screening Unit and after screening material in Dumper	**Assumption & Calculations**			
	Material Transport (Before Screening)	14,678.00	MT
	Material Transport (After Screening @ 90%)	13,210.00	MT
	Total	**27,888.00**	**MT**
	Capacity Proposed	**27.00**	MT/Hour
	Total Requirement	**1,033.00**	**Hours**
		23.00	Hours/Day
	Nos. of Units Proposed @ 10 Hours/Day / Unit	**2.00**	**Nos.**
6	**Transportation / Dumper**			
Purpose	**Assumption & Calculations**			

Table 22: Detailed Calculation of Infrastructure Requirements for Bioremediation				
No.	**Details**			
Transportation of Screened material with lead of 1 to 1.5 Kms & Inert to Dumping site		Inert Material (After Stabilisation / Screening)	2,513.00	MT
		Balance Material (After Stabilisation / Screening)	9,330.00	MT
		Total	**11,843.00**	**MT**
		Capacity Proposed	**18.00**	MT/Hour
		Total Requirement	**658.00**	**Hours**
			15.00	Hours/Day
		Nos. of Units Proposed @ 10 Hours/Day / Unit	**2.00**	**Nos.**
7	**Manpower/ Site Supervisor**			
Purpose For Supervision Trips/ operations		**Assumption & Calculations**		
		Person Required @1 Per Screening Unit	**4.00**	Nos.
		Total Requirement	**176.00**	**Mondays**
8	**Manpower/ Labour**			
Purpose For Manual segregation of Recyclables		**Assumption & Calculations**		
		Recyclable Material (Before Stabilisation/ Screening)	1,368.00	MT
		Total recyclable per day	31.09	MT
		Person Required @ 2 MT per person per day	16.00	Nos.
		Total Requirement	**704.00**	**Mondays**
9	**Recyclable Processing /Plastic Dusting Machine**			
Purpose Removal of dust from the combustible Material like plastic, paper, rubber, etc.		**Assumption & Calculations**		
		Plastic, Polythene, Tetra Packs Etc	744.00	MT
		Paper and Card Board	403.00	MT
		Textiles	474.00	MT
		Total Combustible Material Excluding Horticulture Waste & Wooden Pices (Before Stabilisation/Screening)	1,621.00	MT
		Capacity Proposed	**12.00**	TPH
		Total Requirement	**136.00**	**Hours**
		Total Requirement @ 8 Hours per day	**17.00**	**Days**
		Total Machine Requirement	**1.00**	**Nos.**
10	**Recyclable Processing /Shredding Machine**			
Purpose Shredding of Material like plastic, paper, rubber, etc.		**Assumption & Calculations**		
		Plastic, Polythene, Tetra Packs Etc	744.00	MT
		Paper and Card Board	403.00	MT
		Textiles	474.00	MT
		Total Combustible Material Excluding Horticulture Waste & Wooden Pices (Before Stabilisation/Screening)	1,621.00	MT
		Capacity Proposed	**12.00**	TPH
		Total Requirement	**136.00**	**Hours**
		Total Requirement @ 8 Hours per day	**17.00**	**Days**
		Total Machine Requirement	**1.00**	**Nos.**
11	**Recyclable Processing /Bailing Machine**			
Purpose formatting Balls of Material like plastic, paper, rubber , etc.		**Assumption & Calculations**		
		Plastic, Polythene, Tetra Packs Etc	744.00	MT
		Paper and Card Board	403.00	MT
		Textiles	474.00	MT
		Total Combustible Material Excluding	1,621.00	MT

Table 22: Detailed Calculation of Infrastructure Requirements for Bioremediation			
No.	**Details**		
	Horticulture Waste & Wooden Pices (Before Stabilisation/Screening)		
	Capacity Proposed	12.00	TPH
	Total Requirement	**136.00**	**Hours**
	Total Requirement @ 8 Hours per day	**17.00**	**Days**
	Total Machine Requirement	**1.00**	**Nos.**
Source: Proposed by the Consultant			

54. The following are the minimum requirements of infrastructure for Bioremediation.

Table 23: Summary of Infrastructure Requirements for Bioremediation			
No.	**Details**	**Infrastructure**	**Minimum Requirements**
1	**Excavation & Loading**	Excavator	1 Nos.
2	**Transportation**	Dumper	2 Nos.
3	**Stabilization**	Bio culture Preparation & Spraying	13211 Liter
4	**Screening**	Rotary Trommels with Vibrating Screen	1 Nos. of Sets
5	**Loading**	Backhoe Loader	2 Nos.
6	**Transportation**	Dumper	2 Nos.
7	**Manpower**	Site Supervisor	4 Nos.
8	**Manpower**	Labour	16 Nos.
9	**Recyclable Processing**	Plastic Dusting Machine	1 Nos.
10	**Recyclable Processing**	Shredding Machine	1 Nos.
11	**Recyclable Processing**	Bailing Machine	1 Nos.
12	**Other**	Electricity Connection	110 HP
Source: Proposed by the Consultant			

47. The following are the specifications for the required infrastructure for Bioremediation.

Table 24: Specifications for Infrastructure Requirements for Bioremediation

Specifications for Excavator

Make- Tata Hitachi / Hyundai / JCB / equivalent		**Dimensions**	
Engine		Shoe Width	500 mm
Maximum Engine Power	133 hp	**Working Range**	
No. of Cylinder	6	Max digging depth	5580 mm
Max. Torque	537.588 Nm/min-1	Maximum dumping height	6480 mm
Weight		Boom Length	5.68 m
Maximum Operating Weight	20000 kg	Arm Length	2.85 m
Performance		**Bucket**	
Maximum Bucket Capacity	1.5 cum	Bucket tearout with boost	16400 Kgf
Gradeability	70 % (35 deg)	**Refiling Capacity**	
Swing Speed	13.7 rpm	Fuel Tank	310 L
Travel Speed	4.2 km / h	Engine Oil	221 L

Specifications for Dumper

Table 24: Specifications for Infrastructure Requirements for Bioremediation

Make	TATA / Bharat Benz / Ashok Leyland/ Equivalent	**Clutch**	380 mm Dia Push type Single Plate Dry Friction Organic Lining
Engine	Cummins ISBe 5.6 BS6	**Gearbox**	G1150 9 speed Gearbox with crawler & one reverse
Engine Norm	BS-VI	**Steering**	Power Steering
Power	219 HP	**Transmission**	Manual
Max Torque	850 NM	**Power Steering**	Yes
No. of Tyre	10	**Body Option**	Customizable
Fuel Tank	300 Ltr.	**Chassis Type**	Chassis with Cabin
GVW	28000 KG	**Cabin Type**	Day Cabin
Wheelbase	3880 MM	**Arm Rest**	No
Front Axle	Forged I beam reverse elliot type - drop beam	**Tiltable Steering**	Yes
Rear Axle	Single reduction, extra heavy duty, hypoid gears, fully floating axle shaft	**Front Tyre**	295/95 D20
Front Suspension	Semi elliptical leaf spring suspension	**Rear Tyre**	295/95 D20
Rear Suspension	TML bogie suspension with anti roll bar	**Seating Capacity**	D+1

Specifications for Bio Culture Preparation & Spraying

As per Market Availability

Specifications for Rotary Trommels with Vibrating Screen

Table 24: Specifications for Infrastructure Requirements for Bioremediation

Sr. No.	DESCRIPTION	CAP./SIZE	ELE. POWER (HP)
1	FEED HOPER	2.5M³	-
1:2	VIBRATORY MOTOR	318x2 CFF	0.25x2
1:3	CONVEYOR BELT (CHEVRON)	650Wx12600L	-
1:4	DRIVE	GEAR+MOTOR	5
2	VIBRATOR SCREEN	90x90mm	-
2:2	VIBRATORY MOTOR	2600x2 CFF	3x2
3	1st REJECT CONVEYOR	ABOVE 90mm	-
3:2	CONVEYOR BELT (CHEVRON)	500Wx16600L	-
3:3	DRIVE	GEAR+MOTOR	5
3:4	BLOWER OUTLET (152mm)	7600M³/hr	7.5
4	SLINGER CONVEYOR BELT	800Wx20600L	-
4:2	DRIVE	GEAR+MOTOR	7.5
5	ROTARY SCREEN (6mm)	Ø2000x7500Lmm	-
5:2	SCREEN Ø25mm	33M² (GROSS)	-
5:3	DRIVE	GEAR+MOTORx2	10x2
6	PROCESSED CONVEYOR	600Wx26300L	-
6:2	DRIVE	GEAR+MOTOR	5
7	2nd REJECT CONVEYOR	ABOVE 25mm	-
7:2	DRIVE	GEAR+MOTOR	5
7:3	BLOWER OUTLET (100mm)	3400M³/hr	2
8	CONTROL PANEL BOARD	WITH CHANGEOVER SWITCH	TOTAL HP = 63.5
9	REQUIRED AREA FOR PLANT INSTALLATION	10Wx30L mtr.	

Specifications for Backhoe Loader

Make	JCB/ Escort / Mahindra/ Equivalent	**AXLES**	
ENGINE		**Front**	Drive axle rigidly mounted, incorporates JCB Max – Trac torque proportioning differential, driven by short prop shaft from gear box.
Engine Model	KOEL 4R81 0, NA, water cooled, BS III diesel engine.	**Rear**	2WD steer axle, centrally pivoted, with oscillation angle of 16
Gross Torque	182 nm @ 1500 RPM	**BRAKES**	
Gross Power	49.5 HP @ 2200 RPM	**ELECTRICAL**	
No of Cylinders	4	**Electrical**	100 Ah 12 Volts battery system with alternator and full road lighting.
TRANSMISSION		**WEIGHT**	
Torque converter stall ratio is	2.61: 1	**Shipping Weight**	4530 Kgs
STEERING		**6 in 1 clam shovel bucket**	Yes
A* Outside Loader Bucket	9.70 m	**Cabin**	Yes
A Outside Loader Bucket**	11.00 m	**Dozer Blade**	Yes
B Outside Wheels	7.44 m	**Auger**	Yes
B Outside Wheels**	7.90 m	**Canopy**	Yes
		High Dump Bucket	3.1 M
HYDRAULIC SYSTEM		**TYRES**	
Combined Pump Flow	691 pm @ 2200 RPM	**Standard Front**	7.5 x 16 – 16 PR
System Pressure	2610 PSI	**Standard Rear**	14.9 x 24 – 12 PR
Pump Type	Gear, Double pump		

Specifications for Plastic Dusting Machine

Table 24: Specifications for Infrastructure Requirements for Bioremediation

Power	15 HP	**Wash Capacity**	1 TPH
Phase	3 phase	**Motor Power**	15 HP
Voltage	415 V	**Power Source**	Electric
Operating System	Automatic		

Specifications for Shredding Machine

Shredding Machine Type	Double Shaft	**Forward / Reverse**	Yes
Shredding Material	Rubber, Paper, Waste, Plastic	**App. Dimensions**	57 inch L x 24 inch W x 53 inch H
Motor Capacity	10 HP	**Floor Space**	22 sq. Ft
Electric Type	3 PH	**Gear Box**	130-20(2 Nos.)
No. of Motors	2	**Wheels**	With Wheel
Stage Size	600 mm	**Forward / Reverse Facility**	Yes
Capacity	2 to 2.5 Ton / hour	**Output Size**	5 to 10mm
Blades	WPS / OHNS	**Electric Consumption**	15.00 KW = 15 units / hr
Safety Pack	Optional		

Specifications Bailing Machine

Capacity	15 Ton	**Working Fluid**	Hydro Enklo 63
Brand	AIM	**Hydraulic Pressure**	2700 Psi
Phase	3 Phase	**Power**	3 HP
Voltage	220-380V	**Power Source**	Electric

Source: Consultant

F. Cost Estimates & Implementation Plan for Dumpsite Remediations

1. Unit Rates Adopted for Costing

48. The following are the unit Rates adopted deriving Cost for Bioremediation Works.

Table 25: Unit Rates Adopted

No.	Details	Unit Rates Adopted	Source of Rates
1	Clearing Dumping site using Bio-remediation of Old Dumped waste	Rs. 550/- Per MT	Directorate, Urban Administration & Development Madhya Pradesh

Source: Consultant

2. Cost Estimates

49. The following are the summary of Cost Estimates **for Bioremediation** for Dumpsite Reclamation –

Table 26: Summary of Cost for Bioremediation

No.	Description of Work	Quantity		Unit Rate	Total Estimated Project Cost
1	Dumpsite Reclamation which includes following works-				
	The works for scientific dump site reclamation through ***Bioremediation*** of legacy waste/ unprocessed municipal solid waste, Resource Recovery and Rejects Disposal which includes following activities- (i) Biomining/ Excavation of complete mixed MSW from the dumpsite which underwent biological and physical degradation. (ii) Resource recovery by using suitable mechanical sieving machine or any other suitable equipment / method, segregating, sorting, retrieving recoverable materials, storing, selling, diverting for recycling etc. (iii) Rejects disposal / Backfilling of reject at Suitable area within 10 Kilometres from the site or Staking	**14,678.00**	**In MT**	**₹ 550.00**	**₹ 80,72,900.00**
			Total Project Cost + Applicable taxes (A):		**₹ 80,72,900.00***

Source: Consultant
*- Applicable Taxes EXTRA

3. Proposed Implementation Plan

a) Comparison of various Implementation Model for Dumpsite Reclamation

50. The following are the Comparison of various Implementation Model for Dumpsite Declamation adopted in India-

Table 27: Comparison and selection of appropriate models for dumpsite reclamation			
Details	**Telangana & J & K**	**Bhopal**	**Maharashtra**
Project Structure	**Cluster basis** Invitation of Single Tender for Nine Cluster Work Execution at individual ULB level (contract shall be executed by each ULB separately)	**Standalone**	**Standalone**
Bidding Parameter	Per Ton (MT) Basis	**A.** Cost of the portion of the reclaimed land in area ..... (in excess of min. land area of 15 acres). cost of the excess land @ Rs 5.26 Cr per acre) **B.** Lumpsum Quote of Bidder for Bio-remediation & Capping L1 bid = Lowest (B-A) value	Lumpsum basis on land to be reclaimed (Min.80%)
Payment Milestone-Comparison Matrix	1. Project to be completed in 6 Months 2. Payment on Monthly Legacy Waste Processed (Prorated Basis)	Construction Phase: 80 % Contract Value DPR: 5%; Committed Land Handover 48 % (In Six Milestone of 6% each); Capping: 27% (In two stage 12% & 15%) O & M: 20% (In 10 Milestone of 2% every 6 Months)	40% of proposed Land Reclaimed: 40% Cumulative 70% of Proposed Land reclamation: 30% Cumulative 100% of Proposed Land reclamation: 100%
Source: Consultant			

51. From the above analysis, it can be established that the works of Bioremediation and scientific capping for smaller ULBs can be done for cluster of ULBs at the division level. The following is the model proposed for the project.

Table 28: Comparison and selection of appropriate models for dumpsite reclamation	
Details	**Proposed Model for M.P.**
Project Structure	**Cluster basis** Invitation of Tender at Division Level

Table 28: Comparison and selection of appropriate models for dumpsite reclamation	
Details	**Proposed Model for M.P.**
	Work Execution at individual ULB level (contract shall be executed by each ULB separately) Proportionate (of Lumpsum Quote) payment by individual level
Bidding Parameter	Lumpsum basis on land to be reclaimed **(Min. 80%)** The bidder quoting the lowest price will be selected to execute the works.
Payment Milestone-Comparison Matrix	Land Reclamation (Min 80%): - **100% of Contract Value (20%, 20%, 15%, 20%,25%)** against completion of Bioremediation Works
Source: Consultant	

b) Proposed Implementation timeframe

52. The following are the proposed timeframe for implementation

Table 29: Proposed Implementation timeframes		
No	**Activity**	**Minimum Required Months**
1	Construction & Commissioning Period	1
2	Completion of Bioremediation Works	3
	Total Time Duration	**4**
Source: Consultant		

4. Proposed Funding Mechanism

53. As per direction of Urban Administration and Development Department, Govt. of Madhya Pradesh, the following is the fund sharing mechanism under for all the infrastructure to be financed under Swachh Bharat Mission (Urban) 2.0.

Table 30: Proposed Financial Structure & Funding Mechanism			
Population Range	**Govt. of India (GoI) Share**	**Govt. of Madhya Pradesh Share**	**Urban Local Body Share**
More than 10 Lakh	25%	25%	50%
1 Lakh to 10 Lakh	33%	33%	34%
Less than 1 Lakh	**50%**	**40%**	**10%**
"Harda"	**₹ 40,36,450**	**₹ 32,29,160**	**₹ 8,07,290**
Source: Urban Administration & Development Department, Govt. of Madhya Pradesh			

54. The remainder (10%) has to be brought in by ULB which in case can be covered under the grant of 15th Finance Commission (Proposed amount under grant as per the Budget year 2022-2023).

5. Benefits from the Proposed Project:

55. Land is the most valuable asset that will be recovered as output of this Proposed Project, considering the revenue guidelines for the site land value can be assessed as shown in table below.

Table 31: Reclaimed land benefits

No.	Details	Benefit	Remarks
1	Waste Spread Area	22403 sqm	Area to be reclaimed
2	Cost of Land	900 Rs./Sqm	As per ULB or Current Market rate
3	Total cost of Land to be reclaimed (Rs.)	₹ 2,01,62,700.00	

Source: Consultant

56. In addition, the Successful Concessioner can generate the revenue from selling the material recovered from bio remediation process.

57. The remediation of dumpsites leads to the following Benefits:

- Elimination of foul odour to benefit the citizen living nearby
- Decline in vector borne diseases arising out of the dumpsite
- Significant Reduction in Air pollution of the entire area
- Elimination of dump fires and leachate generation
- Uplifting of the environmental, aesthetic and social parameters of entire area
- Reduction in Green House Gas Emissions, soil pollution and Ground water contamination
- Increase in nearby real state value and rental values.
- Dumpsite land becomes available for other use

G. Environment Mitigation Measures

58. There are several factors that must be kept in mind during implementation of the project.

- *Fresh Waste:* The issue of dumping of fresh waste generated by ULB will be resolved onsite as the remediation work cannot be carried out on any section of the dump site receiving fresh waste.

- *Space Management:* Availability of space is a constant challenge as each of aeration, stabilization, and screening need to be done within the boundaries of the dumpsite, and the solution to this problem varies on a case-to-case basis. Safety will be ensured when trying to manage space.

- *Leachate Management:* Most high heaps of legacy waste are water-logged with leachate even near the topmost layers and all the way to the bottom. This is not just from rainwater entering the heap but is produced by airless rotting within the entire waste heap. So when legacy waste heaps are opened up, some leachate almost always trickles out. This is not produced by the formation of wind-rows or cones, which in fact help to dry out the waste by aerated decomposition. Aeration of the waste leads to reduction in leachate. Channels will be created to lead the oozing leachate rivulets to a lined depression or pond for treatment or for leachate recirculation onto wind-rows as a type of bio culture. Bio-cultures that have been proved successful at other locations will be sprinkled onto the leachate pools.

- *Fire Control and Safety:* Most large dumpsites are smouldering from hidden fires. Methane itself is flammable with a blue flame, and supports the yellow-flame burning of combustible plastics, cloth and oily rags. Sometimes flammable industrial waste finds its way onto dumpsites, aggravating the problem. There is a better way, again requiring creative common-sense and experience and training of earth-mover drivers. Most fires within heaps have a point source – a bag of textile discards or plastic waste or a ball of oily rags. Earthmover drivers must learn to dig in and pluck out these burning balls of fire. These should be laid nearby on the surface of the dump and then rubbed out with the back of the excavator shovel to extinguish the flames and smoke. Wet soil should be kept handy to immediately plug the excavated hole. Adding composting bio-cultures can be tried, to counter the anaerobic conditions around the burning spots. Smoking points must be tackled patiently and systematically, one by one, till the dump is smoke-free to begin stabilizing operations by bio-remediation.

- Other Measures- The following general measures should be considered:

  - ***Vector and vermin control:*** *The site might attract vectors and vermin because of the presence of organic waste. To avoid or reduce vectors and vermin, the filling area should be minimised and the waste covered at regular intervals.*

  - ***Litter control:*** *Offsite litter should be picked up on a regular basis.*

  - ***Noise control:*** *Noise in the site arises from operations and waste vehicles entering and leaving the site. During operations, equipment with faulty or worn-out exhaust systems cancause high noise levels. Hence, they need to be repaired.*

- ***Dust control:*** *The combination of vehicle movements and winds on temporary and un-surfaced roads can create dust. Dust within and around a landfill site can be a source of annoyance, harm, and physical discomfort to landfill staff and neighbourhood. Therefore, all precautions have to be taken to avoid dust generation.*

- ***Odour control:*** *The landfill should be operated in a manner that will minimise the odour from waste or associated items. Operational procedures include placing suitable cover material over the waste in a timely manner.*

****End of Report****

Glossary of Terms

1. **"aerobic composting"** means a controlled process involving microbial decomposition of organic matter in the presence of oxygen;

2. **"anaerobic digestion"** means a controlled process involving microbial decomposition of organic matter in absence of oxygen;

3. **"authorisation"** means the permission given by the State Pollution Control Board or Pollution Control Committee, as the case may be, to the operator of a facility or urban local authority, or any other agency responsible for processing and disposal of solid waste;

4. **"biodegradable waste "** means any organic material that can be degraded by micro-organisms into simpler
stable compounds;

5. **"bio-methanation"** means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas;

6. **"brand owner"** means a person or company who sells any commodity under a registered brand label.

7. "**buffer zone**" means zone of no development to be maintained around solid waste processing and disposal facility, exceeding 5 TPD of installed capacity. This will be maintained within total and area allotted for the solid waste processing and disposal facility.

8. **"bulk waste generator"** means and includes buildings occupied by the Central government departments or undertakings, State government departments or undertakings, local bodies, public sector undertakings or private companies, hospitals, nursing homes, schools, colleges, universities, other educational institutions, hostels, hotels, commercial establishments, markets, places of worship, stadia and sports complexes having an average waste generation rate exceeding 100kg per day**;**

9. **"bye-laws"** means regulatory framework notified by local body, census town and notified area townships for facilitating the implementation of these rules effectively in their jurisdiction**.**

10. **"census town"** means an urban area as defined by the Registrar General and Census Commissioner of India;

11. **"combustible waste"** means non-biodegradable, non-recyclable, non-reusable, non-hazardous solid waste having minimum calorific value exceeding 1500 kcal/kg and excluding chlorinated materials like plastic, wood pulp, etc**;**

12. "**composting"** means a controlled process involving microbial decomposition of organic matter;

13. "**contractor**" means a person or firm that undertakes a contract to provide materials or labour to perform a service or do a job for service providing authority;

14. **"co-processing"** means use of non-biodegradable and non-recyclable solid waste having calorific value exceeding 1500k/cal as raw material or as a source of energy or both to replace or supplement the natural mineral resources and fossil fuels in industrial processes;

15. **“decentralised processing”** means establishment of dispersed facilities for maximizing the processing of biodegradable waste and recovery of recyclables closest to the source of generation so as to minimize transportation of waste for processing or disposal;

16. "**disposal**" means the final and safe disposal of post processed residual solid waste and inert street sweepings and silt from surface drains on land as specified in Schedule I to prevent contamination of ground water, surface water, ambient air and attraction of animals or birds;

17. **“domestic hazardous waste”** means discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge, etc., generated at the household level;

18. "**door to door collection**" **m**eans collection of solid waste from the door step of households, shops, commercial establishments, offices, institutional or any other non-residential premises and includes collection of such waste from entry gate or a designated location on the ground floor in a housing society, multi storied building or apartments, large residential, commercial or institutional complex or premises;

19. **“dry waste”** means waste other than bio-degradable waste and inert street sweepings and includes recyclable and non-recyclable waste, combustible waste and sanitary napkin and diapers, etc;

20. **“dump sites”** means a land utilised by local body for disposal of solid waste without following the principles of sanitary land filling;

21. **“extended producer responsibility” (EPR)** means responsibility of any producer of packaging products such as plastic, tin, glass and corrugated boxes, etc., for environmentally sound management, till end-of-life of the packaging products;

22. **“facility”** means any establishment wherein the solid waste management processes namely segregation,
recovery, storage, collection, recycling, processing, treatment or safe disposal are carried out;

23. **"fine" means** penalty imposed on waste generators or operators of waste processing and disposal facilities
under the bye-laws for non-compliance of the directions contained in these rules and/or bye- laws

24. **"Form"** means a F8orm appended to these rules;

25. **“handling”** includes all activities relating to sorting, segregation, material recovery, collection, secondary storage, shredding, baling, crushing, loading, unloading, transportation, processing and disposal of solid wastes;

26. **“inerts”** means wastes which are not bio-degradable, recyclable or combustible street sweeping or dust and silt removed from the surface drains;

27. **“incineration”** means an engineered process involving burning or combustion of solid waste to thermally degrade waste materials at high temperatures;

28. **“informal waste collector”** includes individuals, associations or waste traders who are involved in sorting, sale and purchase of recyclable materials;

29. "**leachate**" means the liquid that seeps through solid waste or other medium and has extracts of dissolved or suspended material from it;

30. **" local body"** for the purpose of these rules means and includes the municipal corporation, nagar nigam, municipal council, nagarpalika, nagarpalika parishad, municipal board, nagar panchayat and town panchayat, census towns, notified areas and notified industrial townships with whatever name they are called in different States and union territories in India;

31. "**materials recovery facility" (MRF)** means a facility where non-compostable solid waste can be temporarily stored by the local body or any other entity mentioned in rule 2 or any person or agency authorised by any of them to facilitate segregation, sorting and recovery of recyclables from various components of waste by authorised informal sector of waste pickers, informal recyclers or any other work force engaged by the local body or entity mentioned in rule 2for the purpose before the waste is delivered
or taken up for its processing or disposal;

32. **"non-biodegradable waste"** means any waste that cannot be degraded by microorganisms into simpler stable compounds;

33. **"operator of a facility"** means a person or entity, who owns or operates a facility for handling solid waste
which includes the local body and any other entity or agency appointed by the local body;

34. **primary collection"** means collecting, lifting and removal of segregated solid waste from source of its generation including households, shops, offices and any other non-residential premises or from any collection points or any other location specified by the local body;

35. "**processing"** means any scientific process by which segregated solid waste is handled for the purpose of reuse, recycling or transformation into new products**;**

36. **"recycling**" means the process of transforming segregated non-biodegradable solid waste into new material or product or as raw material for producing new products which may or may not be similar to the original products;

37. **"redevelopment"** means rebuilding of old residential or commercial buildings at the same site, where the existing buildings and other infrastructures have become dilapidated;

38. **"refused derived fuel**"(RDF) means fuel derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste;

39. "**residual solid waste"** means and includes the waste and rejects from the solid waste processing facilities which are not suitable for recycling or further processing;

40. **"sanitary land filling "** means the final and safe disposal of residual solid waste and inert wastes on land in a facility designed with protective measures against pollution of ground water, surface water and fugitive air dust, wind-blown litter, bad odour, fire hazard, animal menace, bird menace, pests or rodents, greenhouse gas emissions, persistent organic pollutants slope instability and erosion;

41. **"sanitary waste"** means wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste;

42. **"Schedule"** means the Schedule appended to these rules;

43. "**secondary storage**" means the temporary containment of solid waste after collection at secondary waste storage depots or MRFs or bins for onward transportation of the waste to the processing or disposal facility;

44. "**segregation**" means sorting and separate storage of various components of solid waste namely biodegradable wastes including agriculture and dairy waste, non-biodegradable wastes including recyclable waste, nonrecyclable combustible waste, sanitary waste and non-recyclable inert waste, domestic hazardous wastes, and construction and demolition wastes;

45. **"service provider"** means an authority providing public utility services like water, sewerage, electricity, telephone, roads, drainage, etc;

46. "**solid waste**" means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other entities mentioned in rule 2;

47. **"sorting"** means separating various components and categories of recyclables such as paper, plastic, cardboards, metal, glass, etc., from mixed waste as may be appropriate to facilitate recycling;

48. **"stabilising"** means the biological decomposition of biodegradable wastes to a stable state where it generates no leachate or offensive odours and is fit for application to farm land, soil erosion control and soil remediation;

49. **"street vendor"** means any person engaged in vending of articles, goods, wares, food items or merchandise of everyday use or offering services to the general public, in a street, lane, side walk, footpath, pavement, public park or any other public place or private area, from a temporary built up structure or by moving from place to place and includes hawker, peddler, squatter and all other synonymous terms which may be local or region specific; and the words "street vending" with their grammatical variations and cognate expressions, shall be construed accordingly;

50. **"tipping fee"** means a fee or support price determined by the local authorities or any state agency authorised by the State government to be paid to the concessionaire or operator of waste processing facility or for disposal of residual solid waste at the landfill;

51. **"transfer station"** means a facility created to receive solid waste from collection areas and transport in bulk in covered vehicles or containers to waste processing and, or, disposal facilities;

52. "**transportation**" means conveyance of solid waste, either treated, partly treated or untreated from a location to another location in an environmentally sound manner through specially designed and covered transport system so as to prevent the foul odour, littering and unsightly conditions;

53. **"treatment"** means the method, technique or process designed to modify physical, chemical or biological characteristics or composition of any waste so as to reduce its volume and potential to cause harm;

54. **"user fee"** means a fee imposed by the local body and any entity mentioned in rule 2 on the waste generator to cover full or part cost of providing solid waste collection, transportation, processing and disposal services.

55. "**vermi composting**" means the process of conversion of bio-degradable waste into compost using earth worms;

56. "**waste generator**" means and includes every person or group of persons, every residential premises and non-residential establishments including Indian Railways, defence establishments, which generate solid waste;

Drawings & L Sections

MaRS Enviro Research & Engineering Services Pvt. Ltd

[CIN- U74994GJ2010PTC062087]
NABL accredited Testing Laboratory vide Certificate No : TC-7070
Address- Survey No.:171/1 ,Gota – Jagatpur Road, Ahmedabad-382481, Gujarat
Email: lab@marsconsultancy.com

TEST REPORT

Ref No:- 02118	
Name & Address of Customer: **MaRS Planning & Engineering Services Pvt. Ltd** 601, Surmount, Opp. ISCON Mega Mall SG Highway, Ahmedabad-54. Gujarat	Sample Drawn by: The Party Particulars of the Sample: Legacy Waste Sample at Harda
Date of receipt of sample: 30/08/2022 Date of analysis: 02/09/2022	Sample quantity received:
Type of packing: Plastic Pouch	Sample Condition: Fit for Analysis

Sample Number	1	2	3
Total Sample Weight (in kg.)	10.53	11.12	11.10

RESULTS

Physical & Chemical Testing of Sample

Sr No.	Parameter	Unit	Results	Test Method
1	pH		5.0	
2	Bulk Density	MT/Cum	0.95	IS:2386(P-3):1963

Sr No.	Parameter	Unit	Results			Test Method
			Sample 1	Sample 2	Sample 3	
1	Biodegraded Fraction	% w/w	18.24%	16.64%	25.13%	On-Site Physical Verification
2	Plastic, Polythene, Tetra Packs Etc	% w/w	3.33%	8.01%	3.87%	
3	Paper and Card Board	% w/w	4.47%	1.35%	2.43%	
4	Horticulture Waste & Wooden Piece	% w/w	1.24%	4.77%	3.69%	
5	Metal	% w/w	0.86%	0.42%	0.39%	
6	Textiles	% w/w	2.43%	4.77%	5.13%	
7	Glass	% w/w	4.18%	1.62%	2.61%	
8	Leather, Rubber Etc	% w/w	3.52%	3.87%	1.26%	
9	Heavy Fractions	% w/w	25.56%	26.00%	22.25%	
10	Coarser fraction	% w/w	15.49%	11.96%	17.47%	
11	Fine Fractions	% w/w	20.71%	20.60%	15.76%	
	Total		100.00%	100.00%	100.00%	

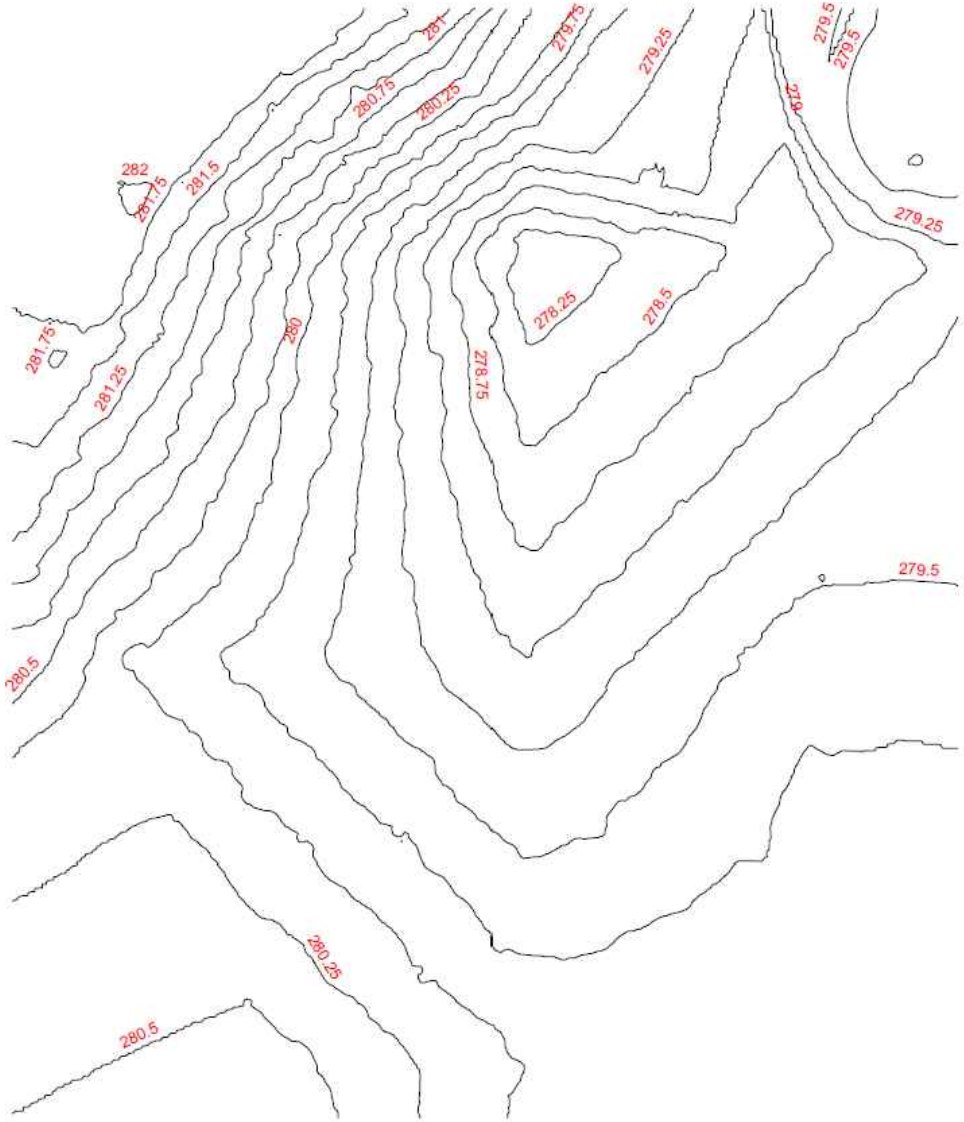
Sr No.	Parameter	Unit	Results	Test Method
1	Moisture	% w/w	22.99	ASTM D 3173-87 (1996)
2	Ash Content	% w/w	26.99	ASTM D 3174-97
3	Total volatile content (LOI)	% w/w	23.48	ASTM D 3175-89a (1997)
4	Total Organic Carbon (TOC)	% w/w	27.2	IS: 228 (P-1): 1987
5	Calorific value	Cal/Kg	882.98	Bomb Calorimeter
6	C/N ratio		14.08	Computation
7	Total Nitrogen	mg/kg	1.89	ASTM D 3179-89 (1997)
8	Total Phosphates as P2O5	% w/w	2.09	IS: 228 (P-3): 1987
9	Total Potassium as K2o	% w/w	1.7	USEPA 6010C :2007

Checked by

Authorised Signatory

Note-

1. The Test results relate purely to the sample submitted by customer for analysis. No Liability will be accepted by us regarding any false information or samples drawn by the customer. Perishable sample will be destroyed after testing.
2. Information of submitted samples as provided by Customer.
3. The Report shall not be reproduced in full or part for any purpose and can't be used as evidence in a court of Law without our the written approval and special permissions.
4. Subject to Ahmedabad Jurisdiction.



INFORMATION :-

2013	TERRAIN PROFILE DETAIL

LEGENDS :-

0.25	INTERVAL
40.000	CONTOUR LINE
	DUMP AREA BOUNDARY

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

NOTES:

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Drawing No.	Scale	Drawing Status
C-00 R0	NTS	Issued for DPR Approval

Drawing Name

Terrain Profile

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (JNP / SP / JS)

Client

Authority
Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

Consultant

309, ARISTA, Sindhu Bhavan Rd, Off S.G. Highway, Bodakdev, Ahmedabad - 380 059. Gujarat (India) **T:** (+) 91-79-2970 2258
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

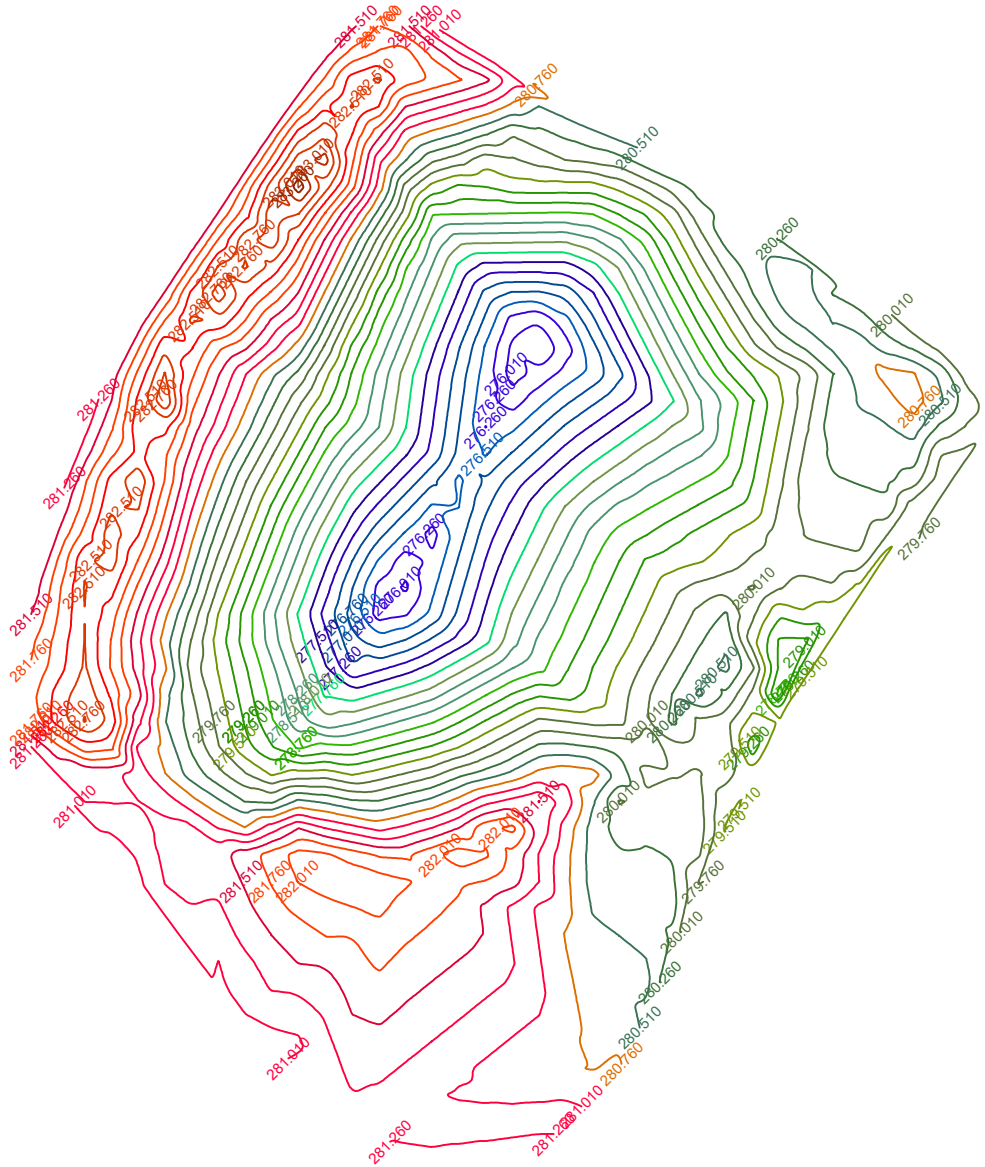
Size **A4**

INFORMATION :-

279.878 Mt	TBM LEVEL*
283.260 Mt	HIGHEST CONTOUR LINE LEVEL*
276.010 Mt	LOWEST CONTOUR LINE LEVEL*
0.69 Mt**	AVERAGE HEIGHT OF DUMP HEAP
22403 SQM	LAND AREA UNDER LEGACY WASTE
7690 SQM	TOTAL AREA

LEGENDS :-

0.25	INTERVAL
	CONTOUR LINE
	SHED
	BUILDING
	COMPOUND WALL
	LEGACY WASTE DUMP HEAP



Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

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Drawing No.	Scale	Drawing Status
C-001 R0	**NTS**	**Issued for DPR Approval**

Drawing Name

CONTOUR MAP

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

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N W E S

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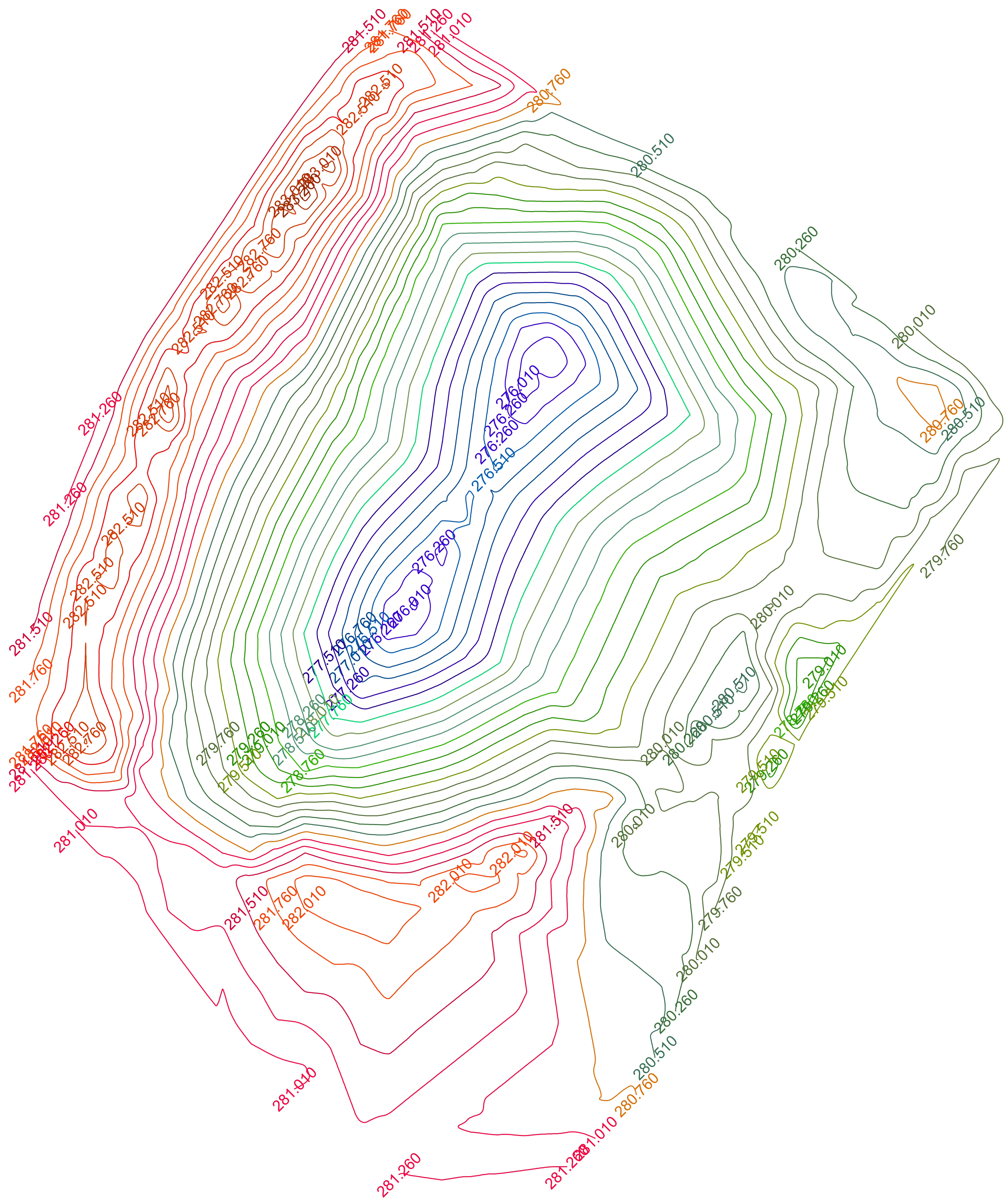
7690 SQM	TOTAL AREA

LEGENDS :-

0.25	INTERVAL
	CONTOUR LINE
	SHED
	BUILDING
	COMPOUND WALL
	LEGACY WASTE DUMP HEAP



Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

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Division	District	Urban Local Body
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Drawing No.	Scale	Drawing Status
C-002 R0	**NTS**	**Issued for DPR Approval**

Drawing Name

CONTOUR MAP

Revision History

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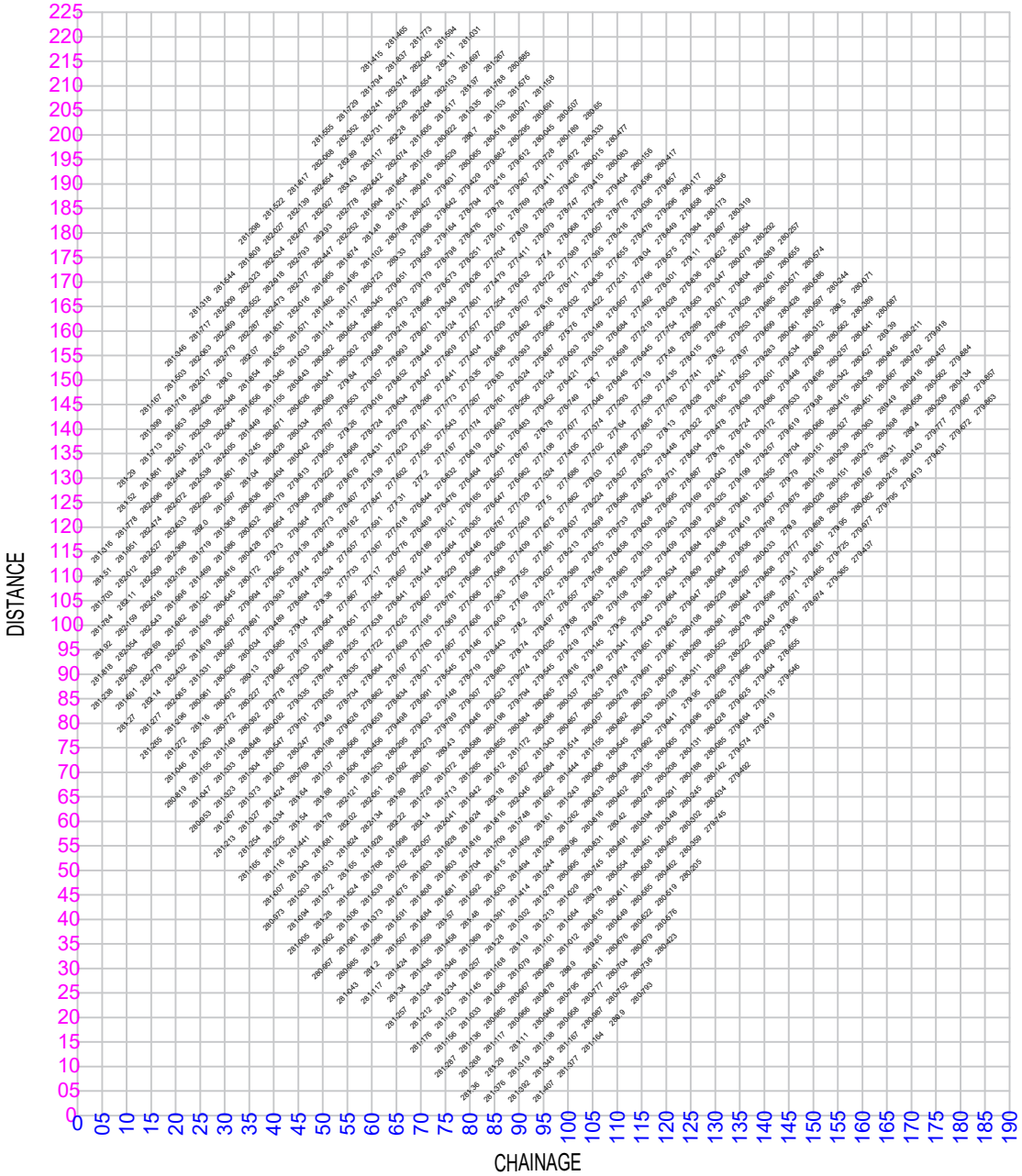
N W E S

Size **A2**



LEGENDS :-

———	GRID 0.5 X 0.5	———	SHED
0.25	INTERVAL	———	BUILDING
xxx.xxx	SPOT LEVELS		

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

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Drawing No.	Scale	Drawing Status
C-003 R0	**NTS**	**Issued for DPR Approval**

Drawing Name

5m X 5m Spot Level

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
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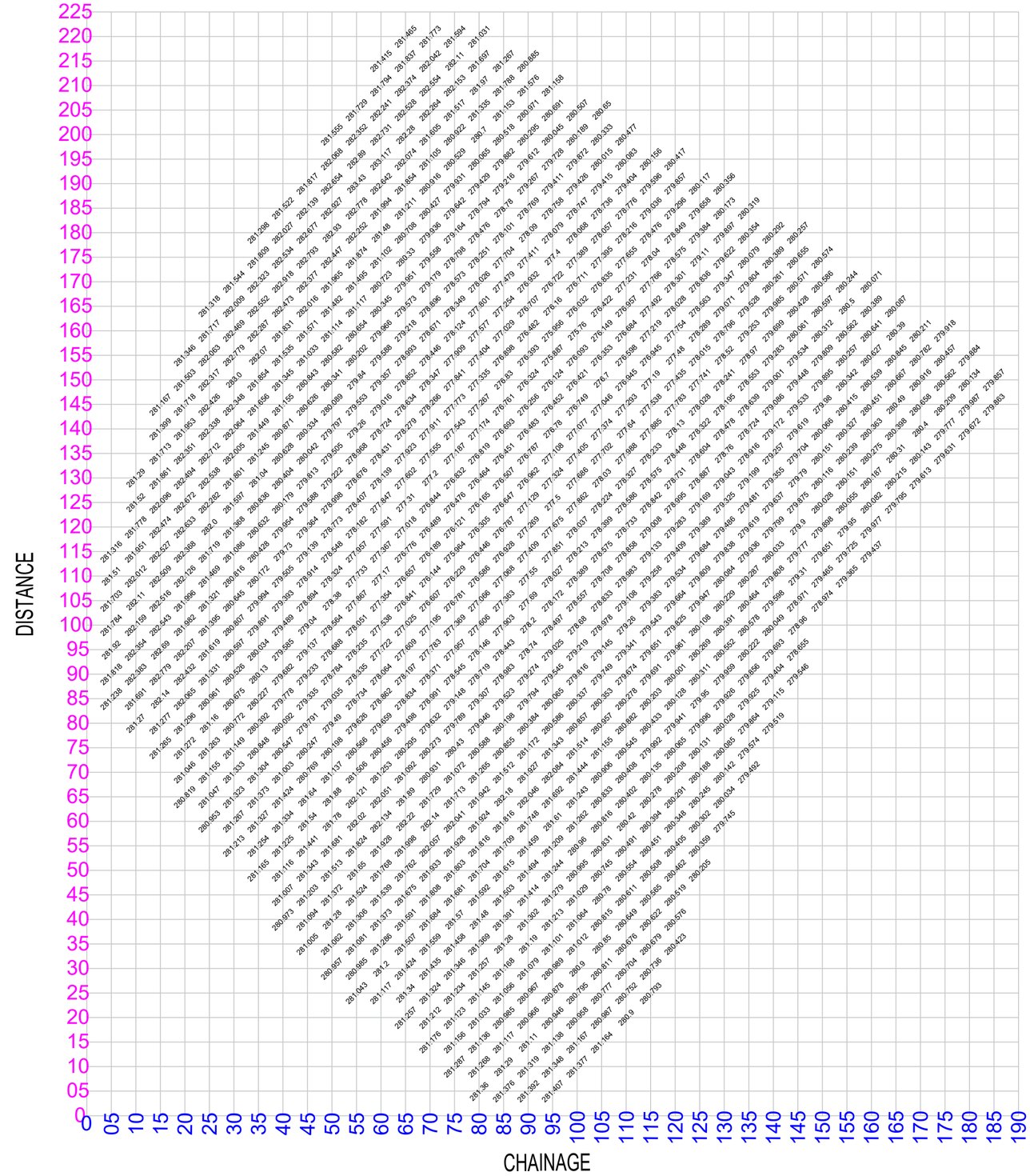
Size **A4**



LEGENDS :-

———	GRID 0.5 X 0.5	———	SHED
0.25	INTERVAL	———	BUILDING
xxx.xxx	SPOT LEVELS		

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

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Drawing No.	Scale	Drawing Status
C-004 R0	**NTS**	**Issued for DPR Approval**

Drawing Name

5m X 5m Spot Level

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
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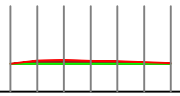
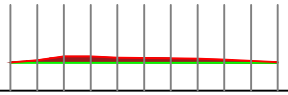
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

Size **A2**



FRL (Waste Heap Level)	281.238	281.818	281.920	281.784	281.703	281.510	281.316
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200
DISTANCE	85	90	95	100	105	110	115

L SECTION (FROM CH:005)



FRL (Waste Heap Level)	281.270	281.691	282.383	282.354	282.159	282.110	282.012	281.951	281.778	281.520	281.290
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200
DISTANCE	80	85	90	95	100	105	110	115	120	125	130

L SECTION (FROM CH:010)

FRL (Waste Heap Level)	281.265	281.277	282.140	282.779	282.690	282.543	282.516	282.509	282.527	282.474	282.096	281.861	281.713	281.399	281.267
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200
DISTANCE	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145

L SECTION (FROM CH:015)

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

NOTES:

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6. All Dimensions are in M unless specified.

Drawing No.	Scale	Drawing Status
C-005 R0	NTS	Issued for DPR Approval

Drawing Name

Longitudinal Section

(Chainage no: 005,010,015)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (JNP / SP / JS)

Client

Authority
Directorate, Urban Administration & Development, Government of MP

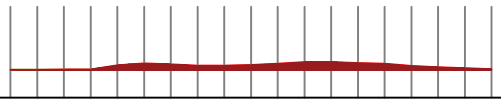
Nodal Authority- Urban Local Body

Consultant

309, ARISTA, Sindhu Bhavan Rd, Off S.G. Highway, Bodakdev, Ahmedabad - 380 059. Gujarat (India) **T:** (+) 91-79-2970 2258
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

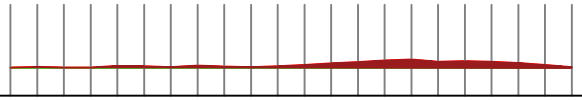
N W E S

Size **A4**



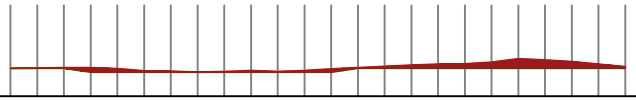
FRL (Waste Heap Level)	281.219	281.226	281.272	281.296	282.065	282.432	282.207	281.982	281.996	282.126	282.368	282.633	282.672	282.494	282.351	281.953	281.718	281.503	281.346						
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200						
DISTANCE	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155						

L SECTION (FROM CH:020)



FRL (Waste Heap Level)	281.253	281.347	281.255	281.263	281.516	281.461	281.331	281.619	281.395	281.321	281.469	281.719	282.000	282.282	282.538	282.712	282.338	282.426	282.317	282.063	281.717	281.318			
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200			
DISTANCE	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165			

L SECTION (FROM CH:025)



FRL (Waste Heap Level)	281.213	281.267	281.323	281.333	281.149	280.772	280.675	280.526	280.597	280.807	280.645	280.816	281.086	281.368	281.597	281.801	282.005	282.064	282.348	283.000	282.779	282.469	282.009	281.544	
OGL (Original Ground Level)	281.200	281.200	281.200	280.500	280.500	280.500	280.500	280.500	280.500	280.500	280.500	280.500	280.500	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	
DISTANCE	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	

L SECTION (FROM CH:030)

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

NOTES:

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6. All Dimensions are in M unless specified.

Drawing No.	Scale	Drawing Status
C-006 R0	NTS	Issued for DPR Approval

Drawing Name

Longitudinal Section

(Chainage no: 020,025,030)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (UNP / SP / JS)

Client

Authority
Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

Consultant

309, ARISTA, Sindhu Bhavan Rd, Off S.G. Highway, Bodakdev, Ahmedabad - 380 059. Gujarat (India) **T:** (+) 91-79-2970 2258
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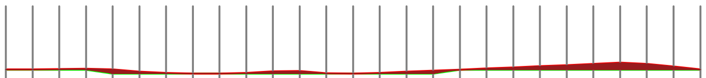
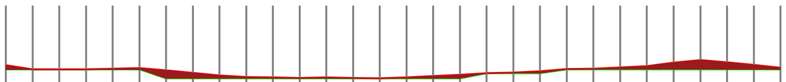
N W E S

Size **A4**



DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
50	281.265	281.200
55	281.254	281.200
60	281.327	281.200
65	281.373	281.200
70	281.304	280.500
75	280.848	280.500
80	280.592	280.500
85	280.527	280.500
90	280.513	280.500
95	280.634	280.500
100	280.891	280.500
105	280.994	280.500
110	280.572	280.500
115	280.528	280.500
120	280.632	280.500
125	280.836	280.500
130	281.040	280.500
135	281.245	281.200
140	281.449	281.200
145	281.656	281.200
150	281.854	281.200
155	282.070	281.200
160	282.287	281.200
165	282.552	281.200
170	282.323	281.200
175	281.809	281.200
180	281.298	281.200

L SECTION (FROM CH:035)



DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
40	281.973	281.200
45	281.207	281.200
50	281.216	281.200
55	281.225	281.200
60	281.334	281.200
65	281.424	281.200
70	281.003	279.500
75	280.547	279.500
80	280.092	279.500
85	279.778	279.500
90	279.682	279.500
95	279.585	279.500
100	279.689	279.500
105	279.593	279.500
110	279.505	279.500
115	279.730	279.500
120	279.954	279.500
125	280.179	279.500
130	280.504	280.500
135	280.628	280.500
140	280.871	280.500
145	281.255	281.200
150	281.345	281.200
155	281.535	281.200
160	281.831	281.200
165	282.473	281.200
170	282.918	281.200
175	282.534	281.200
180	282.027	281.200
185	281.522	281.200

L SECTION (FROM CH:040)

DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
35	281.905	281.200
40	281.394	281.200
45	281.203	281.200
50	281.343	281.200
55	281.441	281.200
60	281.540	281.200
65	281.640	281.200
70	280.769	279.000
75	280.247	279.000
80	279.791	279.000
85	279.335	279.000
90	279.233	279.000
95	279.137	279.000
100	279.040	279.000
105	279.194	279.000
110	279.014	279.000
115	279.139	279.000
120	279.364	279.000
125	279.588	279.000
130	279.813	279.000
135	280.042	279.000
140	280.334	279.000
145	280.626	279.000
150	280.843	279.000
155	281.333	281.200
160	281.571	281.200
165	282.016	281.200
170	282.377	281.200
175	282.793	281.200
180	282.677	281.200
185	282.139	281.200
190	281.817	281.200

L SECTION (FROM CH:045)

Project Name
Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project
Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

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6. All Dimensions are in M unless specified.

Drawing No.	Scale	Drawing Status
C-007 R0	**NTS**	**Issued for DPR Approval**

Drawing Name
Longitudinal Section
(Chainage no: 035,040,045)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (JNP / SP / JS)

Client
Authority
Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

Consultant
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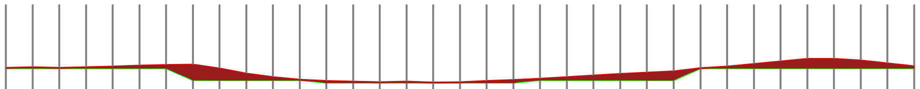
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

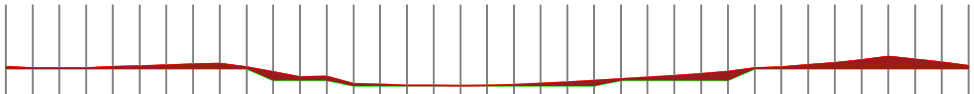
N W E S

Size **A4**



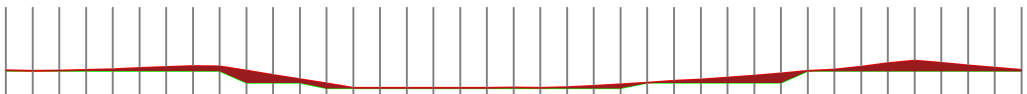
DISTANCE	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200
FRL (Waste Heap Level)	281.257	281.362	281.280	281.372	281.513	281.681	281.780	281.880	281.137	280.198	279.490	279.035	278.784	278.688	278.564	278.680	278.524	278.548	278.773	278.998	279.222	279.505	279.797	280.089	280.341	280.582	281.214	281.482	281.965	282.447	282.930	282.927	282.654	282.068	281.555
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	279.000	279.000	279.000	279.000	279.000	278.500	278.500	278.500	278.500	278.500	278.500	278.500	278.500	279.000	279.000	279.000	279.000	279.000	279.000	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200

L SECTION (FROM CH:050)



DISTANCE	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205
FRL (Waste Heap Level)	281.543	281.285	281.281	281.306	281.524	281.650	281.824	282.020	282.121	281.506	280.566	279.626	279.734	278.335	278.235	278.051	278.067	278.033	278.057	278.182	278.407	278.676	278.968	279.260	279.553	279.840	280.202	280.654	281.317	281.495	281.874	282.252	282.778	283.430	282.890	282.352	281.729
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	279.000	279.000	279.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	279.000	279.000	279.000	279.000	279.000	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200

L SECTION (FROM CH:055)



DISTANCE	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215
FRL (Waste Heap Level)	281.317	281.200	281.286	281.373	281.539	281.768	281.928	282.134	282.051	281.253	280.456	279.659	278.862	278.064	278.022	278.038	278.054	278.070	278.067	278.091	278.047	278.139	278.431	278.724	279.016	279.357	279.588	279.966	280.345	280.723	281.202	281.480	281.994	282.642	283.117	282.731	282.241	281.794	281.415
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	279.000	279.000	279.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	279.000	279.000	279.000	279.000	279.000	279.000	279.000	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200

L SECTION (FROM CH:060)

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

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6. All Dimensions are in M unless specified.

Drawing No.	Scale	Drawing Status
C-008 R0	**NTS**	**Issued for DPR Approval**

Drawing Name

Longitudinal Section

(Chainage no: 050,055,060)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (JNP / SP / JS)

Client

Authority

Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

Consultant

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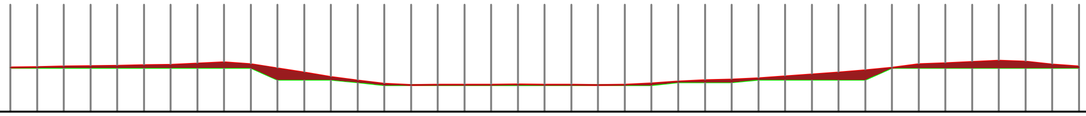
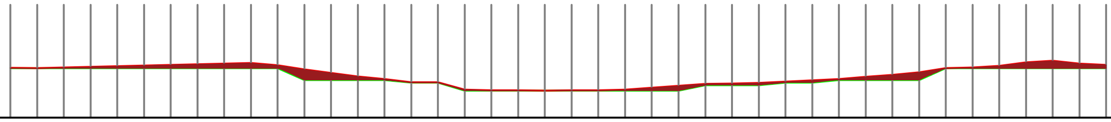
N W E S

Size **A4**



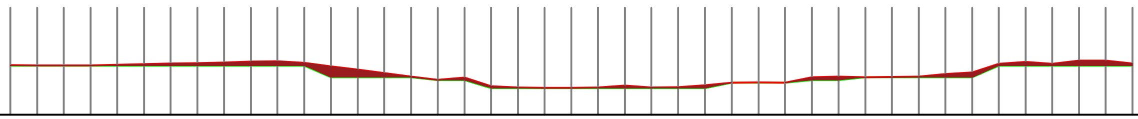
FRL (Waste Heap Level)	281.257	281.340	281.424	281.507	281.591	281.675	281.762	281.998	282.220	281.890	281.092	280.295	279.498	278.834	278.197	278.009	278.025	278.041	278.057	278.076	278.018	278.010	278.002	278.023	278.279	278.634	278.852	278.993	279.218	279.573	279.951	280.330	280.708	281.211	281.854	282.074	282.280	282.528	282.374	281.837	281.465
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	279.000	279.000	279.000	278.500	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	278.500	278.500	278.500	279.000	279.000	279.000	279.000	279.000	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200
DISTANCE	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220

L SECTION (FROM CH:065)



FRL (Waste Heap Level)	281.276	281.212	281.324	281.435	281.559	281.684	281.808	281.933	282.057	282.140	281.729	280.931	280.273	279.632	279.191	278.571	278.583	277.195	277.070	277.040	277.009	277.089	277.044	277.200	277.555	277.911	278.266	278.347	278.446	278.671	278.896	279.179	279.558	279.936	280.427	281.216	281.305	281.605	282.264	282.554	282.042	281.773
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	279.000	279.000	279.000	279.000	278.500	278.500	277.000	277.000	277.000	277.000	277.000	277.000	277.000	277.000	277.000	278.000	278.000	278.000	278.500	278.500	279.000	279.000	279.000	279.000	281.200	281.200	281.200	281.200	281.200	281.200	281.200
DISTANCE	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220

L SECTION (FROM CH:070)



FRL (Waste Heap Level)	281.287	281.256	281.223	281.234	281.346	281.458	281.570	281.681	281.803	281.928	282.041	281.713	281.072	280.430	279.789	279.148	278.545	278.957	277.369	277.081	277.029	277.064	277.121	277.476	277.132	277.187	277.543	278.003	278.041	278.009	279.004	279.149	279.030	279.098	279.164	279.642	279.931	281.529	281.922	281.517	282.153	282.110	281.594
OGL (Original Ground Level)	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	281.200	279.000	279.000	279.000	279.000	278.500	278.500	277.000	277.000	277.000	277.000	277.000	277.000	277.000	277.000	277.000	278.000	278.000	278.000	278.500	278.500	279.000	279.000	279.000	279.000	279.000	281.200	281.200	281.200	281.200	281.200	281.200
DISTANCE	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220

L SECTION (FROM CH:075)

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

NOTES:

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6. All Dimensions are in M unless specified.

Drawing No.	Scale	Drawing Status
C-009 R0	NTS	Issued for DPR Approval

Drawing Name

Longitudinal Section
(Chainage no: 065,070,075)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (JNP / SP / JS)

Client

Authority
Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

Consultant

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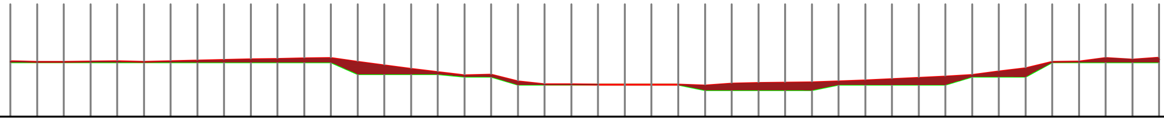
309, ARISTA, Sindhu Bhavan Rd, Off S.G. Highway, Bodakdev, Ahmedabad - 380 059. Gujarat (India) **T:** (+) 91-79-2970 2258
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

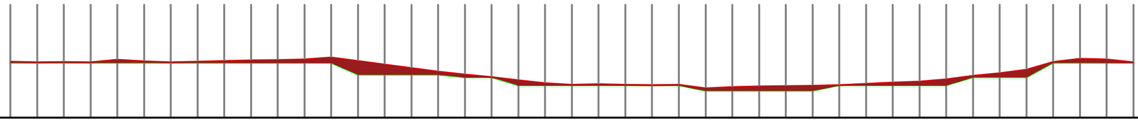
N W E S

Size **A4**



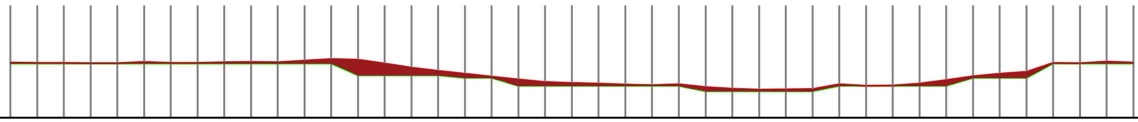
DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
5	281.360	281.200
10	281.268	281.200
15	281.236	281.200
20	281.333	281.200
25	281.345	281.200
30	281.257	281.200
35	281.369	281.200
40	281.480	281.200
45	281.592	281.200
50	281.704	281.200
55	281.816	281.200
60	281.924	281.200
65	281.942	281.200
70	281.265	279.000
75	280.588	279.000
80	279.946	279.000
85	279.307	279.000
90	278.719	278.500
95	278.846	278.500
100	277.606	277.000
105	277.066	277.000
110	277.086	277.000
115	277.006	277.000
120	277.005	277.000
125	277.005	277.000
130	277.004	277.000
135	276.819	276.000
140	277.174	276.000
145	277.267	276.000
150	277.335	276.000
155	277.404	276.000
160	277.577	277.000
165	277.801	277.000
170	278.026	277.000
175	278.251	277.000
180	278.476	277.000
185	278.794	278.500
190	279.429	278.500
195	280.065	278.500
200	281.237	281.200
205	281.335	281.200
210	281.970	281.200
215	281.697	281.200
220	282.031	281.200

L SECTION (FROM CH:080)



DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
5	281.376	281.200
10	281.290	281.200
15	281.317	281.200
20	281.285	281.200
25	281.756	281.200
30	281.468	281.200
35	281.280	281.200
40	281.391	281.200
45	281.503	281.200
50	281.615	281.200
55	281.709	281.200
60	281.816	281.200
65	282.180	281.200
70	281.512	279.000
75	280.855	279.000
80	280.198	279.000
85	279.523	279.000
90	278.983	278.500
95	278.543	278.500
100	277.903	277.000
105	277.363	277.000
110	277.068	277.000
115	277.228	277.000
120	277.087	277.000
125	277.047	277.000
130	277.107	277.000
135	276.451	276.000
140	276.693	276.000
145	276.761	276.000
150	276.830	276.000
155	276.898	276.000
160	277.029	277.000
165	277.254	277.000
170	277.479	277.000
175	277.704	277.000
180	278.101	277.000
185	278.780	278.500
190	279.216	278.500
195	279.882	278.500
200	281.318	281.200
205	281.953	281.200
210	281.788	281.200
215	281.267	281.200

L SECTION (FROM CH:085)



DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
5	281.392	281.200
10	281.319	281.200
15	281.311	281.200
20	281.266	281.200
25	281.267	281.200
30	281.479	281.200
35	281.290	281.200
40	281.302	281.200
45	281.414	281.200
50	281.494	281.200
55	281.459	281.200
60	281.748	281.200
65	282.046	281.200
70	281.927	279.000
75	281.172	279.000
80	280.384	279.000
85	279.794	279.000
90	279.274	278.500
95	278.740	278.500
100	278.200	277.000
105	277.690	277.000
110	277.550	277.000
115	277.409	277.000
120	277.269	277.000
125	277.129	277.000
130	277.282	277.000
135	276.787	276.000
140	276.483	276.000
145	276.256	276.000
150	276.324	276.000
155	276.393	276.000
160	277.282	277.000
165	277.007	277.000
170	277.032	277.000
175	277.411	277.000
180	278.090	277.000
185	278.769	278.500
190	279.267	278.500
195	279.612	278.500
200	281.295	281.200
205	281.271	281.200
210	281.576	281.200
215	281.385	281.200

L SECTION (FROM CH:090)

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

NOTES:

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6. All Dimensions are in M unless specified.

Drawing No.	Scale	Drawing Status
C-010 R0	NTS	Issued for DPR Approval

Drawing Name

Longitudinal Section
(Chainage no: 080,085,090)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (JNP / SP / JS)

Client

Authority
Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

Consultant

MaRS PIVOTAL PLANNING SERVICES

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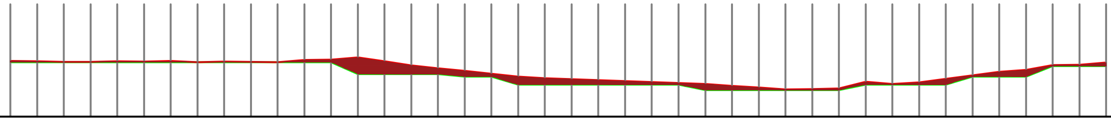
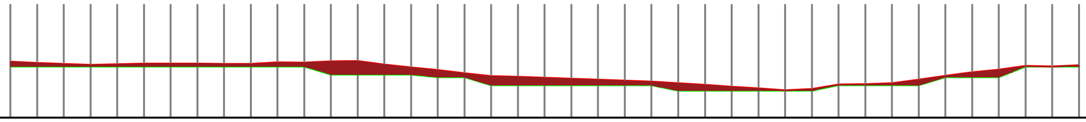
N W E S

Size **A4**



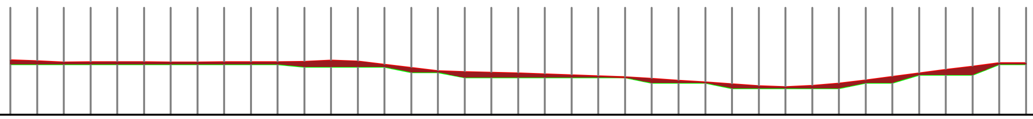
DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
5	281.407	281.200
10	281.348	281.200
15	281.238	281.200
20	281.246	281.200
25	281.378	281.200
30	281.289	281.200
35	281.401	281.200
40	281.213	281.200
45	281.279	281.200
50	281.244	281.200
55	281.209	281.200
60	281.610	281.200
65	281.692	281.200
70	282.084	279.000
75	281.343	279.000
80	280.586	279.000
85	280.065	279.000
90	279.545	278.500
95	279.025	278.500
100	278.497	277.000
105	278.172	277.000
110	278.027	277.000
115	277.851	277.000
120	277.675	277.000
125	277.500	277.000
130	277.324	277.000
135	277.108	276.000
140	276.780	276.000
145	276.452	276.000
150	276.124	276.000
155	276.187	276.000
160	276.256	276.000
165	277.516	277.000
170	277.122	277.000
175	277.400	277.000
180	278.079	277.000
185	278.758	278.500
190	279.411	278.500
195	279.728	278.500
200	280.645	280.500
205	280.691	280.500
210	281.158	280.500

L SECTION (FROM CH:095)



DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
10	281.377	280.500
15	281.167	280.500
20	280.958	280.500
25	280.795	280.500
30	280.900	280.500
35	281.012	280.500
40	281.064	280.500
45	281.029	280.500
50	280.995	280.500
55	280.960	280.500
60	281.262	280.500
65	281.243	280.500
70	281.444	279.000
75	281.514	279.000
80	280.857	279.000
85	280.337	279.000
90	279.816	278.500
95	279.219	278.500
100	278.680	277.000
105	278.557	277.000
110	278.389	277.000
115	278.213	277.000
120	278.037	277.000
125	277.862	277.000
130	277.686	277.000
135	277.405	276.000
140	277.077	276.000
145	276.749	276.000
150	276.421	276.000
155	276.093	276.000
160	276.276	276.000
165	277.132	277.000
170	277.211	277.000
175	277.389	277.000
180	278.068	277.000
185	278.747	278.500
190	279.426	278.500
195	279.872	278.500
200	280.589	280.500
205	280.507	280.500
210	280.760	280.500

L SECTION (FROM CH:100)



DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
15	281.164	280.500
20	280.987	280.500
25	280.777	280.500
30	280.811	280.500
35	280.850	280.500
40	280.815	280.500
45	280.780	280.500
50	280.745	280.500
55	280.831	280.500
60	280.816	280.500
65	280.833	280.500
70	280.906	280.000
75	281.155	280.000
80	280.957	280.000
85	280.353	280.000
90	279.749	279.000
95	279.145	279.000
100	278.978	278.000
105	278.833	278.000
110	278.708	278.000
115	278.575	278.000
120	278.399	278.000
125	278.224	278.000
130	278.030	278.000
135	277.702	277.000
140	277.374	277.000
145	277.046	277.000
150	276.700	276.000
155	276.353	276.000
160	276.149	276.000
165	276.422	276.000
170	276.835	276.000
175	277.395	277.000
180	278.057	277.000
185	278.736	278.500
190	279.415	278.500
195	280.015	278.500
200	280.633	280.500
205	280.650	280.500

L SECTION (FROM CH:105)

Project Name
Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project
Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

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Drawing No.	Scale	Drawing Status
C-011 R0	NTS	Issued for DPR Approval

Drawing Name
Longitudinal Section
(Chainage no: 095,100,105)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (JNP / SP / JS)

Client
Authority
Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

Consultant
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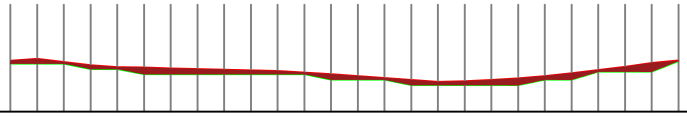
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

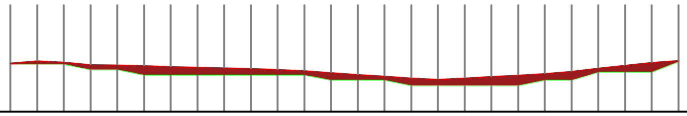
N W E S

Size **A4**



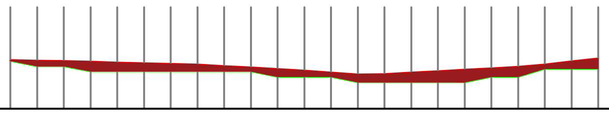
DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
75	280.545	280.000
80	280.882	280.000
85	280.278	280.000
90	279.674	279.000
95	279.341	279.000
100	279.260	278.000
105	279.108	278.000
110	278.983	278.000
115	278.858	278.000
120	278.733	278.000
125	278.586	278.000
130	278.327	278.000
135	277.988	277.000
140	277.640	277.000
145	277.293	277.000
150	276.945	276.000
155	276.598	276.000
160	276.684	276.000
165	276.957	276.000
170	277.231	276.000
175	277.655	277.000
180	278.216	277.000
185	278.776	278.500
190	279.404	278.500
195	280.083	278.500
200	280.577	280.500

L SECTION (FROM CH:110)



DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
75	280.010	280.000
80	280.433	280.000
85	280.203	280.000
90	279.691	279.000
95	279.651	279.000
100	279.543	278.000
105	279.383	278.000
110	279.258	278.000
115	279.133	278.000
120	279.008	278.000
125	278.842	278.000
130	278.575	278.000
135	278.233	277.000
140	277.885	277.000
145	277.538	277.000
150	277.190	276.000
155	276.945	276.000
160	277.219	276.000
165	277.492	276.000
170	277.766	276.000
175	278.040	277.000
180	278.476	277.000
185	279.036	278.500
190	279.596	278.500
195	280.156	278.500
200	280.500	280.500

L SECTION (FROM CH:115)



DISTANCE	FRL (Waste Heap Level)	OGL (Original Ground Level)
85	280.128	280.000
90	280.001	279.000
95	279.961	279.000
100	279.825	278.000
105	279.664	278.000
110	279.534	278.000
115	279.409	278.000
120	279.283	278.000
125	278.995	278.000
130	278.731	278.000
135	278.448	277.000
140	278.130	277.000
145	277.783	277.000
150	277.435	276.000
155	277.480	276.000
160	277.754	276.000
165	278.028	276.000
170	278.301	276.000
175	278.575	277.000
180	278.849	277.000
185	279.296	278.500
190	279.857	278.500
195	280.417	278.500

L SECTION (FROM CH:120)

Project Name
Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project
Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

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Drawing No.	Scale	Drawing Status
C-012 R0	NTS	Issued for DPR Approval

Drawing Name
Longitudinal Section
(Chainage no: 110,115,120)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (JNP / SP / JS)

Client
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Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

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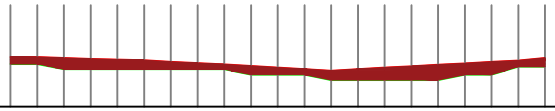
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

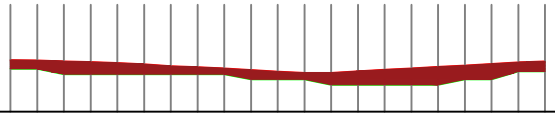
N W E S

Size **A4**



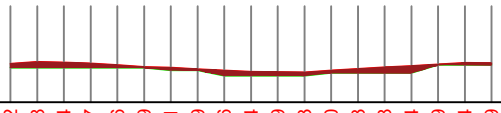
FRL (Waste Heap Level)	280.311	280.269	280.108	279.947	279.809	279.684	279.389	279.169	278.887	278.604	278.322	278.028	277.741	278.015	278.289	278.563	278.836	279.110	279.384	279.658	280.117				
OGL (Original Ground Level)	279.000	279.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	277.000	277.000	277.000	276.000	276.000	276.000	276.000	276.000	277.000	277.000	278.500	278.500				
DISTANCE	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190				

L SECTION (FROM CH:125)



FRL (Waste Heap Level)	280.600	280.552	280.391	280.229	280.084	279.838	279.486	279.325	279.043	278.760	278.478	278.195	278.241	278.520	278.796	279.071	279.347	279.622	279.897	280.173	280.356				
OGL (Original Ground Level)	279.000	279.000	278.000	278.000	278.000	278.000	278.000	278.000	278.000	277.000	277.000	277.000	276.000	276.000	276.000	276.000	276.000	277.000	277.000	278.500	278.500				
DISTANCE	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190				

L SECTION (FROM CH:130)



FRL (Waste Heap Level)	280.222	280.578	280.464	280.287	279.936	279.619	279.481	279.199	278.916	278.724	278.639	278.553	278.970	279.253	279.528	279.804	280.079	280.354	280.319						
OGL (Original Ground Level)	279.500	279.500	279.500	279.500	279.500	279.500	279.000	279.000	278.000	278.000	278.000	278.000	278.500	278.500	278.500	278.500	280.000	280.000	280.000						
DISTANCE	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185						

L SECTION (FROM CH:135)

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

NOTES:

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3. The consultant accept no legal liability or responsibility for any loss or damage suffered by the client arising out of, or in connection with, the use or misuse of the information issued.
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6. All Dimensions are in M unless specified.

Drawing No.	Scale	Drawing Status
C-013 R0	NTS	Issued for DPR Approval

Drawing Name

Longitudinal Section

(Chainage no: 125,130,135)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (JNP / SP / JS)

Client

Authority
Directorate, Urban Administration & Development, Government of MP

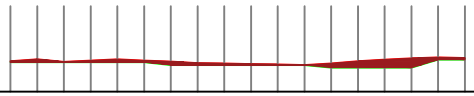
Nodal Authority- Urban Local Body

Consultant

309, ARISTA, Sindhu Bhavan Rd, Off S.G. Highway, Bodakdev, Ahmedabad - 380 059. Gujarat (India) **T:** (+) 91-79-2970 2258
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

N W E S

Size **A4**



FRL (Waste Heap Level)	279.693	280.049	279.598	279.808	280.033	279.799	279.637	279.355	279.257	279.172	279.086	279.001	279.283	279.699	279.985	280.261	280.389	280.292	
OGL (Original Ground Level)	279.500	279.500	279.500	279.500	279.500	279.500	279.000	279.000	279.000	279.000	279.000	279.000	278.500	278.500	278.500	278.500	280.000	280.000	
DISTANCE	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	

L SECTION (FROM CH:140)

FRL (Waste Heap Level)	279.560	279.871	279.731	279.777	279.900	279.875	279.790	279.704	279.619	279.533	279.448	279.534	280.061	280.428	280.571	280.655	280.257		
OGL (Original Ground Level)	279.500	279.500	279.500	279.500	279.500	279.000	279.000	279.000	279.000	279.000	279.000	278.500	278.500	278.500	278.500	280.000	280.000		
DISTANCE	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180		

L SECTION (FROM CH:145)

FRL (Waste Heap Level)	279.601	279.674	279.865	279.651	279.898	280.028	280.116	280.151	280.066	279.980	279.895	279.809	280.312	280.597	280.586	280.574	280.100		
OGL (Original Ground Level)	279.500	279.500	279.500	279.500	279.500	279.000	279.000	279.000	279.000	279.000	279.000	278.500	278.500	278.500	278.500	280.000	280.000		
DISTANCE	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180		

L SECTION (FROM CH:150)

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

NOTES:

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6. All Dimensions are in M unless specified.

Drawing No.	Scale	Drawing Status
C-014 R0	NTS	Issued for DPR Approval

Drawing Name

Longitudinal Section

(Chainage no: 140,145,150)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (UNP / SP / JS)

Client

Authority
Directorate, Urban Administration & Development, Government of MP

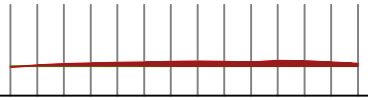
Nodal Authority- Urban Local Body

Consultant

309, ARISTA, Sindhu Bhavan Rd, Off S.G. Highway, Bodakdev, Ahmedabad - 380 059. Gujarat (India) **T:** (+) 91-79-2970 2258
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

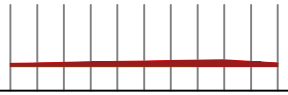
N W E S

Size **A4**



FRL (Waste Heap Level)	279.365	279.725	279.950	280.055	280.151	280.239	280.327	280.415	280.342	280.257	280.562	280.500	280.244	280.000	
OGL (Original Ground Level)	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	
DISTANCE	110	115	120	125	130	135	140	145	150	155	160	165	170	175	

L SECTION (FROM CH:155)



FRL (Waste Heap Level)	279.977	280.082	280.187	280.275	280.363	280.451	280.539	280.627	280.641	280.389	280.071
OGL (Original Ground Level)	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500
DISTANCE	120	125	130	135	140	145	150	155	160	165	170

L SECTION (FROM CH:160)

FRL (Waste Heap Level)	279.795	280.215	280.310	280.398	280.490	280.667	280.845	280.390	280.087	280.000	
OGL (Original Ground Level)	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	279.500	
DISTANCE	125	130	135	140	145	150	155	160	165	170	

L SECTION (FROM CH:165)

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

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Drawing No.	Scale	Drawing Status
C-015 R0	NTS	Issued for DPR Approval

Drawing Name

Longitudinal Section

(Chainage no: 155,160,165)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (UNP / SP / JS)

Client

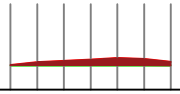
Authority
Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

Consultant

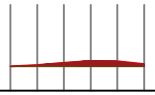
309, ARISTA, Sindhu Bhavan Rd, Off S.G. Highway, Bodakdev, Ahmedabad - 380 059. Gujarat (India) **T:** (+) 91-79-2970 2258
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

Size **A4**



FRL (Waste Heap Level)	279.613	280.143	280.400	280.658	280.916	280.782	280.211
OGL (Original Ground Level)	279.500	279.500	279.500	279.500	279.500	279.500	279.500
DISTANCE	130	135	140	145	150	155	160

L SECTION (FROM CH:170)



FRL (Waste Heap Level)	279.500	279.777	280.209	280.562	280.457	279.918
OGL (Original Ground Level)	279.500	279.500	279.500	279.500	279.500	279.500
DISTANCE	135	140	145	150	155	160

L SECTION (FROM CH:175)

FRL (Waste Heap Level)	279.987	280.134	279.884
OGL (Original Ground Level)	279.500	279.500	279.500
DISTANCE	145	150	155

L SECTION (FROM CH:180)

Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

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6. All Dimensions are in M unless specified.

Drawing No.	Scale	Drawing Status
C-016 R0	NTS	Issued for DPR Approval

Drawing Name

Longitudinal Section

(Chainage no: 170,175,180)

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (UNP / SP / JS)

Client

Authority

Directorate, Urban Administration & Development, Government of MP

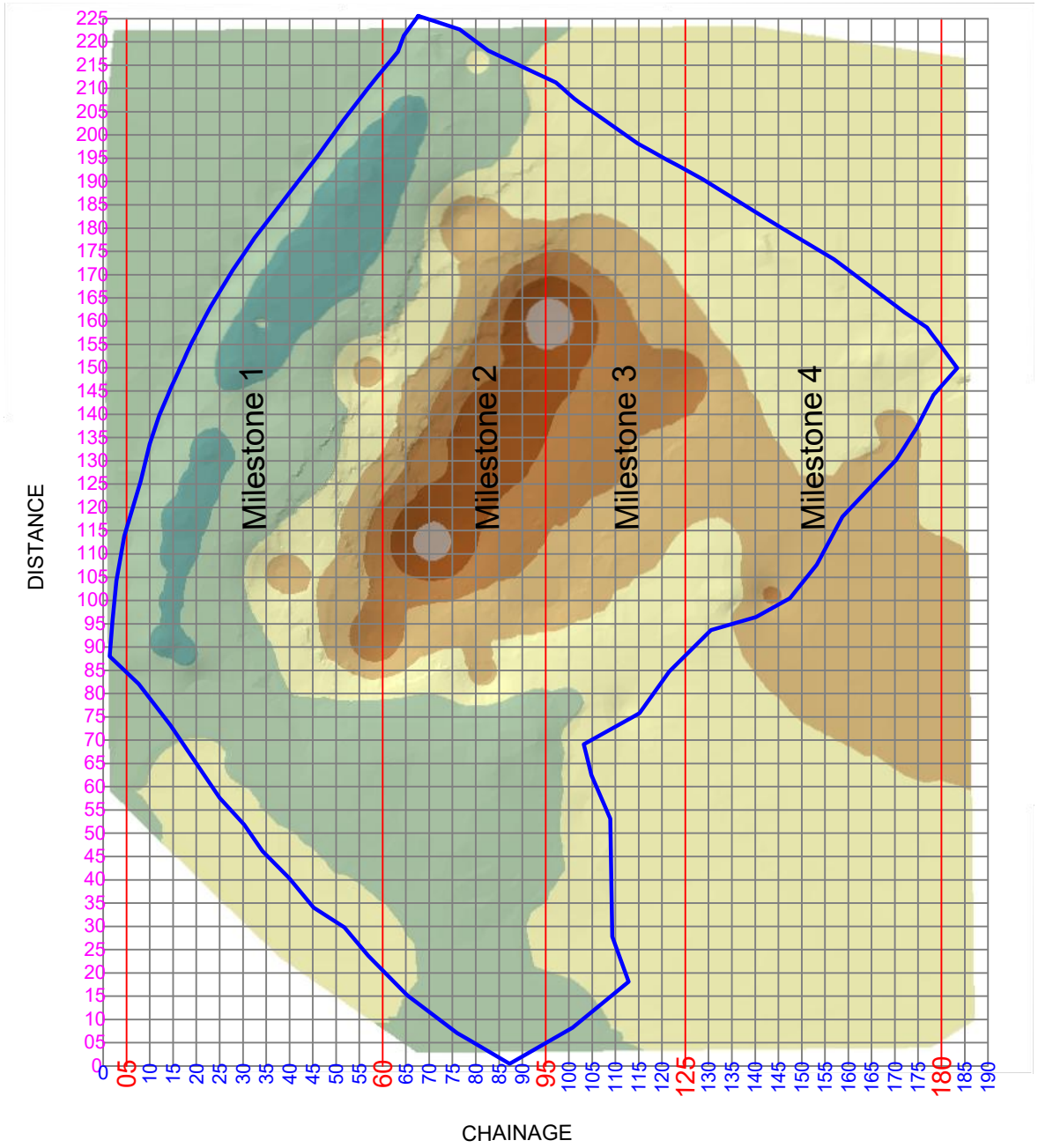
Nodal Authority- Urban Local Body

Consultant

309, ARISTA, Sindhu Bhavan Rd, Off S.G. Highway, Bodakdev, Ahmedabad - 380 059. Gujarat (India) **T:** (+) 91-79-2970 2258
E: marsgreentech@gmail.com **W:** www.marsgreentech.com

N W E S

Size **A4**



Project Name

Preparation of Detailed Project Report for Solid Waste Management in Madhya Pradesh

Sub Project

Bioremediation for Disposal of Legacy Waste

Division	District	Urban Local Body
BHOPAL	HARDA	HARDA

NOTES:

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Drawing No.	Scale	Drawing Status
C-017 R0	**NTS**	**Issued for DPR Approval**

Drawing Name

Land Reclamation Plan

Revision History

DATE	NO.	REVISION	DRAWN	CHECKED	APPROVED

Drawn by	Designed by	Checked by	Approved by
Draftsmen (CS/ NT/ NR)	Subject Expert	SWM Expert (HP / RB / MS)	Team Leader (UNP / SP / JS)

Client

Authority
Directorate, Urban Administration & Development, Government of MP

Nodal Authority- Urban Local Body

Consultant

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E: marsgreentech@gmail.com **W:** www.marsgreentech.com

Size **A4**

कार्यालय जिला शहरी विकास अभिकरण, हरदा

क्रमांक 392/डूडा/2023 हरदा, दिनांक 27/09/2023

प्रति,

1. कार्यपालन यंत्री, जल संसाधन विभाग, जिला हरदा (म.प्र.)।
2. कार्यपालन यंत्री, लोक स्वास्थ्य यांत्रिकी, जिला हरदा
3. मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी, जिला हरदा
4. उप संचालक कृषि, कृषि विभाग, जिला हरदा
5. मुख्य नगर पालिका अधिकारी, समस्त नगरीय निकाय, जिला हरदा
6. उप पुलिस अधीक्षक, यातायात विभाग, जिला हरदा
7. जिला खनिज अधिकारी, जिला हरदा

विषयः– जिला पर्यावरणीय योजना के अनुपालन के संबंध में।

सदर्भः– .म.प्र.प्रदूषण नियंत्रण बोर्ड का पत्र क्रमांक 27.03.2023 तथा 23.08.2023

उपरोक्त विषयांतर्गत संदर्भित पत्रों का अवलोकन हो, जिसके परिप्रेक्ष्य में लेख है कि माननीय एन.जी.टी प्रकरण क्रं. 360/2018 दिनांक 17/1/2023 में अन्य विषयों के साथ ही डिस्ट्रिक्ट एवायरमेंट प्लान का अपडेशन किये जाने एवं जिला पर्यावरीय योजना के क्रियान्वयन की प्रगति को प्रत्येक वर्ष 31 जनवरी तक जिले की वेबसाइट पर अपलोड करने के निर्देश दिये गये है। वर्ष 2021–22 हेतु जिला प्रशासन द्वारा तैयार की गई डिस्ट्रिक्ट एनवायरमेंट प्लान म.प्र. प्रदूषण नियंत्रण बोर्ड द्वरा केन्द्रीय प्रदूषण नियंत्रण को प्रेषित की गई थी जिसका प्रतिवर्ष अपडेशन होना है। सभी संबंधित विभागो को जिला पर्यावरणीय योजना का प्रगति प्रतिवेदन (अपडेशन) प्रत्येक वर्ष 31 जनवरी तक कर कलेक्टर हरदा की वेबसाइट पर अपलोड किया जाना है।

अतःआपको निर्देशित किया जाता है कि माननीय एन.जी.टी.के उपरोक्त पारित आदेश के अनुपालन में संलग्न प्रपत्र में (विभागवार) अपडेशन कर 07 दिवस के भीतर साफ्ट कॉपी व हार्ड कॉपी में अनिवार्य रूप से प्रस्तुत करें।

परियोजना अधिकारी

जिला शहरी विकास अभिकरण, हरदा

पृ. क्रमांक 393/डूडा/2023 हरदा, दिनांक 27/09/2023

प्रतिलिपिः–

कलेक्टर महोदय, जिला हरदा की ओर सूचनार्थ प्रेषित।

परियोजना अधिकारी

जिला शहरी विकास अभिकरण, हरदा

Date: 10.10.2023

To,

The Municipal Commissioner
Municipal Council Harda,
Harda, M.P.

Subject: Work Plan for Legacy Waste Dumpsite Remediation at Nagar Palika Parishad Harda.

Ref: Public Health Branch/ 23/3738 / Harda Dated: 29.08.2023

Dear Sir,

In Reference to subject matter above and your letter received having letter no Public Health Branch/ 23/3738 / Harda Dated: 29.08.2023 please find the enclosed work plan for the work of Legacy Waste Dumpsite Remediation at Nagar palika Parishad Harda.

Time Schdule and Implementation Plan

Sr. No.	DESCRIPTION	START DATE	END DATE	DURATION (Days)	01-10-2023		31-10-2023		30-11-2023		30-12-2023
1	Kick of meeting and details work plan	10-10-2023	10-10-2023	1		1 Days					
2	Site Investigation	10-10-2023	10-10-2023	1		1 Days					
3	Design, Drawing and cleaning up site.	10-10-2023	12-10-2023	2		2 Days					
4	Erraction of plant and machinery	13-10-2023	25-10-2023	12		12 Days					
5	Excavation and window statcking for agration of Legacy waste	15-10-2023	20-12-2023	65		65 Days					
6	Screening and segrigation	25-10-2023	30-12-2023	65		65 Days					
7	Disposal of recyclable material	10-11-2023	30-12-2023	50		50 Days					
8	Disposal of reject material	10-11-2023	30-12-2023	50		50 Days					
9	Leveling and grading	27-12-2023	29-12-2023	2		2 Days					
10	Final face lifting of MSW and site Handing over.	30-12-2023	30-12-2023	1		1 Days					

We assure you best of our Services always.

Thanking You.

Yours Sincerely

For M/s Altech Enviro Pvt Ltd

ALTECH ENVIRO PVT LTD. DIRECTOR

Authorized Signatory

कार्यालय नगर पालिका परिषद्, हरदा जिला–हरदा
Municipal Council, Harda M.P.
Nagar Palika, V.V. Giri Ward, Bomby Road, Harda M.P.
Mail Id: cmoharda@mpurban.gov.in
Tel No: 07577-222238, 225301

क्रमांक / जनस्वास्थ्य शाखा / 23 / 3738 हरदा, दिनांक 29 / 08 / 2023

प्रति,

अल्टेक इनवायरो प्रा.लि.
प्रयागराज उत्तर प्रदेश

विषयः नगर पालिका हरदा में लीगेसी वेस्ट डंप साईट रेमिडियेशन कार्य हेतु निष्पादित अनुबंध की समयावधि में वृद्धि किये जाने बावत्।

–––––000–––––

उपरोक्त विषयांतर्गत लेख है कि आपको नगर पालिका हरदा में लीगेसी वेस्ट डंप साईट रेमिडियेशन कार्य हेतु निकाय द्वारा कार्यादेश जारी किया गया था, जो अनुबंध दिनांक 01.05.2023 से 04 माह की समयावधि के लिये निष्पादित किया गया था। किंतु वर्षा ऋतु के कारण कार्य संपन्न नहीं होने से निकाय की पी.आई.सी. बैठक दिनांक 25.08.2023 संकल्प क्र. 257 में पारित निर्णय अनुसार अनुबंध की समयावधि 31.12.2023 तक बढ़ाई जाती हैं।

अतः निर्धारित समयावधि में उक्त कार्य पूर्ण करना सुनिश्चित करें।

मुख्य नगर पालिका अधिकारी
नगर पालिका परिषद्, हरदा

न्यायालय कलेक्टर एवं जिलादंडाधिकारी जिला हरदा

रा.प्र.क्र. 01/अ-20(5)/2023-24
ग्राम नहाडिया तहसील हरदा
जिला हरदा म.प्र.

मध्यप्रदेश शासन,
द्वारा मुख्य नगरपालिका अधिकारी,
नगरपालिका परिषद हरदा,
तहसील हरदा जिला हरदा, - आवेदक

बनाम

म.प्र.शासन राजस्व विभाग

//आदेश//

(पारित दिनांक 24 /07/2023)

1. प्रकरण का संक्षिप्त विवरण इस प्रकार है कि मुख्य नगरपालिका अधिकारी नगरपालिका परिषद हरदा जिला हरदा द्वारा मौजा नहाडिया तहसील हरदा स्थित शासकीय छोटाघास मद की भूमि खसरा नंबर 27/4 एवं खसरा नंबर 27/5 कुल रकबा 6.859 हे. में से 6.070 हे. भूमि ठोस अपशिष्ट प्रबंधन हेतु आबंटित किये जाने के संबंध में नजूल निवर्तन निर्देश नियम 2020 के प्रावधानो के तहत ऑनलाईन आवेदन प्रस्तुत किया गया था ।

2. उक्त आशय का आवेदन पत्र प्राप्त होने पर अनुविभागीय अधिकारी हरदा को जांच हेतु भेजा गया। अनुविभागीय अधिकारी हरदा द्वारा तहसीलदार हरदा से जॉच प्रतिवेदन लिया गया। तहसीलदार हरदा द्वारा जांच के दौरान प्रकरण में इश्तहार का प्रकाशन कराया गया एवं हल्का पटवारी से प्रतिवेदन लिया गया, पश्चात् तहसीलदार हरदा द्वारा प्रतिवेदन अंकित किया गया। प्रतिवेदन में उल्लेख किया गया है कि इश्तहार जारी करने पर नियत समयावधी में ग्राम पंचायत सामरधा एवं ग्रामवासी नहाडिया द्वारा आपत्ति प्रस्तुत की गई। प्रस्तुत आपत्ति पर मुख्य नगर पालिका अधिकारी नगरपालिका परिषद हरदा से प्रतिउत्तर लिया गया । मुख्य नगर पालिका अधिकारी हरदा व्दारा उल्लेख किया कि ग्राम नहाड़िया में नगर पालिका हरदा को भूमि आबंटन ठोस अपशिष्ट प्रसंस्करण केन्द्र एवं जिला स्तर की सेनेटरी लैंडफिल तैयार करने हेतु केन्द्र शासन की स्वच्छ भारत मिशन 2.0 योजनान्तर्गत किया जा रहा है। ग्राम पंचायत सामरधा एवं कायागांव के व्दारा आवेदित भूमि आबंटन के संबंध में कचरा जलाने से होने वाले प्रदूषण

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पर आपत्ति ली गई, किन्तु आवेदित भूमि पर वैज्ञानिक तरीके से कचरा प्रसंस्करण का कार्य किया जावेगा, जिससे प्रदूषण फैलने एवं कचरे में आग लगने की संभावना नही है। कचरे का परिवहन बंद गाडियों में सुरक्षित तरीके से किया जावेगा, जिससे मार्ग में गंदगी फैलने की संभावना नही है। आपत्तिकर्ताओं की आपत्ति औचित्यविहीन होने से निरस्त किये जाने योग्य है ।

3. तहसीलदार हरदा द्वारा प्रतिवेदन में यह भी उल्लेख किया गया है कि आवेदित भूमि छोटाघास मद में दर्ज होकर निस्तार पत्रक अनुसार चराई एवं पत्थर के लिए सुरक्षित है । उक्त भूमि मौके पर रिक्त है तथा आवेदित भूमि के संबंध में किसी भी न्यायालय में कोई प्रकरण विचाराधीन नही है। मध्यप्रदेश नजूल निर्वतन निर्देश 2020 की धारा 3 ग के अनुसार वादोक्त भूमि नजूल भूमि नही है । ग्राम नहाड़िया स्थित भूमि खसरा नंबर 27/4 रकबा 6.018 हे. ख.नं. 27/5 रकबा 0.841 हे. कुल रकबा 6.859 हे. भूमि छोटाघास मद में दर्ज होकर निस्तार पत्रक अनुसार चराई एवं पत्थर के लिये सुरक्षित है। ग्राम में चरनोई का रकबा 2 प्रतिशत से रकबा 20.1375 हे. अधिक है। ग्राम मे चरनोई का रकबा दो प्रतिशत से अधिक होने से मुख्य नगरपालिका परिषद हरदा को ठोस अपशिष्ठ प्रबंधन हेतु आवंटित किया जाना उचित प्रतीत होना प्रतिवेदित करते हुए प्रकरण अनुविभागीय अधिकारी हरदा की ओर प्रेषित किया गया ।

4. अनुविभागीय अधिकारी राजस्व हरदा द्वारा तहसीलदार हरदा के प्रतिवेदन से सहमत होते हुए प्रकरण अनुशंसा सहित इस न्यायालय को प्रेषित किया गया ।

5. प्रकरण इस न्यायालय में प्राप्त होने पर प्रकरण का अवलोकन किया गया। प्रकरण प्रचलन के दौरान सरपंच ग्राम पंचायत एवं ग्रामवासी झाडपा तथा ग्राम पंचायत सामरधा एवं ग्रामवासी कायागांव द्वारा भी आवेदित भूमि आबंटन के संबंध में आपत्ति प्रस्तुत की गई । प्रस्तुत आपत्ति पर क्षेत्रीय कार्यालय मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड औद्धोगिक क्षेत्र मंडीदीप जिला रायसेन से एवं मुख्य नगरपालिका अधिकारी नगरपालिका परिषद हरदा से रिपोर्ट ली गई तथा उप संचालक नगर तथा ग्राम निवेश जिला नर्मदापुरम से भी अभिमत लिया गया ।

6. मुख्य नगरपालिका अधिकारी नगरपालिका परिषद हरदा जिला हरदा द्वारा पत्र क्रमांक 2785 दिनांक 30.06.2023 के माध्यम से प्रतिवेदन प्रस्तुत किया गया । जिसमें मुख्य रूप से उल्लेख किया कि ग्रामवासी झाड़पा एवं सरपंच ग्राम पंचायत झाडपा सरपंच ग्राम पंचायत सामरधा एवं ग्रामवासी कायागांव के द्वारा आपत्तियों में उठाये गये बिंदु के संबंध में महत्वपूर्ण तथ्य एवं बिंदुवार प्रतिवेदन निम्नानुसार है:-

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क्रमांक	आपत्ति के बिन्दु	प्रतिउत्तर
1	यह कि, आवेदित भूमि गौचर की भूमि होकर ग्राम से लगी हुई है जहां आसपास ग्रामीणजन अपने-अपने परिवार के साथ निवास करते हैं।	नगर पालिका हरदा द्वारा 6.070 हेक्टेयर भूमि ठोस अपशिष्ट प्रबंधन हेतु आवंटित किये जाने का आवेदन प्रस्तुत किया है जो नहाड़िया में उपलब्ध शासकीय गौचर भूमि का केवल एक भाग हैं, भूमि आवंटन के पश्चात भी गौचर हेतु भूखण्ड उपलब्ध रहेगा।
2	यह कि, आवेदित भूमि के आस-पास किसानों की उपजाउ कृषि भूमियां लगी हुई है।	यह सत्य है कि आवेदित भूमि के आसपास कृषि भूमि लगी हुई है किन्तु भूमि आवंटन के पश्चात निकाय द्वारा ठोस अपशिष्ट प्रसंस्करण का कार्य पूर्णतः वैज्ञानिक पद्धति से किया जावेगा, जिससे कृषि भूमि पर विपरीत प्रभाव पड़ने की संभावना नही रहेगी।
3	यह कि, आवेदित भूमि जहां स्थित हैं वहां से आवागमन का काफी दबाव हैं और आवागमन का मार्ग सिंगल पट्टी रोड़ होकर मार्ग काफी सकरा है।	आवेदित भूमि के आसपास जनसंख्या घनत्व काफी कम है जिस कारण वहा से आवागमन का दबाव नहीं है एवं आवेदित भूमि के आसपास परिवहन हेतु समुचित मार्ग उपलब्ध है।
4	यह कि आवेदित जमीन जहाँ स्थित है वहा से कई ग्राम के लोगो का आवागमन है ।	यह सत्य है कि आवेदित जमीन के आसपास लोगों का आवागमन होता है किन्तु निकाय द्वारा कचरे का परिवहन बंद वाहनों में सुरक्षित रूप से किया जायेगा जिससे मार्ग मे गंदगी फैलने की संभावना नही रहेगीं।
5	यह कि, आवेदित भूमि को नगर पालिका परिषद्, हरदा को आवंटित करके उसमें शहर हरदा का कचरा डाला जावेगा।	यह जानकारी गलत है कि निकाय द्वारा भूमि आवंटन के पश्चात वहा पर हरदा शहर का कचरा डाला जावेगा, अपितु शासन के निर्देशानुसार उक्त भूमि पर ठोस अपशिष्ट प्रबंधन नियम 2016 के प्रावधानों के तहत ठोस अपशिष्ट प्रसंस्करण केन्द्र एवं सेनेटरी लैंडफिल का निर्माण कराया जावेगा ।

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6	यह कि, नगर पालिका परिषद्, हरदा द्वारा वर्तमान में नहाड़िया जाने वाले मार्ग पर कचरा डाला जाता है, उससे वहाँ आस-पास रहने वाले लोग कितने परेशान है। इस संबंध में हम प्रतिदिन उन्हें देखते हैं और समाचार पत्र, टीवी चैनलो पर भी समाचार सुनने और देखने को मिलता हैं। उन लोगों की शिकायत के कारण ही वहाँ से कचरा डालने का स्थान बदलकर हमारे ग्राम में उपरोक्त भूमि नगर पालिका परिषद्, हरदा प्राप्त कर उसमें शहर हरदा का कचरा डालना चाहती हैं जिसमें हमें घौर आपत्ति हैं।	यह सत्य है कि वार्ड क्रमाक 31, मुक्तिधाम के पास नहाड़िया जाने वाले मार्ग पर निकाय के लेगेसी वेस्ट डंपसाईट स्थित है किन्तु उक्त डंपसाईट के समस्त लेगेसी बेस्ट के रेमेडिएशन हेतु निकाय द्वारा कार्यादेश जारी किया जा चुका हैं एवं आगामी माहों में कार्य पूर्ण करा लिया जावेगा। ग्राम नहाड़िया में आवेदित भूमि पर शासन के निर्देशानुसार उक्त भूमि पर ठोस अपशिष्ट प्रबंधन नियम 2016 के प्रावधानों के तहत ठोस अपशिष्ट प्रसंस्करण केन्द्र एवं सेनेटरी लैंडफिल का निर्माण कराया जावेगा।
7	कचरा डालने से आगजनी की घटना होने की पूर्ण संभावना रहेगी।	आवेदित भूमि पर पूर्णतः वैज्ञानिक पद्धति से ठोस अपशिष्ट प्रबंधन नियम 2016 के प्रावधानों के तहत कचरा प्रसंस्करण का कार्य किया जावेगा जिससे आगजनी की घटनायें होने की संभावनाये नही रहेगीं।
8	कचरा डालने से बदबू आकर प्रदूषण होगा और ग्रामीणजन के स्वास्थ्य पर विपरीत प्रभाव पड़ेगा।	आवेदित भूमि पर पूर्णतः वैज्ञानिक पद्धति से ठोस अपशिष्ट प्रबंधन नियम 2016 के प्रावधानों के तहत कचरा प्रसंस्करण का कार्य किया जावेगा जिससे किसी भी प्रकार का प्रदूषण फैलने एवं ग्रामीण जनों के स्वास्थ्य पर विपरीत प्रभाव पड़ने की संभावना नहीं रहेगीं।
9	यह भूमि गौचर की हैं जिसमें ग्राम की गौ मातायें विचरण करती हैं जिससे वे वंचित हो जावेगी और वहाँ कूड़ा करकट पन्नी इत्यादि खाने से गौमाताओं की मृत्यु होगी।	नगर पालिका हरदा द्वारा 6.070 हेक्टेयर भूमि ठोस अपशिष्ट प्रबंधन हेतु आवंटित किये जाने का आवेदन प्रस्तुत किया है जो नहाड़िया में उपलब्ध शासकीय गौचर भूमि का केवल एक भाग हैं, भूमि आवंटन के पश्चात भी गौचर हेतु भूमि उपलब्ध रहेगी।

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10	आस-पास की कृषि भूमि प्रदूषण के कारण अनुपजाउ होगी और उपज भी प्रभावित होगी।	भूमि आवंटन के पश्चात निकाय द्वारा ठोस अपशिष्ट प्रसंस्करण का कार्य पूर्णतः वैज्ञानिक पद्धति से किया जावेगा, जिससे कृषि भूमि पर विपरीत प्रभाव पड़ने की संभावना नही रहेगी।
11	कचरा डालने के लिए नगर पालिका के दर्जनों वाहनों का आवागमन प्रतिदिन होगा जिससे दुर्घटनायें बढ़ेगी क्योंकि मार्ग बहुत सकरा हैं और ग्रामीणों का आवागमन 24 घंटे रहता हैं।	निकाय द्वारा कचरे का परिवहन बंद वाहनों में सुरक्षित रूप से किया जायेगा आवेदित भूमि तक वाहनों के पहुंचने हेतु समुचित मार्ग उपलब्ध हैं जिस कारण मार्ग में कचरा परिवहन वाहनो के आवागमन से दुर्घटनायें होने की संभावना नहीं हैं।
12	कूड़ा करकट मृत पशु वहाँ डाले जायेंगे जिससे भयंकर बदबू से हवा दूषित होने के साथ-साथ मांसाहारी पशु जैसे- कुत्ते, सियार वहाँ 24 घंटे रहेंगे और ग्रामीणों को उनसे अपनी जान का खतरा रहेगा।	निकाय द्वारा आवेदित भूमि पर कूड़ा करकट, मृत पशु नहीं डाले जायेंगें अपितु ठोस अपशिष्ट प्रसंस्करण केन्द्र एवं सेनेटरी लैंडफिल का निर्माण कर पूर्णतः वैज्ञानिक पद्धति से कचरा प्रसंस्करण का कार्य किया जावेगा, जिससे वहां पर वायु प्रदूषण होने एवं मांसाहारी पशुओं जैसे कुत्ते, सियार के विचरण कर गंदगी फैलाने की संभावना नहीं रहेगी।
13	जहां यह जमीन स्थित हैं वहाँ से राहगिरों के स्वास्थ्य पर भी विपरित प्रभाव पड़ेगा।	प्रदूषण फैलने से राहगिरो के स्वास्थ्य पर किसी भी प्रकार का विपरित प्रभाव नही पडेगा।
14	सबसे बड़ी समस्या तो यह भूमि नगर पालिका को आवंटित करने से उत्पन्न होगी कि हरदा जिले का सबसे बड़ा तालाब इस भूमि से कुछ ही दूरी पर है। इस तालाब में मछली पालन, कमल कंद, सिंगाड़े का कार्य होता है एवं पानी पीने योग्य है। इसलिये तालाब का पानी प्रदूषित होगा और जो आय सरकार हो होती हैं वह बंद हो जावेगी। साथ ही उपरोक्त जमीन के आस-पास वन भूमि भी हैं जिससे पशु-पक्षी और पेड़-पौधे भी प्रभावित होंगे।	ठोस अपशिष्ट प्रबंधन नियम 2016 के अनुसार सेनेटरी लैंडफिल तालाब, झील आदि से 200 मीटर दूरी पर स्थित होना आवश्यक हैं, निकाय द्वारा आवेदित भूमि कायांगांव स्थित तालाब से 200 मीटर से अधिक दूरी पर स्थित होने के कारण तालाब में जल प्रदूषण होने एवं जलीय जीव-जंतुओं के प्रभावित होने की संभावना नही रहेगी।

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6.1. मुख्य नगरपालिका अधिकारी नगरपालिका परिषद हरदा द्वारा अपने प्रतिवेदन में मुख्य रूप से यह भी उल्लेख किया कि:-

6.1.1. ठोस अपशिष्ट प्रबंधन नियम 2016 के अनुसार सेनेटरी लैंडफिल हेतु चयनित भूमि नदी से 100 मीटर, तालाब से 200 मीटर, आवास स्थलो, सार्वजनिक उद्यानों एवं जल आपूर्ति कुओं से 200 मीटर की दूरी पर होना चाहिये तथा सेनेटरी लैंडफिल कम से कम 20-25 वर्षो तक चलने के लिये पर्याप्त रूप से बड़े होना चाहिये, निकाय द्वारा आवेदित भूमि उपरोक्तानुसार सभी मापदंडों के अनुसार उपयुक्त हैं।

6.1.2. भूमि आवंटन के पश्चात निकाय द्वारा सेनेटरी लैंडफिल एवं ठोस अपशिष्ट प्रसंस्करण केन्द्र का निर्माण ठोस अपशिष्ट प्रबंधन नियम 2016 के सभी प्रावधानों के अनुसार किया जावेगा जिसमें अपशिष्ट प्रसंस्करण का कार्य वैज्ञानिक पद्धति से पूर्णतः फेंसिंग किये हुए प्लांट में किया जावेगा, जिस कारण उक्त स्थल पर प्रदूषण फैलने एवं कचरे में आग लगने की घटनायें होने की संभावना नही रहेगी।

6.1.3. निकाय द्वारा सेनेटरी लैंडफिल एवं ठोस अपशिष्ट प्रसंस्करण केन्द्र के निर्माण होने के पश्चात उक्त स्थल तक कचरे का परिवहन बंद वाहनो में सुरक्षित तरीके से किया जावेगा जिससे परिवहन मार्ग में गंदगी फैलने की संभावना नही रहेगी।

अतः ग्रामवासी झाड़पा एवं सरपंच ग्राम पंचायत झाड़पा, सरपंच ग्राम पंचायत सामरधा एवं ग्रामवासी कायागांव के द्वारा प्रेषित की गई आपत्तियां औचित्यहीन होने से निरस्त किये जाने का निवेदन मुख्य नगरपालिका अधिकारी नगरपालिका परिषद हरदा द्वारा अपने प्रतिवेदन में किया गया है ।

7. उप संचालक नगर तथा ग्राम निवेश जिला नर्मदापुरम द्वारा पत्र दिनांक 28.06.2023 के माध्यम प्रतिवेदन प्रेषित किया गया । जिसमें उल्लेख किया कि प्रश्नाधीन भूमि ग्राम नहाडिया तहसील हरदा की भूमि खसरा क्रमांक 27/4 एवं 27/5 रकबा 6.070 हेक्टेयर भूमि मध्यप्रदेश नगर तथा ग्राम अधिनियम 1973 के प्रावधानों के अंतर्गत गठित किसी भी निवेश क्षेत्र की सीमा में स्थित नही है। प्रश्नाधीन स्थल के सम्मुख पहुँच मार्ग की दूरी लगभग 12.00 मीटर चौडाई होना आवश्यक है। मध्यप्रदेश भूमि विकास नियम 2012 के मार्गदर्शी मापदंडो के आधार पर भूमि आवंटन किया जाना उचित होने का लेख किया गया है ।

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8. क्षेत्रीय कार्यालय मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड औद्धोगिक क्षेत्र मंडीदीप जिला रायसेन द्वारा पत्र क्रमांक 1102/क्षेका/प्रनिबो/2023 मंडीदीप दिनांक 05.07.2023 के माध्यम से प्रतिवेदन प्रस्तुत किया गया है । जिसमें उल्लेख किया कि आवेदित भूमि के आबंटन के संबंध में डॉ. प्रवीण कोठारी क. वैज्ञानिक से स्थल निरीक्षण कराया गया । स्थल निरीक्षण के समय लिए गये फोटोग्राफ एवं गूगल मैप के अनुसार प्रस्तावित भूमि के समीप स्थित तालाब की दूरी 200 मीटर से कम प्रतीत होती है। उक्त भूमि आबंटन के संबंध में मख्य नगर पालिका अधिकारी नगरपालिका परिषद हरदा को ठोस अपशिष्ठ प्रबंधन नियम 2016 की अनसूची-1 एवं अनुसूची-2 में वर्णित प्रावधानो का पालन सुनिश्चित करने संबंधी निर्देशो के साथ प्रकरण पर विचार किया जाना प्रस्तावित है।

9. क्षेत्रीय कार्यालय मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड औद्धोगिक क्षेत्र मंडीदीप जिला रायसेन से प्रतिवेदन प्राप्त होने पर अनुविभागीय अधिकारी हरदा से पुन: स्थल निरीक्षण कर प्रतिवेदन प्रस्तुत करने हेतु निर्देशित किया गया तत्पश्चात अनुविभागीय अधिकारी हरदा द्वारा पत्र क्रमांक 1522 दिनांक 18.07.2023 के माध्यम से प्रतिवेदन प्रस्तुत किया गया जिसमें उल्लेख किया कि ग्राम नहाडिया में राजस्व अभिलेखों में कोई भी शासकीय तालाब या निजी तालाब दर्ज नहीं है तथा ग्राम नहाड़िया से पश्चिम की ओर ग्राम कायागाँव में शासकीय तालाब स्थित है। जिसकी दूरी प्रस्तावित भूमि से 600 मीटर है तथा दक्षिण में भूमिस्वामी हक में खसरा नम्बर 31/10 भूमिस्वामी संजीव कुमार आ० मोहनलाल जाति विश्नोई, खसरा नम्बर 31/4 भूमि स्वामी मोहनलाल आ० हजारीलाल जाति विश्नोई एवं खसरा नम्बर 31/8 भूमिस्वामी रामजीवन आ० माणकचंद जाति विश्नोई की भूमि स्थित है किन्तु कोई तालाब स्थित नहीं हैं। अनुविभागीय अधिकारी हरदा द्वारा प्रतिवेदन के साथ नजरी नक्शा भी प्रस्तुत किया गया है ।

10. अनुविभागीय अधिकारी राजस्व हरदा द्वारा अपने प्रतिवेदन दिनांक 18.07.2023 के तारतम्य में क्षेत्रीय अधिकारी मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड औद्धोगिक क्षेत्र मंडीदीप जिला रायसेन से पुन: स्थिति स्पष्ट करते हुए प्रतिवेदन लिया गया। क्षेत्रीय अधिकारी मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड द्वारा पत्र क्रमांक 1185/क्षेका/ प्रनिबो/2023 मंडीदीप दिनांक 20.07.2023 के माध्यम से प्रतिवेदन प्रस्तुत किया गया है। जिसमें उल्लेख किया गया है कि निरीक्षण समय लिये गये फोटोग्राफ एवं गूगल मैप के अनुसार प्रस्तावित भूमि (अक्षांश 22.369298° देशांतर 77.024431°) से तालाब की दूरी 200 मीटर से कम प्रदर्शित हो रही थी ।

प्रस्तावित स्थल के अक्षांश एवं देशांतर कमश 22° 21'57.9"**N**, 77°01'38.1"**E** में तालाब से दूरी गूगल मेप अनुसार लगभग 600 मीटर बतलायी गयी है जो कि ठोस अपशिष्ट प्रबंधन नियम 2016 के अनुसूची-1 में उल्लेखित तालाब से 200 मीटर की दूरी के अनुरूप है।

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11. प्रकरण में उपरोक्त विवेचना के आधार पर यह पाया कि प्रकरण में प्राप्त आपत्तियां तहसीलदार एवं अनुविभागीय अधिकारी हरदा तथा मुख्य नगरपालिका अधिकारी नगरपालिका परिषद हरदा एवं मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड से प्राप्त प्रतिवेदनो के आधार पर औचित्यहीन एवं निराधार होने से निरस्त की जाती है । स्वच्छ भारत मिशन 2.0 के अंतर्गत ठोस अपशिष्ट प्रबंधन के क्रियान्वयन हेतु लिगेसी वेस्ट डम्प साईड रेमेडियशन ठोस अपशिष्ट प्रसंस्करण सेनेटरी लैंड फिल्ड का निर्माण होना है । नगरपालिका क्षेत्र हरदा में आसपास कोई उपयुक्त शासकीय भूमि उपयुक्त नही है । ठोस अपशिष्ठ प्रबंधन हेतु भूमि आबंटन किया जाना आवश्यक है । तहसीलदार के प्रतिवेदन अनुसार आवेदित भूमि मौके पर रिक्त है तथा किसी भी न्यायालय में कोई प्रकरण विचाराधीन नही है। आवेदित भूमि छोटाघास मद में दर्ज होकर निस्तार पत्रक अनुसार चराई एवं पत्थर के लिए सुरक्षित दर्ज है। ग्राम में चराई का रकबा 2 प्रतिशत से 20.137 हे. अधिक है। अनुविभागीय अधिकारी राजस्व हरदा एवं प्रदूषण नियंत्रण बोर्ड के प्रतिवेदन अनुसार 200 मीटर की परीधी में कोई तालाब स्थित नही है । आवेदित भूमि निवेश क्षेत्र की सीमा में स्थित नही है। प्रकरण में आये समस्त जांच प्रतिवेदनो के आधार पर आपत्तिकर्ताओं की आपत्ति निराधार होने से निरस्त योग्य है । जिला स्तरीय गठित नजूल निवर्तन समिति द्वारा भी आवेदित भूमि हस्तांतरण किये जाने में अपनी सहमति दी गई है। आवेदित भूमि के हस्तांतरण के संबंध में तहसीलदार एवं अनुविभागीय अधिकारी राजस्व हरदा द्वारा अनुशंसा की गई है ।

12. मध्यप्रदेश नजूल निवर्तन निर्देश 2020 अध्याय 4 की कण्डिका 92 में दर्शित तालिका (1) के अनुसार सार्वजनिक प्रयोजन के लिए- जैसे सडक, उद्धान, खेल का मैदान, फिल्टर प्लांट, कचरा खंती (ट्रेचिंग ग्राउंड), अस्पताल, स्कूल, कार्यालय आदी के लिए शुन्य प्रब्याजी पर भूमि बंटन के प्रावधान दिये गये है । आवेदित भूमि ठोस अपशिष्ठ प्रबंधन हेतु शुन्य प्रब्याजी पर बंटित की जाना है तथा कण्डिका 96 के अनुसार भू-राजस्व का निर्धारण तथा पुननिर्धारण नियम 2018 के अनुसार वार्षिक भू-राजस्व देय होगा ।

13. अतः उपरोक्त तथ्यों के आधार पर मौजा ग्राम नहाड़िया तहसील हरदा स्थित छोटाघास मद की भूमि खसरा नंबर 27/4 रकबा 6.018 हे. ख.नं. 27/5 रकबा 0.841 हे. कुल रकबा 6.859 हे. में से 6.070 हे. भूमि मुख्य नगरपालिका अधिकारी नगर पालिका परिषद हरदा को ठोस अपशिष्ठ प्रबंधन हेतु निम्न शर्तो के अधीन हस्तांतरित की जाती है ।

शर्तें:-

1. हस्तांतरित भूमि का उपयोग नजूल निवर्तन निर्देश 2020 अध्याय 4 की कण्डिका 92(1) के अनुसार ठोस अपशिष्ठ प्रबंधन हेतु ही किया जायेगा ।

न्यायालय कलेक्टर जिला हरदा (म.प्र.)

कलेक्टर
जिला हरदा

2. भूमि का उपयोग आबंटन के अनुरूप तीन वर्ष की अवधि के भीतर किया जावे, समयावधि में उपयोग नहीं होने पर रिक्त भूमि अन्य महत्वपूर्ण शासकीय प्रयोजन के लिये आरक्षित की जा सकेगी ।

3. अनुविभागीय अधिकारी/नजूल अधिकारी हरदा आदेशानुसार रिकार्ड दुरूस्त करें साथ ही हस्तांतरित उक्त भूमि का सीमांकन कर सबंधित विभाग को कब्जा दिलाने की कार्यवाही भी करे ।

4. किसी भी वरिष्ठ न्यायालय से हस्तांतरित भूमि के संबंध में कोई आदेश या स्थगन प्राप्त होता है, तो इस न्यायालय का वरिष्ठ न्यायालय के आदेश पालन करने का अधिकार सुरक्षित रहेगा।

5. हस्तांतरित उपरोक्त भूमि पर निर्माण के पूर्व संचालनालय नगरीय प्रशासन एवं विकास मध्यप्रदेश भोपाल तथा अन्य कोई संबंधित विभाग के दिशा निर्देश हो तो उनके दिशा निर्देशों का भी पालन करना अनिवार्य होगा ।

6. उप संचालक नगर तथा ग्राम निवेश नर्मदापुरम् / हरदा के प्रस्ताव अनुसार हरदा विकास योजना एवं मध्यप्रदेश भूमि विकास नियम 2012 के प्रावधानो के अनुसार गैर आवासीय गतिविधि के विकास हेतु न्यूनतम 12.00 मीटर चौडाई का पहुंच मार्ग रखना आवश्यक होगा तथा मध्यप्रदेश भूमि विकास नियम 2012 के मार्गदर्शी मापदंडो का पालन किया जाना अनिवार्य होगा ।

7. यह आदेश नगरपालिका परिषद हरदा की सामान्य सभा एवं कार्यकारी समिति के संकल्पो के अध्ययीन रहेगा ।

8. ठोस अपशिष्ठ प्रबंधन नियम 2016 की अनुसूची-1 एवं अनुसूची-2 में वर्णित प्रावधानो का पालन किया जाना आवश्यक होगा ।

9. प्रस्तावित ठोस अपशिष्ठ प्रसंस्करण निपटान सुविधा संबंधी ब्यौरा, प्रस्तावित कार्य पद्धति, शोधन प्रोधोगिकी का विवरण उपलब्ध नही है । अत: नगरपालिका परिषद हरदा को केन्द्रीय प्रदूषण नियंत्रण बोर्ड द्वारा जारी तकनीकी मार्गदर्शी सिद्धांतो और शहरी विकास मंत्रालय द्वारा तैयार किये गये ठोस अपशिष्ठ प्रबंधन संबंधी मेन्युअल के अनुसार प्रस्तावित सुविधा का डिजाईन करने तथा इसकी स्थापना सुनिश्चित करना होगा ।

न्यायालय कलेक्टर जिला हरदा (म.प्र.)

कलेक्टर
जिला हरदा

10. अन्य कोई केन्द्रीय शासन या राज्य शासन के यदि नियम निर्देश लागू होते हो तो उनका भी पालन करना अनिवार्य होगा तथा निर्माण से पूर्व यदि कोई सक्षम अनुमति लिया जाना आवश्यक होगा तो सक्षम अनुमति भी प्राप्त करना अनिवार्य होगा ।
11. उपरोक्त दर्शित शर्तो का पालन न करने की स्थिति में इस न्यायालय द्वारा यह पारित आदेश स्वमेव निरस्त माना जावेगा ।

यह आदेश मेरे द्वारा बोलकर टंकण कराया गया तथा मेरी हस्ताक्षर एवं न्यायालय की पद मुद्रा से जारी किया गया ।

(ऋषि गर्ग)
कलेक्टर
जिला हरदा
कलेक्टर
जिला हरदा

पृ.क्र./8195/रीडर-1/2023 हरदा दिनांक24/07/2023

प्रतिलिपी:-

1. क्षेत्रीय अधिकारी क्षेत्रीय कार्यालय मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड औद्धोगिक क्षेत्र मंडीदीप जिला रायसेन की ओर सूचनार्थ ।
2. अनुविभागीय अधिकारी हरदा की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु।
3. तहसीलदार हरदा की ओर सूचनार्थ एवं पालनार्थ ।
4. मुख्य नगरपालिका अधिकारी नगरपालिका परिषद हरदा जिला हरदा जिला हरदा की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु ।

न्यायालय कलेक्टर जिला हरदा (म.प्र.)

कलेक्टर
जिला हरदा
कलेक्टर
जिला हरदा

कार्यालय नगर पालिका परिषद्, हरदा जिला–हरदा
Municipal Council, Harda M.P.
Nagar Palika, V.V. Giri Ward, Bomby Road, Harda M.P.
Mail Id: cmoharda@mpurban.gov.in
Tel No: 07577-222238, 225301

क्रमांक / स्व.भा.मि. / 23 / 3190 हरदा, दिनांक 27 / 7 / 2023

प्रति,

अनुविभागीय अधिकारी (राजस्व)
हरदा जिला– हरदा (म0प्र0)

विषयः नगर पालिका परिषद्, हरदा को ठोस अपशिष्ट प्रबंधन हेतु ग्राम नहाड़िया में आवंटित की गई भूमि के अधिपत्य देने के संबंध में।

संदर्भः न्यायालय कलेक्टर एवं जिला दण्डाधिकारी जिला हरदा द्वारा पारित आदेश दिनांक 24.07.2023 राजस्व प्रकरण क्र. 01 / अ–20(5) 2023–24

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उपरोक्त विषयांतर्गत लेख है कि संदर्भित आदेश के माध्यम से नगर पालिका परिषद्, हरदा को ठोस अपशिष्ट प्रबंधन हेतु ग्राम नहाड़िया तहसील हरदा स्थित शासकीय छोटा घास की भूमि खसरा नं0 27 / 4 एवं 27 / 5 कुल रकवा 6.859 हेक्टेयर में से 6.07 हेक्टेयर भूमि आवंटित की गई हैं।

कृपया संदर्भित आदेशानुसार रिकार्ड दुरूस्त कराने एवं उक्त भूमि का सीमांकन कर निकाय को आधिपत्य देने का कष्ट करें। ताकि स्वच्छ भारत मिशन 2.0 अंतर्गत ठोस अपशिष्ट प्रसंस्करण केन्द्र एवं सेनेटरी लैंडफिल निर्माण की डी0पी0आर0 तैयार किये जाने संबंधित कार्यवाही की जा सकें।

संलग्नः उपरोक्तानुसार।

27/7/23
मुख्य नगर पालिका अधिकारी
नगर पालिका परिषद्, हरदा

पृ0 क्रमांक / स्व.भा.मि. / 23 / 3191 **हरदा, दिनांक / / 2023**

प्रतिलिपिः– 1. कलेक्टर महोदय जिला हरदा की ओर सादर सूचनार्थ प्रेषित्।
2. परियोजना अधिकारी महोदय जिला शहरी विकास अभिकरण जिला हरदा की ओर सादर सूचनार्थ प्रेषित।

O/C

27/7/23
मुख्य नगर पालिका अधिकारी
नगर पालिका परिषद्, हरदा

कार्यालय नगर पालिका परिषद्, हरदा जिला–हरदा
Municipal Council, Harda M.P.
Nagar Palika, V.V. Girl Ward, Bomby Road, Harda M.P.
Mail Id: cmoharda@mpurban.gov.in
Tel No: 07577-222238, 225301

क्रमांक / स्व.भा.मि. / 23 / 3568 हरदा, दिनांक 24/8/2023

प्रति,

अनुविभागीय अधिकारी (राजस्व)
हरदा जिला– हरदा (म0प्र0)

विषयः नगर पालिका परिषद्, हरदा को ठोस अपशिष्ट प्रबंधन हेतु ग्राम नहाड़िया में आवंटित की गई भूमि के अधिपत्य देने के संबंध में।

संदर्भः 1. न्यायालय कलेक्टर एवं जिला दण्डाधिकारी जिला हरदा द्वारा पारित आदेश दि. 24.07.23 राजस्व प्रकरण क्र. 01 / अ–20(5) 2023–24
2. इस कार्यालय पत्र क्र. 3190 हरदा, दिनांक 27.07.2023

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उपरोक्त विषयांतर्गत लेख है कि संदर्भित आदेश के माध्यम से नगर पालिका परिषद्, हरदा को ठोस अपशिष्ट प्रबंधन हेतु ग्राम नहाड़िया तहसील हरदा स्थित शासकीय छोटा घास की भूमि खसरा नं0 27 / 4 एवं 27 / 5 कुल रकवा 6.859 हेक्टेयर में से 6.07 हेक्टेयर भूमि आवंटित की गई हैं।

कृपया संदर्भित आदेशानुसार रिकार्ड दुरूस्त कराने एवं उक्त भूमि का सीमांकन कर निकाय को आधिपत्य देने का कष्ट करें। ताकि स्वच्छ भारत मिशन 2.0 अंतर्गत ठोस अपशिष्ट प्रसंस्करण केन्द्र एवं सेनेटरी लैंडफिल निर्माण की डी0पी0आर0 तैयार किये जाने संबंधित कार्यवाही की जा सकें।

संलग्नः उपरोक्तानुसार।

मुख्य नगर पालिका अधिकारी
नगर पालिका परिषद्, हरदा

पृ0 क्रमांक / स्व.भा.मि. / 23 / 3569 **हरदा, दिनांक 24/8/2023**

प्रतिलिपिः– 1. कलेक्टर महोदय जिला हरदा की ओर सादर सूचनार्थ प्रेषित्।
2. परियोजना अधिकारी महोदय जिला शहरी विकास अभिकरण जिला हरदा की ओर सादर सूचनार्थ प्रेषित।

O/C

कार्यालय कलेक्टर, हरदा
शाखा - शाखा
दिनांक 24/8/2023

मुख्य नगर पालिका अधिकारी
नगर पालिका परिषद्, हरदा

24/8/23

कार्यालय नगर पालिका परिषद्, हरदा जिला–हरदा
Municipal Council, Harda M.P.
Nagar Palika, V.V. Giri Ward, Bomby Road, Harda M.P.
Mail Id: cmoharda@mpurban.gov.in
Tel No: 07577-222238, 225301

क्रमांक / स्व.भा.मि. / 23 / 3785 हरदा, दिनांक 4 / 9 / 2023

प्रति,

अनुविभागीय अधिकारी (राजस्व)
हरदा जिला– हरदा (म0प्र0)

विषयः नगर पालिका परिषद्, हरदा को ठोस अपशिष्ट प्रबंधन हेतु ग्राम नहाड़िया में आवंटित की गई भूमि के सीमांकन एवं अधिपत्य देने के संबंध में।

संदर्भः 1. न्यायालय कलेक्टर एवं जिला दण्डाधिकारी जिला हरदा द्वारा पारित आदेश दि. 24.07.23 राजस्व प्रकरण क्र. 01 / अ–20(5) 2023–24
2. इस कार्यालय पत्र क्र. 3190 हरदा, दिनांक 27.07.2023 एवं पत्र क्र. 3568 दि.24.08.2023
3. मार्स प्लानिंग एवं इंजीनीयरिंग सर्विसेज प्रा. लि. गुजरात का पत्र क्र.54 दि. 28.08.2023

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उपरोक्त विषयांतर्गत लेख है कि संदर्भित आदेश के माध्यम से नगर पालिका परिषद्, हरदा को ठोस अपशिष्ट प्रबंधन हेतु ग्राम नहाड़िया तहसील हरदा स्थित शासकीय छोटा घास की भूमि खसरा नं0 27 / 4 एवं 27 / 5 कुल रकवा 6.859 हेक्टेयर में से 6.07 हेक्टेयर भूमि आवंटित की गई हैं। उक्त आवंटित भूमि पर ठोस अपशिष्ट प्रबंधन एवं सेनेटरी लेंडफिल साइट निर्माण कार्य की डीपीआर तैयार किये जाने हेतु शासन द्वारा मार्स प्लानिंग एवं इंजीनीयरिंग सर्विसेज प्रा. लि. गुजरात को नियुक्त किया गया है। उक्त संस्था को डीपीआर तैयार किये जाने हेतु आवंटित भूमि के सीमांकन की आवश्यकता है।

कृपया संदर्भित आदेशानुसार रिकार्ड दुरूस्त कराने एवं उक्त भूमि का सीमांकन कर निकाय को आधिपत्य देने का कष्ट करें। ताकि स्वच्छ भारत मिशन 2.0 अंतर्गत ठोस अपशिष्ट प्रसंस्करण केन्द्र एवं सेनेटरी लैंडफिल निर्माण की डी0पी0आर0 तैयार किये जाने संबंधित कार्यवाही की जा सकें।

संलग्नः उपरोक्तानुसार।

मुख्य नगर पालिका अधिकारी
नगर पालिका परिषद्, हरदा

पृ0 क्रमांक / स्व.भा.मि. / 23 / 3786 **हरदा, दिनांक 4 / 9 / 2023**

प्रतिलिपिः– 1. कलेक्टर महोदय जिला हरदा की ओर सादर सूचनार्थ प्रेषित्।
2. परियोजना अधिकारी महोदय जिला शहरी विकास अभिकरण जिला हरदा की ओर सादर सूचनार्थ प्रेषित।

O/C

4/9/23

मुख्य नगर पालिका अधिकारी
नगर पालिका परिषद्, हरदा

कार्यालय नगर पालिका परिषद्, हरदा जिला–हरदा
Municipal Council, Harda M.P.
Nagar Palika, V.V. Giri Ward, Bomby Road, Harda M.P.
Mail Id: cmoharda@mpurban.gov.in
Tel No: 07577-222238, 225301

क्रमांक / स्व.भा.मि. / 23 / 4361 हरदा, दिनांक 26 / 9 / 2023

प्रति,

अनुविभागीय अधिकारी (राजस्व)
हरदा जिला– हरदा (म0प्र0)

विषय: नगर पालिका परिषद्, हरदा को ठोस अपशिष्ट प्रबंधन हेतु ग्राम नहाड़िया में आवंटित की गई भूमि के सीमांकन एवं अधिपत्य देने के संबंध में।

संदर्भ: 1. न्यायालय कलेक्टर एवं जिला दण्डाधिकारी जिला हरदा द्वारा पारित आदेश दि. 24.07.23 राजस्व प्रकरण क्र. 01 / अ–20(5) 2023–24
2. इस कार्यालय पत्र क्र. 3190 हरदा, दिनांक 27.07.2023, पत्र क्र. 3568 दिनांक 24.08.2023 एवं पत्र क्र. 3785 दिनांक 04.09.2023

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उपरोक्त विषयांतर्गत लेख है कि संदर्भित आदेश के माध्यम से नगर पालिका परिषद्, हरदा को ठोस अपशिष्ट प्रबंधन हेतु ग्राम नहाड़िया तहसील हरदा स्थित शासकीय छोटा घास की भूमि खसरा नं0 27/4 एवं 27/5 कुल रकवा 6.859 हेक्टेयर में से 6.07 हेक्टेयर भूमि आवंटित की गई हैं। उक्त आवंटित भूमि पर ठोस अपशिष्ट प्रबंधन एवं सेनेटरी लेंडफिल साइट निर्माण कार्य की डीपीआर तैयार किये जाने हेतु शासन द्वारा मार्स प्लानिंग एवं इंजीनीयरिंग सर्विसेज प्रा. लि. गुजरात को नियुक्त किया गया है। उक्त संस्था को डीपीआर तैयार किये जाने हेतु आवंटित भूमि के सीमांकन की आवश्यकता है।

माननीय हरित अधिकरण (एन.जी.टी.) में प्रचलित प्रकरण OA (Original Application) 81/2023-OA No. 523-PB में पारित निर्णय 23.08.2023 द्वारा नगर पालिका परिषद्, हरदा पर राशि 1.02 करोड़ रू. का जुर्माना अधिरोपित किया गया हैं। साथ ही उक्त आदेश के माध्यम से दिनांक 31.12.2023 के पश्चात् वर्तमान डम्पिंग साईट पर कचरे का निपटान किये जाने पर रोक लगाई गई हैं। अतः दिनांक 31.12.2023 के पूर्व निकाय को ग्राम नहाड़िया में आवंटित भूमि पर ठोस अपशिष्ट प्रसंस्करण केन्द्र तैयार किया जाना अनिवार्य हैं, जिससे माननीय एन.जी.टी. के आदेश का पालन किया जा सकें।

कृपया संदर्भित आदेशानुसार रिकार्ड दुरूस्त कराने एवं उक्त भूमि का सीमांकन कर निकाय को आधिपत्य देने का कष्ट करें। ताकि स्वच्छ भारत मिशन 2.0 अंतर्गत ठोस अपशिष्ट प्रसंस्करण केन्द्र एवं सेनेटरी लैंडफिल निर्माण की डी0पी0आर0 तैयार किये जाने संबंधित कार्यवाही की जा सकें।

संलग्नः उपरोक्तानुसार।

मुख्य नगर पालिका अधिकारी
नगर पालिका परिषद्, हरदा

हरदा, दिनांक 26 / 9 / 2023

पृ0 क्रमांक / स्व.भा.मि. / 23 / 4362

प्रतिलिपिः– 1. कलेक्टर महोदय जिला हरदा की ओर सादर सूचनार्थ प्रेषित्।
2. अध्यक्ष महोदय नगर पालिका परिषद्, हरदा की ओर सादर सूचनार्थ प्रेषित्।
3. परियोजना अधिकारी महोदय जिला शहरी विकास अभिकरण जिला हरदा की ओर सादर सूचनार्थ प्रेषित।

मुख्य नगर पालिका अधिकारी
नगर पालिका परिषद्, हरदा

REGIONAL OFFICE
MADHAYA PRADESH POLLUTION CONTROL, BOARD
Plot no.28,C-Sector New Industrial Area Mandideep,Distt.Raisen
Ph.07480-232803, E-mail:-romppcbmandideep@gmail.com

AIR ANANALYSIS REPORT

Report No. 55/RL/2023

Sample From: :- MSW Site Harda
Distt- Harda (M.P.)

Analysed by- R.S.Bharti

Results	Description of sample	Date of Collection	Collection by	Date of Receive	Date of analysis
1.	Ambient air Monitoring Near Nallah Side (Leaward Directionj)	23.10.2023	Anil Mastkar (J.L.A.)	25.10.2023	26.10.2023
2.	Ambient air Monitoring Near MRF Plant (Windward Directionj)				

Ambient Air Monitoring

S. No.	Parameters	Unit	Result 1	Result 2
1.	Respirable Suspended Particulate Matter$[PM]_{10}$	µg/M³	124.70	147.71
2.	SO_2	µg/M³	14.0	16.84
3.	NO_X	µg/M³	17.60	20.53

Remark - Result is beyond the Limit.

Jr. Scientist

Lab Incharge

Ambient Air Quality Monitored Around the MSW Dumpsite at Two Locations

REGIONAL OFFICE
MADHYA PRADESH POLLUTION CONTROL BOARD
Plot no.28,C- Sector New Industrial Area Mandideep, Distt.Raisen
Ph. 07480-232803],mail :- romppcbmandideep@gmail.com

WATER ANANALYSIS REPORT

Report No. 319,320,321/2023

Sample From :- MSW Site , Harda
Sample Description: -
A. Waste Water Pond Near MSW Site , Harda
B. Nallah Water Sample Near MSW Site Before Mixing into River Ajnal, Harda
C. Nallah Water Sample Near MSW Site After Mixing into River Ajnal, Harda

Sample collected by :- R.K.Mishra (Chemist)& Anil Mastkar (J.L.A.)
Date of Collection :- 23/10/2023
Date of Receipt :- 23/10/2023
Date of Analysis :- 26/10/2023

Analysed by- R.K.Mishra

S.No	Parameter	Unit	Results		
			A	B	C
1.	PH	-	7.80	7.62	7.60
2.	Total Solids	mg/l	876	796	772
3.	Total Dissolved Solids	mg/l	817	729	718
4.	Total Suspended Solids	mg/l	59	67	54
5.	BOD (3 days at 27 ^{0}C)	mg/l	56	55	46
6.	COD	mg/l	360	340	320
7.	Chloride	mg/l	310.43	295.65	256.23

Analyst

Chief Chemist

Lab Incharge
R.O, M.P.P.C.B. Mandideep

Water samples Around the MSW Dumpsite at Three Locations
respectively Leachate/storm water, Nallah joining to Ajnal river and after mixing of Nallah into river