



- \* **Guidelines for Licensing Poultry Meat Stalls and Poultry Waste Rendering Plants - 2021**
- \* **Guidelines for Household Bio-Medical / Sanitary Waste Management - 2022**
- \* **Guidelines for Managing Construction and Demolition Waste - 2022**
- \* **Guidelines for Remediation of Legacy Waste Dumpsites Through Bio Remediation - 2022**

**SUCHITWA MISSION**  
**LOCAL SELF GOVERNMENT DEPARTMENT**  
**GOVERNMENT OF KERALA**



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**Guidelines for Licensing Poultry Meat Stalls  
and Poultry Waste Rendering Plants - 2021**





GOVERNMENT OF KERALA

Abstract

Local Self Government Department – Guidelines for Licensing Poultry Meat Stalls and Poultry Waste Rendering Plants – Approved - Orders Issued.

LOCAL SELF GOVERNMENT (WM) DEPARTMENT

GO(Ms.) No. 227/2021/LSGD

Dated, Thiruvananthapuram 07.10.2021

Read :- Letter No. 3796/C1/2018/SM dated 16.09.2021 from Executive Director, Suchitwa Mission.

ORDER

Several incidents have come to notice of illegal dumping of chicken waste by the wayside. It is seen that some unlicensed operators have also been responsible for illegal dumping of chicken waste. In the circumstances a clear policy framework to deal with the issues arising out of inappropriate management of chicken waste is required.

2. The Executive Director, Suchitwa Mission vide letter read above has submitted a draft Guidelines for Licensing Poultry Meat Stalls and Poultry Waste Rendering Plants. The guidelines is an effort to control the activity of waste dumping, encourage formal chicken rendering units, establish clear responsibility of waste generators and other stakeholder and establish clear monitoring system.

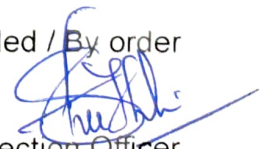
3. Government have examined the matter in detail and are pleased to approve the Guidelines for Licensing Poultry Meat Stalls and Poultry Waste Rendering Plants, enclosed as Annexure to this Government Order.

By order of the Governor,  
Sarada Muraleedharan IAS,  
Additional Chief Secretary.

To

The Executive Director, Suchitwa Mission.  
The Member Secretary, Kerala State Pollution Control Board.  
The Principal Director, Local Self Government Department.  
The Director of Urban Affairs, Thiruvananthapuram.  
The Director of Panchayats, Thiruvananthapuram.  
The Principal Accountant General (A&E), Kerala, Thiruvananthapuram.  
The Accountant General (Audit I) / (Audit II), Kerala, Thiruvananthapuram.  
The Law Department.  
The Executive Director, Information Kerala Mission, Thiruvananthapuram.  
The Information Officer, I&PRD (web & New Media)  
Stock File / Office Copy.

Forwarded / By order

  
Section Officer

Copy to :- PS to Minister LSGD  
PA to Additional Chief Secretary, LSGD  
CA to Special Secretary, LSGD

**GUIDELINES FOR LICENSING  
POULTRY MEAT STALLS AND POULTRY  
WASTE RENDERING PLANTS**



## 1. BACKGROUND

Kerala state has more than 16,000 poultry stalls where around 18 lakh poultry are slaughtered and sold daily and it is estimated that about 1,080 TPD of poultry waste is produced. Though there are a number of units in the state for rearing, processing and selling poultry meat, very few have the facility for scientific processing and sale of meat. Also, the waste generated as a part of such unscientific processing, is not being properly managed and this often ends up in polluting the environment and affecting human health.

Poultry farms and some poultry meat processing units resorted to biogas plants to treat their poultry related wastes. But since anaerobic digestion took time and some waste materials like feathers could not be processed in the system, alternate technologies were searched for, which later led to the acceptance of rendering technology which could process all poultry wastes including feathers. This then led to the setting up of poultry waste rendering plants in the State, majorly in the private sector. At present, there are 12 rendering units having an overall capacity of 372 TPD and setting up of more plants are in the pipeline. But the waste generated are collected by unauthorized agencies for the purpose of usage in farms and generally found dumped at public lands, streams and rivers. Presently there is no mechanism to ensure that the waste generated at Poultry stalls/slaughtering units are properly collected, safely transported and scientifically treated at these facilities. Also the operation of such facilities based on the quantum of waste generated is not regulated in the State.

Poultry Meat Stalls and Rendering plants are governed by the following legislations;

- **The Kerala Panchayat Raj (Issue of License to Industries, Factories, Trade, Entrepreneurship Activities and Other Services) Rules, 2011** pertains to issuing trade licence to Poultry Stalls and Rendering Plants in Grama Panchayats.
- **The Kerala Municipality (Issue of License to Industries, Factories, Trade, Entrepreneurship Activities and Other Services) Rules, 2011** pertains to issuing licenses to Butcher's fishmonger's and poulturer's.
- **Food Safety and Standards Act 2006**, Section 31(1) & 31(2) ) defines that no person shall commence or carry on any food business except under a licence and shall apply to a petty manufacturer who himself manufactures or sells any article of food or a petty retailer, hawker, itinerant vendor or a temporary stall holder or small scale or cottage or such other

industries relating to food business or tiny food business operator; but they shall register themselves with such authority and in such manner as may be specified by regulations, without prejudice to the availability of safe and wholesome food for human consumption or affecting the interests of the consumers.

- **Food Safety and Standards (Licensing and Registration of Food Businesses), Regulations 2011** - lays down the regulations for registration/licensing of Food Business Operators including Poultry Meat Stalls.
- **Food Safety and Standards (Food Products Standards and Food Additives) fifteenth Amendment Regulation, 2018** - The standards specified in clause 11 of these regulations shall apply to Fresh or Chilled or Frozen Poultry Meat including poultry whole carcasses, pieces, cuts or edible offal that have been packed in any suitable packaging material.
- **IS 7049:1973 Code for handling, processing, quality evaluation and storage of poultry issued by Bureau of Indian Standards** -lays down guidelines for efficient handling, processing, quality evaluation and cold storage of poultry.
- **Prevention of Cruelty to Animals (Slaughter House) Rules, 2000 (Section 3, Section 8, Section 9)** sub-sections (1) and (2) of section 38 states that “No person shall slaughter any animal within a municipal area except in a slaughterhouse recognised or licensed by the concerned authority empowered under the law for the time being in force to do so.
- **Solid Waste Management Rules 2016**- pertains to management of solid waste generated in poultry meat stalls
- **Revised Comprehensive Industry Document on Slaughter Houses, 2017 published by Central Pollution Control Board**- lays down the general requirements for rendering plants.
- **Standard Operating Procedure for Rendering Plants’ issued by Kerala State Pollution Control Board**- pertains to guidelines for operation of Rendering plants in the State.

Even though various rules and regulations are issued for the operation of Poultry meat stalls and rendering plants for scientific management of waste, there are a lot of gaps in the system for regulating poultry meat sale, transport of poultry waste and its scientific processing. It is necessary that comprehensive guidelines be issued in compliance with the Central and State legislations to regulate the processing and sale of poultry meat and management of poultry waste generated. The following guidelines are issued in addition to the conditions laid down under various Acts, Rules and regulations for regulating the operation of Poultry Meat Stalls and Poultry Waste Rendering

Plants in the State. Nothing in these guidelines is intended to contravene provisions of any existing Government regulations.

## **1. OBJECTIVE**

These guidelines are intended to;

- Standardize facility requirement, procedure for licensing and operation of Poultry Meat Stalls in all Local bodies in the State. The provisions of the guidelines shall be complied for issuance of licence for new poultry meat stalls. These guidelines shall be applicable to existing licensed poultry stalls only while during renewal of license.
- Regulate the approval, licensing and operation of Poultry waste rendering plants in the State based on the quantity of waste generated. A District Level Facilitation and Monitoring Committee (DLFMC) with structure specified in this guideline shall be constituted in each district to regulate the approval of proposed/existing rendering plants.
- Develop a monitoring mechanism in the State for the implementation of these regulations

## **2. DEFINITION**

In these guidelines unless the context otherwise requires,-

- 1) “Poultry” means live birds of domestic fowls, turkeys, geese, ducks, guinea-fowls, pheasants and quails;
- 2) “Poultry meat Stall” means shops, outlets, other business places intended for slaughter, handling and sale of Poultry meat.
- 3) “Rules’ means the Kerala Municipality (Industries, Factories, Trade, Entrepreneurship and other Servicers) Rules 2011 or Kerala Panchayat (Industries, Factories, Trade, Entrepreneurship and other Servicers) Rules 2011 as the case may be.
- 4) “Secretary” means the Secretary of a Municipality/Municipal Corporation/ Grama Panchayat.

## **3. LICENSE FOR POULTRY MEAT STALLS**

- a) No person shall be permitted for slaughtering poultry in the Poultry Meat Stalls except that with a licence in Form 2 of the Rules issued by the Secretary or the person authorised by the Secretary. The fee for grant of licence shall be as specified in the Rules.

b) Application for running poultry meat stall should be submitted to the Secretary along with the documents mentioned below:-

1. Layout plan of poultry stall showing
  - i. clear demarcation between dirty area and clean area
  - ii. each area such that no birds are killed in the vicinity of other birds
  - iii. clear distance of 10 metres from nearest residential buildings
  - iv. drainage and location of septic tank and soak pit
  - v. installation of fly catchers/insect control measures
2. Process flow diagram with list of machines/equipment for processing. If mechanical process is involved.
3. Documents to prove the ownership of land, i.e. Certificate /Tax receipt /lease agreement for proving ownership of the building.
4. NOC/Consent to operate from Kerala State Pollution Control Board.
5. Registration/License from FSSAI as per norms. (In case it is not possible to produce FSSAI license at the time of submitting application, the applicant should produce FSSAI license within 2 months from the date of obtaining licence under these guidelines and a declaration in this regard shall be submitted).
6. Health certificates of the butcher/s obtained from a registered medical practitioner.
7. Copy of agreement with licensed rendering units for waste management or the details of the waste disposal method to be adopted by the applicant. The waste disposal method to be adopted by the applicant must be in accordance with PCB guideline.

#### **4. PROCEDURE TO BE FOLLOWED BY THE SECRETARY WHILE PROCESSING APPLICATION FOR POULTRY MEAT STALLS**

On receipt of the application, if any supporting document is missing with the application, the Secretary or Officer authorized by him shall immediately inform the applicant and allow the applicant to submit the missing document at the earliest, but not later than three days from the date of receipt of application. On filing the application in full, the Secretary or the Officer authorised by him shall issue an acknowledgement to the applicant with the date of inspection not exceeding 7 working days. Secretary or the Officer authorised by him shall visit the premises as per the time fixed for inspection and shall verify that following compliances have been met;

Poultry meat stall shall consist of the following infrastructure facilities: -

- a. Separation of clean and dirty areas. Clean areas include cutting, packing and chilling. Dirty areas include bird storage, slaughtering area, bleeding area, evisceration area and washing area
- b. Separation of live bird area and slaughter area, so that no bird shall be killed in the vicinity of other live birds.
- c. Separate rooms/space/provision shall be provided for the following operations: -
  - Live poultry receiving and holding area: Facilities should be provided for washing and disinfection of Coops.
  - Meat preparation room: - The preparation room shall be ventilated and cool. Screened ventilators shall be provided near the ceiling for facilitating cross-ventilation. An electric fan and an exhaust fan may preferably be provided inside the preparation room. Care shall be taken that no direct sunlight falls on the dressed carcasses. The room shall suitably be made fly proof and provided with fly-traps. Clear space shall be marked for the following process.
    - Slaughter and bleeding.
    - Feather removal.
  - Evisceration, chilling and packing.
  - Inedible products storage:- closed containers for the storage of feathers and inedible waste products, prior to transport to rendering plants or other waste disposal system.
  - Sales counter
- d. Weighing scales used shall preferably be of a type which obviates unnecessary handling and contamination and the pan of the scale and shall be made of stainless steel or nickel coated.
- e. Equipment used shall be made of either stainless steel, galvanized iron and use containers made of non-toxic material for storage.
- f. Net or screen fitted doors, windows and other openings to prevent entry of insects
- g. Other facilities like those of toilets and arrangement for hand washing shall also be provided.



- h. If bulk quantities are intended to be processed, poultry meat may be stored either under refrigeration, or frozen as per FSSAI norms
- i. Temporary storage facility (refrigerated) for daily waste produced if storage is more than 12 Hours.
- j. The main services such as potable water supply, electricity and proper sewage disposal facilities are essential prerequisites and shall be made available.
- k. Following pollution control measures shall be provided;
  - For wastewater disposal:
    - Up to 200 birds/per day capacity - Septic tank and soak pit system.
    - Above 200 birds/ per day capacity - Effluent Treatment Plant
  - For solid waste (other than slaughter waste) disposal: Compost/Manure Pit or any other solid waste treatment system
  - For slaughter waste disposal: Agreement with licensed/authorized rendering plants existing within the district. If rendering plants are not available in the district, agreement shall be made with the rendering plants available in the nearby district or waste treatment system adopted by the licensee as per PCB guideline.
- l. Poultry meat stall shall have necessary arrangements for keeping following operational records
  - a. Daily stock log/register
  - b. Daily sales log/register
  - c. Manifest for handing over waste generated daily

## **5. ISSUANCE OF LICENSE TO POULTRY MEAT STALLS**

- i. After the inspection, if the compliances are found satisfactory, license shall be issued subject to the payment of fee as per the Rules. On inspection if it is found that, the requirements as specified in the guidelines are not complied, the Secretary shall guide the Poultry Meat Stalls Operator/ applicant on necessary steps to be taken or changes or alteration to be made in the premises in order to ensure general sanitary and hygienic conditions and other terms as prescribed in the guidelines. The applicant shall carry out the required steps, changes or alterations and intimate the Secretary within 10 days or such period as may be allowed by the Secretary.

- ii. Within a period of 10 days from receipt of an inspection report excluding the time taken by the applicant in complying with the advice, if any, given in the inspection report and verification thereof, the Secretary concerned shall consider the application and may either grant license or reject the application. Provided that before refusing license, an applicant shall be given an opportunity of being heard and the reasons for refusal shall be recorded in writing.
- iii. After the inspection, if the compliances are found satisfactory, the Secretary shall issue a License in Form 2 in the Rules, a true copy of which shall be displayed at a prominent place at all times within the premises of poultry meat stalls.
- iv. Periodical inspection shall be conducted by the Secretary or the Officer authorized by him to ensure that compliances are adhered to by the licensed Poultry Meat Stalls. In case of non-compliance, the Secretary shall take appropriate actions as per the provisions of Kerala Panchayat Raj Act and Kerala Municipality Act.
- v. Poultry meat stalls which are already obtained a license shall meet the compliances as specified in this guideline within 3 years of the commencement of the guideline.

## **6. SANITARY AND HYGIENIC REQUIREMENTS FOR POULTRY MEAT STALLS**

The place where poultry is slaughtered, processed or handled shall comply with the following requirements:

- i. The premises shall be free from filthy surroundings and shall maintain an overall hygienic environment. The premises shall be clean, adequately lighted and ventilated and sufficient free space for movement.
- ii. Floors, Ceilings and walls must be maintained in a sound condition. They should be smooth and easy to clean with no flaking paint or plaster. The floor and walls shall be washed as per requirement with an effective disinfectant. The premises shall be kept free from all insects. Windows, doors and other openings shall be fitted with net or screen, as appropriate to make the premise insect free.
- iii. All equipment shall be kept clean, washed, dried and stacked at the close of business to ensure freedom from growth of mould/ fungi and infestation. There should be an efficient drainage system and there shall be adequate provisions for disposal of refuse. Separate waste bins should be provided in the poultry meat stalls to keep waste generated from it. The slaughter waste generated from the poultry meat stalls should be handed over to the

Rendering plant on a daily basis. An agreement for this purpose shall be executed with the Rendering plant operators, if applicable.

- iv. The workers working in slaughtering and processing shall use clean aprons, hand gloves, and head wears.
- v. Persons suffering from infectious diseases shall not be permitted to work. Any cuts or wounds shall remain covered at all times and the person should not be allowed to come in direct contact with meat.
- vi. Potential sources of contamination like rubbish, waste water, toilet facilities, open drains and stray animals shall be avoided.
- vii. Refrigerator/Freezer should be cleaned at least once a week to remove stains, ice particles and food particles. The temperature in the fridge should be in the range of 4°C - 6°C.

7. **FRAMEWORK FOR REGULATING OPERATION OF POULTRY WASTE RENDERING PLANTS.**

**Constitution of District Level Facilitation and Monitoring Committee**

District Level Facilitation and Monitoring Committee (*hereinafter referred to as DLFMC*) shall be constituted in each district to regulate the operation of Poultry Waste Rendering Plants (*hereinafter referred as Rendering Plants*) based on quantum of waste generated and to ensure that such facilities are meeting the prescribed design and standards of operation within the respective district/area of jurisdiction

The structure of the committee shall be as follows;

- District Collector-*Chairman*
- District Co-ordinator, Suchitwa Mission - *Convener*
- District Co-ordinator, Haritha Keralam Mission- *Member*
- Regional Joint Director( Urban) in charge of the district - *Member*
- Deputy Director of Panchayats- *Member*
- Representative of Kerala State Pollution Control Board- *Member*
- Representative from Food Safety Department - *Member*
- Technical expert nominated by Suchitwa Mission - *Member*

### **Conditions precedent to grant license to rendering plant**

- a. Every New/Existing rendering plant shall obtain approval from the DLFMC in addition to the existing statutory compliances/approvals.
- b. After the commencement of this guideline every person intended to set up new rendering plants shall obtain prior approval from DLFMC before obtaining building permit.
- c. Every person having Existing/functional rendering plants shall obtain approval from DLFMC within 3 months or 30 days before expiry of valid license issued from LSGI whichever is earlier from the date of issue of these guidelines
- d. The application to obtain approval (New/Existing/Renewal)for rendering plant shall be submitted to the Convenor, DLFMC in prescribed format as per **Annexure – I** along with the documents mentioned below;
  - a. Company/Agency profile
  - b. Technical details of the plant including machine layout with capacity including details of odour control system
  - c. 2 sets of detailed drawings of plant building including plot layout
  - d. Copy of consent to establish certificate from KSPCB
  - e. Working Plan
  - f. Copy of documents to prove the ownership of land, i.e. Certificate /Tax receipt /lease agreement for proving ownership of the building.
  - g. Building permit (in the case of buildings already under construction)

#### ***Additional documents required for existing/functional rendering plants***

- h. Copy of valid license issued by LSGI
  - i. Copy of valid Consent to Operate certificate from KSPCB
  - j. Log/register of quantity of waste collected and treated for last one year
- e. On receipt of the application, if any supporting document is missing with the application, the Convenor shall immediately inform the applicant and allow the applicant to submit the missing document at the earliest but not later than three days from the date of receipt of application. On filing the application in full, the Convenor shall issue an acknowledgement to the applicant.
- f. DLFMC shall verify the application received and shall issue approval within 15 days considering the following criteria;

- a. The process flow of rendering plant shall be as specified in the **‘Revised Comprehensive Industry Document on Slaughter Houses published by Central Pollution Control Board’** comprising of batch cooker, boiler, condenser, odour control systems etc.
- b. The proposal complies with the provisions stipulated in the **‘Standard Operating Procedure for Rendering Plants’** issued by Kerala State Pollution Control Board from time to time.
- c. Total treatment capacity including that of the existing rendering plants functioning within the district, shall not exceed the actual capacity requirement as specified in the SOP issued KSPCB.
- d. Subserviced areas within a district are covered.
- g. The approval issued by DLFMC shall be valid for a period of three years.
- h. The approval obtained from DLFMC shall be renewed for further operation once in three years or the time at which DLFMC desires for a revision in the approval whichever is earlier.
- i. For renewal of approval, if there is no change in ownership, capacity of treatment, service area the application shall be submitted only along with the additional documents mentioned in the list of documents to be submitted and if it is the other case, a fresh application along with the prescribed documents shall be submitted.

## **8. LICENSING PROCEDURE FOR RENDERING PLANTS BY LOCAL SELF GOVERNMENT INSTITUTIONS**

The Authority to issue the license to rendering plants will be the Secretary of the Local Self Government or the person authorised by him in whose jurisdiction the facility is set up. The license to Rendering Plants shall be issued as per the provisions of the Kerala Panchayat Raj Act and Kerala Municipality Act.

- a. Application to obtain license for rendering plant shall be submitted to the Secretary along with the documents mentioned below:-
  - i. Approval from **DLFMC** that the plant is meeting the prescribed design and standards for operation within the respective district. The applicant shall obtain the approval/certification from DLFMC prior to the submission of application for license from Local Self Government Institutions.

- ii. Documents to prove ownership or lease deed.
  - iii. Copy of valid Consent to Operate certificate from KSPCB
  - iv. Certificate from the Inspector of the Factories or Industrial Extension Officer.
  - v. Site plan (duly demarcate the Educational Institutions, Places of Worship and Residential Buildings within 100 m)
- b. On receipt of the application, the Secretary or the Officer authorised by him shall issue an acknowledgement to the applicant. If any supporting document is not found, the Secretary or the Officer authorized by him shall immediately inform the applicant in writing, the list of missing documents and allow the applicant to submit the missing document but not later than 5 days.
  - c. After the inspection, if the compliances are found satisfactory, license shall be issued subject to the payment of fee as per the Rules. On inspection if it is found that, the requirements as specified in the guidelines are not complied, the Secretary shall guide the Rendering Plant Operator/ applicant on necessary steps to be taken or changes or alteration to be made in the premises in order to ensure general sanitary and hygienic conditions and other terms as prescribed in the guidelines. The applicant shall carry out the required steps, changes or alterations and intimate the Secretary within 15 days or such period as may be allowed by the Secretary.
  - d. Within a period of 15 days from receipt of an inspection report excluding the time taken by the applicant in complying with the advice, if any, given in the inspection report and verification thereof, the concerned Secretary shall consider the application and may either grant license or reject the application. Provided that before refusing a license, an applicant shall be given an opportunity of being heard and the reasons for refusal shall be recorded in writing.
  - e. After the inspection, if the compliances are found satisfactory, the Secretary shall issue a License in Form 2 in the Rules, a true copy of which shall be displayed at a prominent place at all times within the premises of the Rendering Plant.
  - f. Periodical inspection shall be conducted by the Secretary or the Officer authorized by him to ensure that compliances are adhered to by the licensed Rendering Plants. In case of non-compliance, the Secretary shall take appropriate actions as per the provisions of Kerala Panchayat Raj Act and Kerala Municipality Act.

**9. PUNISHMENTS TO ILLEGAL COLLECTION, TRANSPORTATION AND DUMPING OF POULTRY WASTE**

Illegal collection transportation and dumping of poultry slaughter waste etc shall be punished under the provisions of Kerala Panchayat Raj Act, 1994; Kerala Municipalities Act, 1994; Solid Waste management Rules, 2016 and Kerala Irrigation & Water Conservation (Amendment) Act, 2018, as amended on 03.07.2018.

**10. MANAGEMENT OF BIRDS DEAD DUE TO CONTAGIOUS DISEASES OR CALAMITIES**

- In case of an outbreak of contagious diseases or calamities, which may cause large scale death of poultry birds, all dead birds in numbers more than 20, should be disposed of through rendering plants only.
- Secretary of the LSGI concerned shall report such cases to the Convenor, DLFMC at the earliest.
- DLFMC shall consult with licensed rendering plants available at the nearest location to treat and dispose of dead birds by levying a tipping fee fixed by DLFMC.
- Rendering plant operators shall ensure that all the employees engaged in the plant as well collection use special PPE if any required.
- Records of dead birds collected and treated shall be maintained by the rendering plant operators and the same shall be reported to DLFMC.

**11. ROLES AND RESPONSIBILITIES OF VARIOUS STAKEHOLDERS**

**i. Local Self Government Institutions**

Local Self Government Institutions shall;

- a. issue licence to poultry meat stall and rendering plants as per the provisions of these guidelines
- b. Regulate all illegal poultry slaughtering
- c. Regulate illegal collection, transportation and dumping of poultry waste and penalize the defaulters as per the legal provisions
- d. facilitate poultry stall owners to enter into agreement with rendering plants as per the direction and approval of DLFMC
- e. bring to the notice of DLFMC/KSPCB regarding non-collection of waste by authorized rendering plants if any

- f. Collect and maintain records from the Poultry Stall Owners/Poultry Processing Owners regarding the number of birds purchased, processed and sold by them, quantity of waste collected, transported, processed and disposed by them etc and maintain these records.

**ii. Kerala State Pollution Control Board**

Kerala State Pollution Control Board shall;

- a. issue NOC/Consent to Operate to only those poultry meats stalls that follow strict hygiene and having own solid-liquid waste treatment facilities or an agreement with poultry waste rendering units
- b. prepare and publish Standard Operating Procedure (SOP) for (collection, storage, transportation and processing of poultry waste) Rendering plants in the State from time to time
- c. ensure that the rendering plants operators are following the SOP through periodical inspection and submit quarterly reports to DLFMC
- d. bring to the notice of DLFMC, any case of non-compliance of SOP by approved rendering plants
- e. Issue consent to operate only to those rendering units which comply with the prevailing SOP and guidelines issued by agencies concerned.
- f. Ensure that the rendering plants manage the wastewater generated by them through Effluent Treatment Plants.
- g. Ensure that the rendering plants maintain proper records of all their activities including number/quantity processed, quantity of wastes managed, extent of treatment done etc.
- h. Ensure that rendering plants have odour control systems should have condenser, scrubber and bio filter.
- i. Ensure that in a rendering plant the odour ducting mechanism shall be in place, so that odour from cooked material should not spread outside.

**iii. District Level Facilitation and Monitoring Committee**

District Level Facilitation and Monitoring Committee shall;

- a. issue approval/NOC to rendering plants within a district and publish list of approved rendering plants on a regular basis



- b. fix maximum tipping fee that can be levied by the rendering units accepting wastes for processing within the district based on the following parameters from time to time;
  - a. Number of poultry meat stalls and quantum of waste processed
  - b. Operational expenses of the Plant
  - c. Transportation expenses
  - d. Geography of the district (spatial data)
- c. Intervene if any social issues related to functioning of rendering plants arise.

**iv. Food and Safety Department**

Food and Safety Department shall;

- a. issue registration/license to poultry meat stalls as per FSSAI norms.
- b. conduct periodical inspections at poultry meat stall to ensure that such facilities are functioning as per the compliances
- c. ensure that all the hotels and restaurants keep a register in which the details of the person/institution/ (with their FSSAI license) from whom they purchase poultry meat.
- d. ensure that hotels and restaurants purchase poultry meat from licensed poultry meat stalls only.
- e. shall ensure the Food Safety Training and Certification (FoSTaC) of Poultry Meat Stalls.

**v. Poultry Stall Owners**

Poultry Stall Owners shall;

- a. ensure that poultry intended for slaughtering should be clean and in good health.
- b. ensure that poultry held in storage sheds should be provided adequate ventilation and climate control such as fans or curtains.
- c. ensure that when the poultry is reared specifically for human consumption and they therefore at some stage have to be slaughtered, they should be slaughtered in a humane manner.
- d. strictly adhere to the FSSAI guidelines and other legislations to ensure that the meat is processed scientifically, stored hygienically and that the waste is stored, transported and treated scientifically.

- e. strictly adhere to the Standard Operating Procedures of Kerala State Pollution Control Board (KSPCB) in handling and storage of poultry slaughter waste
- f. shall enter into an agreement with authorized rendering plant owner for daily removal /collection of the waste and shall strictly abide by the protocol for storage, collection, transportation and processing of solid waste or setup a waste treatment facility as per the directions and guidelines of PCB
- g. shall set up treatment unit to treat the liquid waste generated to the standards specified by Central Pollution Control Board/KSPCB
- h. ensure that waste is handed over only to authorized rendering plants and not to any other agency/ person.
- i. pay Tipping fee as per the agreement
- j. inform the DLFMC/KSPCB/LSGI, if the waste is not regularly picked up by the rendering plant operator
- k. shall maintain proper records/manifests regarding number of birds processed, quantity of meat produced, quantity sold, quantity of waste (solid and liquid) produced, quantity treated and disposed etc.

**vi. Rendering plant owners/operators**

Rendering plant owners/operators shall;

- a. collect, transport, store and process Poultry waste as per the prevailing Standard Operating Procedure (SOP) and based on the agreement with the poultry meat stalls on a daily basis without fail.
- b. operate the poultry waste rendering plants as per the prevailing SOP issued by KSPCB
- c. levy Tipping fee only as per the DLFMC recommendations.
- d. obtain statutory clearance/s (and renew it correctly on expiry) as per prevailing rules and provisions of these guidelines
- e. own/ rent and maintain enough refrigerated vehicles in good condition for transportation of wastes. Ensure that the vehicles are with body stickers depicting the type and emblem (if any) of the waste being transported and that the crew carry proper manifests/documents when waste is transported.
- f. ensure that the transport crew have proper uniforms and Personal Protective Equipments (PPEs) while in duty

- g. ensure that the waste is not transferred to other vehicles/dumped anywhere during transport
- h. ensure that no spillage occurs during transport
- i. store the collected wastes in refrigerated containers/cold storages, in case it is not processed on the same day of collection.
- j. treat all wastes generated as a part of processing
- k. maintain all records/manifests related to clients, quantity collected, transported, processed, product obtained and sold, waste generated and treated etc
- l. inform the DLFMC/KSPCB/LSGI in case the poultry stall owner fails to provide the waste to the rendering plant regularly

**vii. Suchitwa Mission**

Suchitwa Mission shall;

- a. provide technical support and issue guidelines regarding poultry waste management in the State
- b. empanel rendering plant operators/service providers in the sector.

**Application for obtaining approval from DLFCM for setting up  
Poultry waste Rendering Plant**

**Application For (New plant/ Existing plant/ Renewal)**

**A. Basic Information**

- a) Name& address of Applicant/Agency/Company :
  
  
  
  
  
  
  
  
  
  
- b) Contact number :
  
  
- c) Email address :
  
  
- d) Type of ownership : Sole proprietorship/ Partnership/ Limited Liability Company/ Others/ specify .....

**B. Facility/ Plant details**

- a) Proposed waste treatment capacity of plant : .....(Tons/day)
  
- b) Whether all wastes including feather is proposed to be processed in the plant : Yes/ No
  
- c) Proposed Technology : Dry rendering/ Wet rendering/Others .....(Specify)
  
- d) Proposed output product :
  
- e) Proposed output quantity : .....(Tons/day)
  
- f) Type of equipments/ machineries used :
  
- g) Required no of staffs in the plant :
  
- h) Number of trucks proposed to be used for collecting raw materials :
  
- i) Required no of staffs in the waste collection crew :
  
- j) Are the trucks going to be of : Yes /No

refrigerated type?

k) if yes, specify the temperature : .....(°C)  
range of refrigeration

l) Details of odour control measures :  
proposed to be provided

m) How is the waste water generated :  
proposed to be treated

(If through an ETP, include  
process details, process flow &  
capacity of plant in detailed  
proposal)

n) Has a process flow diagram : Yes / No  
showing the entire proposed  
process included?

o) Consent to establish obtained : Yes / No  
from KSPCB

### C. Land details

- a) Survey No :
- b) Ownership : Own land/ Leased land
- c) if leased, copy of lease agreement : Attached/ Not attached
- d) Plot area : .....(cents)
- e) proposed building floor area : .....(M<sup>2</sup>)
- f) Width of approach road : .....(M)
- g) Availability of power supply : Single phase/ 3 phase
- h) Availability of water connection : Yes / No
- i) Distance of land boundary from : .....M  
nearest a) Building  
b) Water body : .....M

### C. Additional information for approval of existing plants and renewal of approval

- a) Log/ register of quantity of waste : Attached/ Not attached  
collected and treated
- b) Agreement executed with Poultry : Yes / No  
stalls?
- c) If yes, number of stalls executed :  
agreement and the expecting  
quantum of waste generated.
- d) Consent to Operate obtained from : Yes / No  
KSPCB?
- e) If yes attach copy of consent to : Attached/ Not attached

operate obtained from KSPCB

- f) License obtained from concerned LSGI? ( For renewal of approval) : Yes / No
- g) If yes attach copy of valid license obtained from LSGI : Attached/ Not attached

**Declaration**

I hereby declare that all the statements made in and all documents submitted along with this application are true and correct to the best of my knowledge & belief.

Place & Date

Name & Signature

**Guidelines for Household Bio-Medical /  
Sanitary Waste Management - 2022**

"ഭരണഭാഷ- മാതൃഭാഷ"



**കേരള സർക്കാർ**

**സംഗ്രഹം**

തദ്ദേശസ്വയംഭരണ വകുപ്പ് - ഗാർഹിക ബയോ മെഡിക്കൽ മാലിന്യം ശേഖരണം, സംഭരണം, കൈയൊഴിയൽ പദ്ധതി പ്രാവർത്തികമാക്കുന്നതിനുള്ള മാർഗ്ഗ നിർദ്ദേശം അംഗീകരിച്ച് ഉത്തരവ് പുറപ്പെടുവിക്കുന്നു.

**തദ്ദേശസ്വയംഭരണ (ഡബ്ല്യു.എം.) വകുപ്പ്**

സ.ഉ.(സാധാ) നം.1227/2022/LSGD തീയതി, തിരുവനന്തപുരം, 16-05-2022

- പരാമർശം:-
- (1) ക്ലീൻ കേരള കമ്പനി മാനേജിംഗ് ഡയറക്ടറുടെ 15.09.2021-ലെ E10/CKCL/2021 നമ്പർ കത്ത്.
  - (2) ശുചിത്വമിഷൻ എക്സിക്യൂട്ടീവ് ഡയറക്ടറുടെ 23.03.2022-ലെ 987/G/2021/SM നമ്പർ കത്ത്.

**ഉത്തരവ്**

ബയോമെഡിക്കൽ / സാനിറ്ററി മാലിന്യം നീക്കം ചെയ്യുന്നത് സംബന്ധിച്ച പദ്ധതി നടപ്പാക്കുന്നതിനുള്ള (ശേഖരണം മുതൽ സംസ്കരണം വരെ) കരട് മാർഗ്ഗ നിർദ്ദേശങ്ങൾ സർക്കാരിന്റെ പരിഗണനയ്ക്കായി ക്ലീൻ കേരള കമ്പനി പരാമർശം (1) പ്രകാരം സമർപ്പിച്ചിരുന്നു. പരാമർശം (2) പ്രകാരം പ്രസ്തുത മാർഗ്ഗ നിർദ്ദേശത്തിന്മേലുള്ള റിപ്പോർട്ട് ശുചിത്വമിഷൻ ലഭ്യമാക്കിയിരുന്നു.

(2) സർക്കാർ ഇക്കാര്യം വിശദമായി പരിശോധിച്ചു. ഗാർഹിക ബയോ മെഡിക്കൽ മാലിന്യം ശേഖരണം, സംഭരണം, കൈയൊഴിയൽ പദ്ധതി പ്രാവർത്തികമാക്കുന്നതിന് ഇതോടൊപ്പം ഉള്ളടക്കം ചെയ്തിട്ടുള്ള മാർഗ്ഗ നിർദ്ദേശം അംഗീകരിച്ച് ഉത്തരവാകുന്നു.

(ഗവർണ്ണറുടെ ഉത്തരവിൻ പ്രകാരം)  
ശാരദ മുരളീധരൻ ഐ എ എസ്  
അഡീഷണൽ ചീഫ് സെക്രട്ടറി

പ്രിൻസിപ്പൽ ഡയറക്ടർ, തദ്ദേശസ്വയംഭരണ വകുപ്പ്.  
ഡയറക്ടർ, തദ്ദേശസ്വയംഭരണ (റൂറൽ) വകുപ്പ്.  
ഡയറക്ടർ, തദ്ദേശസ്വയംഭരണ (അർബൻ) വകുപ്പ്.  
പ്രിൻസിപ്പൽ അക്കൗണ്ടന്റ് ജനറൽ (എ&ഇ) / (ഓഡിറ്റ് I) / (ഓഡിറ്റ് II), കേരള,  
തിരുവനന്തപുരം.

എല്ലാ പഞ്ചായത്ത് സെക്രട്ടറിമാർക്കും.  
(തദ്ദേശസ്വയംഭരണ (റൂറൽ) വകുപ്പ് ഡയറക്ടർ മുഖേന)



എല്ലാ കോർപ്പറേഷൻ / മുനിസിപ്പാലിറ്റി സെക്രട്ടറിമാർക്കും.

(തദ്ദേശസ്വയംഭരണ (അർബൻ) വകുപ്പ് ഡയറക്ടർ മുഖേന)

എക്സിക്യൂട്ടീവ് ഡയറക്ടർ, ശുചിത്വമിഷൻ.

മാനേജിംഗ് ഡയറക്ടർ, ക്ലീൻ കേരള കമ്പനി.

സി.ഇ.ഒ., കേരള എൻവൈറോ ഇൻഫ്രാസ്ട്രക്ചർ ലിമിറ്റഡ്, അമ്പലമേട്, കൊച്ചി.

എക്സിക്യൂട്ടീവ് ഡയറക്ടർ, ഇൻഫർമേഷൻ കേരള മിഷൻ.

വിവരപൊതുജന സമ്പർക്ക് (വെബ് & ന്യൂമീഡിയ) വകുപ്പ്.

കരുതൽ ഫയൽ / ഓഫീസ് കോപ്പി.

ഉത്തരവിൻ പ്രകാരം

Signed by Sherin J Titus

Date: 17-05-2022 16:59:29

സെക്ഷൻ ഓഫീസർ

പകർപ്പ് :- തദ്ദേശസ്വയംഭരണ വകുപ്പ് മന്ത്രിയുടെ പി.എസ്.ന്

തദ്ദേശസ്വയംഭരണ വകുപ്പ് അഡീഷണൽ ചീഫ് സെക്രട്ടറിയുടെ പി.എ.യ്ക്ക്

തദ്ദേശസ്വയംഭരണ വകുപ്പ് സ്പെഷ്യൽ സെക്രട്ടറിയുടെ സി.എ.യ്ക്ക്

ഗാർഹിക ബയോ മെഡിക്കൽ മാലിന്യം ശേഖരണം

സംഭരണം കൈയൊഴിയൽ പദ്ധതി പ്രാവർത്തികമാക്കുന്നതിനുള്ള

മാർഗ്ഗ നിർദ്ദേശം

തദ്ദേശസ്വയംഭരണ സ്ഥാപനങ്ങളിലെ വീടുകൾ, അപ്പാർട്ട്മെന്റുകൾ, ഗേറ്റഡ് കോളനികൾ, ഹോസ്റ്റലുകൾ, ലോഡ്ജുകൾ, ഹോട്ടലുകൾ മുതലായ വാസസ്ഥലങ്ങളിൽ ഉല്പാദിപ്പിക്കപ്പെടുന്ന വിപൽക്കരമായ ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങളായ, ഉപയോഗിച്ച ഉപേക്ഷിക്കുന്ന സാനിട്ടറി നാപ്കിൻ, ബേബി ഡയപ്പർ, മുതിർന്നവരും കിടപ്പുരോഗികളും ഉപയോഗിക്കുന്ന ഡയപ്പറുകൾ, മരുന്നുകളുടെ കവറുകൾ, കാലാവധി കഴിഞ്ഞ ഇളികകൾ, ക്യാസ്റ്റിളുകൾ, സിറിഞ്ച്, സിറിഞ്ചിനോടൊപ്പമുള്ളതോ പ്രത്യേകമായതോ ആയ സൂചികൾ, പ്ലാസ്റ്റിക്/ഗ്ലാസ് മരുന്നുകപ്പികൾ എന്നിവ ശേഖരിക്കുന്നതിനും സംഭരിക്കുന്നതിനും കൊച്ചി അനലമേടിൽ സ്ഥാപിതമായിട്ടുള്ള കേരള എൻവറോ ഇൻഫ്രാസ്ട്രക്ചർ ലിമിറ്റഡിന് ശാസ്ത്രീയമായ സംസ്കരണത്തിനായി കൈയൊഴിയുന്നതിനും ആവശ്യമായ സംവിധാനം പ്രാവർത്തികമായിട്ടുണ്ട്. ഇത് ഫലപ്രദമായി ഉപയോഗിക്കുന്നതിന് താഴെപ്പറയുന്ന മാർഗ്ഗ നിർദ്ദേശങ്ങൾ പുറപ്പെടുവിക്കുന്നു.

1. ശേഖരിക്കേണ്ട വസ്തുക്കളുടെ വിശദാംശം.

ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങളെ ഡ്രൈ വേസ്റ്റ്, വെറ്റ് വേസ്റ്റ് എന്ന് രണ്ടായി തിരിച്ചിരിക്കുന്നു.

1. ഡ്രൈവേസ്റ്റ്

ഉപയോഗിക്കാത്തതും കാലാവധി കഴിഞ്ഞതുമായ ഖരരൂപത്തിലുള്ള മരുന്നുകൾ ഉപയോഗ ശേഷം ഒഴിഞ്ഞ മരുന്നുകളുടെ കവറുകൾ, (സ്പിപ്പൾപ്പൈടെ) ഒഴിഞ്ഞ പ്ലാസ്റ്റിക്/ഗ്ലാസ്സ് മരുന്നുകപ്പികൾ, ഉപയോഗിച്ച സിറിഞ്ചുകൾ, സിറിഞ്ചിനോടൊപ്പമോ പ്രത്യേകമായുള്ളതോ ആയ സൂചികൾ മുതലായവ.

2. വെറ്റ് വേസ്റ്റ്

ഉപയോഗിച്ച ഉപേക്ഷിക്കുന്ന സാനിട്ടറി നാപ്കിൻ, കുട്ടികളുടെ ഡയപ്പർ, മുതിർന്നവരും കിടപ്പുരോഗികളും ഉപയോഗിച്ച ഡയപ്പറുകൾ.

2. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങൾ ശേഖരിക്കേണ്ട രീതി

വിവിധ ഇനം ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യം ശേഖരിക്കുന്നതിന് വ്യത്യസ്ത

നിറങ്ങളിലുള്ള പോളിത്തീൻ ബാഗുകൾ ഉപയോഗിക്കണം.

1. സാനിട്ടറി നാപ്കിൻ, ഡയപ്പറുകൾ, രക്താംശമുള്ള മറ്റ് വസ്തുക്കൾ - മഞ്ഞ നിറത്തിലുള്ള പോളിത്തീൻ ബാഗുകൾ.
2. ഉപയോഗ ശൂന്യമായ മരുന്നുകൾ, ഗുളികകൾ, മരുന്ന് സ്പ്രിപ്പുകൾ മുതലായവ - നീലനിറത്തിലുള്ള പോളിത്തീൻ ബാഗുകൾ.
3. സൂചി ഘടിപ്പിച്ച സിറിഞ്ചുകൾ, സൂചികൾ, ബ്ലേഡ്, മലിനമായ മുർച്ചയേറിയ മറ്റ് വസ്തുക്കൾ - വെള്ള നിറത്തിലുള്ള പോളിത്തീൻ ബാഗുകൾ.
4. ഡിസ്റ്റോസിബിൾ ഇനങ്ങളായ കഴലുകൾ, ഗ്ലാസ്സുകൾ, യൂറിൻബാഗ്, സൂചി ഇല്ലാത്ത സിറിഞ്ചുകൾ പ്ലാസ്റ്റിക്/ഗ്ലാസ് മരുന്ന കപ്പികൾ - ചുവപ്പ് നിറത്തിലുള്ള പോളിത്തീൻ ബാഗുകൾ.
5. എവിടെ നിന്നാണോ മാലിന്യം ശേഖരിക്കാൻ ഉദ്ദേശിക്കുന്നത് അതത് സ്ഥലങ്ങളിൽ വ്യത്യസ്ത നിറങ്ങളിലുള്ള പോളിത്തീൻ ബാഗ് മുൻകൂട്ടി വിതരണം ചെയ്യണം. ആവശ്യമെങ്കിൽ ഈ ബാഗുകൾ കെ.ഇ.ഐ.എല്ലിൽ നിന്നും വാങ്ങാവുന്നതാണ്.
6. പോളിത്തീൻ ബാഗുകളിൽ ശേഖരിക്കുന്ന വസ്തുക്കൾ ശേഖരിച്ച ശേഷം യാതൊരു കാരണവശാലും ബാഗ് തുറന്ന് പുറത്തെടുക്കുവാൻ പാടുള്ളതല്ല.
7. ശേഖരിക്കുന്നതിനായി നിയോഗിക്കപ്പെടുന്നവർക്ക് പേഴ്സണൽ പ്രൊട്ടക്ഷൻ കിറ്റ് ലഭ്യമാക്കണം.
3. വീപൽക്കരമായ ഗാർഹിക സാനിട്ടറി മാലിന്യങ്ങളുടെ ശേഖരണം, സംഭരണം, കൈയൊഴിയൽ

1. സാനിട്ടറി മാലിന്യങ്ങളുടെ ശേഖരണം, സംഭരണം, കൈയൊഴിയിൽ ചുമതലകൾ തദ്ദേശസ്വയംഭരണ സ്ഥാപനത്തിന്റെ ഉത്തരവാദിത്വമായിരിക്കും. [2016 ലെ ഖരമാലിന്യ സംസ്കരണ ചട്ടം 15 (i)]
2. പ്രസ്തുത ആവശ്യത്തിലേക്കായി തദ്ദേശസ്വയംഭരണ സ്ഥാപനങ്ങൾക്ക് ഹരിത കർമ്മ സേന അംഗങ്ങളെയോ അവരുടെ കൺസോഷ്യത്തെയോ ചുമതലപ്പെടുത്താവുന്നതാണ്.
3. സംരംഭകർ, സ്ഥാപനങ്ങൾ, സംഘടനകൾ എന്നിവരിൽ നിന്നും നടപടിക്രമങ്ങൾ പാലിച്ചുകൊണ്ട് തെരഞ്ഞെടുക്കാവുന്നതുമാണ്. (താല്പര്യപത്രം ക്ഷണിക്കുന്നതിനുള്ള മാതൃകാ താല്പര്യപത്രവും അപേക്ഷാ ഫോറവും ഇതോടൊപ്പം അനുബന്ധമായി ചേർത്തിരിക്കുന്നു).
4. ഏതെങ്കിലും കാരണവശാൽ സ്വകാര്യ ഏജൻസികൾ ലഭ്യമല്ലെങ്കിൽ പ്രസ്തുത ചുമതല ക്ലീൻ

കേരള കമ്പനിയെ ഏൽപ്പിക്കാവുന്നതാണ്.

- 5. സ്വകാര്യ ഏജൻസികളെ കണ്ടെത്തുകയാണെങ്കിൽ അവർക്ക് വേണ്ട യോഗ്യതകൾ ചുവടെ ചേർക്കുന്നു.

**യോഗ്യതകൾ**

- 1. മുനിസിപ്പൽ ഖര/ദ്രവ മാലിന്യ സംസ്കരണ മേഖലയിലെ മൂന്നരഭവം - കുറഞ്ഞത് 3 വർഷം (സ്റ്റാർട്ടപ്പുകൾ, നൂതന സാങ്കേതിക വിദ്യ ഉപയോഗിക്കുന്നവർ എന്നിവർക്ക് മുൻപരിചയം ആവശ്യമില്ല)

- 2. സാമ്പത്തിക ശേഷി - കഴിഞ്ഞ 2 വർഷത്തിലെ ആഡിറ്റ് റിപ്പോർട്ട് (2018-19, 2019-20) പ്രകാരം വാർഷിക വിറ്റുവരവ് 5 ലക്ഷം രൂപയിൽ കുറയാരുത്.

- 3. GST/PAN രജിസ്ട്രേഷൻ ഉണ്ടായിരിക്കണം.

- 4. സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ് നൽകിയിട്ടുള്ള കൺസർവ്വേഷൻ ഓപ്പറേറ്റ് സർട്ടിഫിക്കറ്റ്

**4. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യം സംസ്കരിക്കുന്നതിനുള്ള ചെലവ്**

- 1. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യത്തിന്റെ ശേഖരണം, സംഭരണം, സംസ്കരണത്തിനായി കയ്യൊഴിയൽ എന്നീ പ്രവർത്തനങ്ങൾക്ക് വേണ്ടി വരുന്ന ചെലവ് മാലിന്യം ഉല്പാദിപ്പിക്കുന്നവരിൽ നിന്നും ഈടാക്കേണ്ടതാണ്.

- 2. ഇതിനുവേണ്ടി വരുന്ന ചെലവ് യാതൊരു കാരണവശാലും നഗരസഭ വഹിക്കുന്നതല്ല

- 3. മാലിന്യം ശേഖരിക്കുന്നതിനു വേണ്ടി വരുന്ന പോളിത്തിൻ ബാഗുകൾ നിശ്ചിത വിലക്ക് കെ.ഇ.ഐ.എല്ലിൽ നിന്നോ പൊതുവിപണിയിൽ നിന്നോ വാങ്ങാവുന്നതാണ്.

- 4. മാലിന്യം ശേഖരിച്ച ശേഷം സംസ്കരണ കേന്ദ്രമായ കെ.ഇ.ഐ.എല്ലിലേക്ക് നീക്കം ചെയ്യുന്നതിനുവേണ്ടി വരുന്ന വാഹന ചിലവ്, കയറ്റിറക്ക് ചെലവ്, ഈ പ്രവർത്തനങ്ങൾക്കായി നിയോഗിക്കപ്പെടുന്നവരുടെ വേതനം, കെ.ഇ.ഐ.എല്ലിൽ സംസ്കരിക്കുന്നതിനുള്ള ചെലവ് എന്നിവ ഈ പ്രവർത്തനം ഏറ്റെടുക്കുന്ന സംരംഭകൻ, സ്ഥാപനം, സംഘടന ആദാനോ അവർ വഹിക്കേണ്ടതാണ്.

- 5. കേരള എൻവൈറോ ഇൻഫ്രാസ്ട്രക്ചർ ലിമിറ്റഡ് (കെ.ഇ.ഐ.എൽ) , അവരുടെ ബയോമെഡിക്കൽ പ്ലാന്റിൽ മാലിന്യം സംസ്കരിക്കുന്നതിന് ഒരു കിലോഗ്രാമിന് 28.50

രൂപയായി നിശ്ചയിച്ചിട്ടുണ്ട്.

- 6. കെ.ഇ.ഐ.എല്ലിന്റെ വാഹനം ഉപയോഗിക്കുകയാണെങ്കിൽ വാഹനത്തിൽ കയറ്റാവുന്ന ഭാരത്തിന്റെ (ടണ്ണേജ്) അടിസ്ഥാനത്തിൽ കിലോമീറ്റർ നിരക്ക് നിശ്ചയിച്ചിട്ടുണ്ട്.
- 7. മുകളിൽ 3,4,5,6 ഖണ്ഡികകളിൽ സൂചിപ്പിച്ചിട്ടുള്ള ചെലവിനങ്ങൾ കണക്കാക്കി മാലിന്യത്തിന്റെ ഇക്കത്തിനനുപാതികമായി ഒരു കിലോ ഗ്രാമിന് 50 രൂപയും ജി.എസ്.റ്റിയും ഉല്പാദകരിൽ നിന്ന് ഈടാക്കാവുന്നതാണ്.
- 8. മാലിന്യം ശേഖരിക്കുമ്പോൾ തന്നെ വേസ്റ്റ് പ്രോസസിംഗ് എക്സ്പെൻസ് (WPE) ഉല്പാദകനിൽ നിന്നും ഈടാക്കാവുന്നതാണ്.
- 9. മാലിന്യം ഉല്പാദിപ്പിക്കുന്നവരിൽ നിന്നും ചിലവ് ഈടാക്കുമ്പോൾ അതിന് ശരിയായ രസീത് നൽകേണ്ടതാണ്. രസീതിൽ നഗരസഭയുടെ സീൽ പതിക്കേണ്ടതും നഗരസഭ നൽകുന്ന ലൈസൻസിന്റെ നമ്പർ അച്ചടിച്ചിരിക്കേണ്ടതുമാണ്.
- 10. കെ.ഇ.ഐ.എൽ മുഖേന മാലിന്യം സംസ്കരിക്കുമ്പോൾ പ്രസ്തുത സ്ഥാപനവുമായി ഉണ്ടാകുന്ന സാമ്പത്തിക ഇടപാടുകൾ കരാറുകാരൻ തന്നെ തീർപ്പാക്കേണ്ടതും യാതൊരു കാരണവശാലും നഗരസഭ ഉത്തരവാദിയാകുന്നതുമല്ല.
- 11. സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡിൽ നിന്നും കൺസന്റ് ടു ഓപ്പറേറ്റ് സർട്ടിഫിക്കറ്റ് ലഭിച്ചതിനു ശേഷം മാത്രമേ ശേഖരണ പ്രക്രിയ ആരംഭിക്കാവൂ.
- 12. ജി.പി.എസ് സംഘടിപ്പിച്ച വാഹനത്തിലായിരിക്കണം മാലിന്യം സംസ്കരണ കേന്ദ്രത്തിലെത്തിക്കേണ്ടത്

5. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യത്തിന്റെ ഉല്പാദനവും സംസ്കരണവും

ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യം ഉല്പാദിപ്പിക്കപ്പെടുന്ന വീടുകൾ, അപ്പാർട്ട്മെന്റുകൾ, ഹോട്ടലുകൾ, ലോഡ്ജുകൾ തുടങ്ങിയ വാസസ്ഥലങ്ങളുടെ ഉടമസ്ഥർ, ചുമതലപ്പെട്ടവർ, അസോസിയേഷനുകളുടെ ഭാരവാഹികൾ യാതൊരു കാരണവശാലും നഗരസഭയുടെ അംഗീകാരമില്ലാത്ത ഏജൻസികൾക്ക്/വ്യക്തികൾക്ക് മാലിന്യം കൈമാറാൻ പാടുള്ളതല്ല. മാലിന്യം കത്തിക്കുന്നതും അലക്ഷ്യമായി വലിച്ചെറിയുന്നതും ഇതര അജൈവ മാലിന്യത്തിനൊപ്പം കൈമാറുന്നതും 2016 ലെ ബയോമെഡിക്കൽ റൂൾസ് പ്രകാരം ശിക്ഷാർഹമാണ്. ജൈവ-അജൈവമാലിന്യങ്ങൾ ഉറവിടത്തിൽ തരംതിരിക്കുകയും ജൈവമാലിന്യങ്ങൾ ഉറവിടത്തിൽ സംസ്കരിക്കുകയും അജൈവമാലിന്യങ്ങൾ കൈയൊഴിയുകയും ചെയ്യുന്നതുപോലെ ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങൾ

പ്രത്യേകമായി ലഭ്യമാകുന്ന പോളിത്തീൻ ബാഗിൽ സൂക്ഷിക്കേണ്ടതും അംഗീകാരമുള്ള ഏജൻസിക്ക് മാത്രം കൈമാറുകയും ചെയ്യേണ്ടതാണ്. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങൾ സംസ്കരിക്കുന്നത് ചെലവേറിയ പ്രവർത്തനമായതിനാൽ ഇതിനായി നിയോഗിക്കപ്പെട്ടിട്ടുള്ള ഏജൻസികൾക്ക് ഇക്കത്തിനനുപാതികമായി സർക്കാർ നിശ്ചയിക്കുന്ന വേസ്റ്റ് പ്രോസസിംഗ് എക്സ് പെൻസായി 50 രൂപയും ജി.എസ്.ടിയും സർവ്വീസ് ചാർജായി നൽകേണ്ടതാണ്.

**ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യം ശേഖരണം സംഭരണം കൈയൊഴിയൽ**

**താല്പര്യപത്രം ക്ഷണിക്കുന്നു**

.....നഗരസഭയിലെ വിവിധ വാർഡുകളിലെ /ഡിവിഷനുകളിലെ വീടുകൾ, അപ്പാർട്ട്മെന്റുകൾ, ഗേറ്റഡ് കോളനികൾ, ഹോസ്റ്റലുകൾ, ലോഡ്ജുകൾ, റോട്ടലുകൾ മുതലായ വാസസ്ഥലങ്ങളിൽ ഉല്പാദിപ്പിക്കപ്പെടുന്ന ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങളായ ഉപയോഗിച്ച് ഉപേക്ഷിക്കുന്ന സാനിട്ടറി നാപ്കിൻ, ബേബി ഡയപ്‌പർ, മുതിർന്നവർക്കും കിടപ്പുരോഗികൾക്കും ഉപയോഗിക്കുന്ന ഡയപ്പറുകൾ, മരണങ്ങളുടെ കവറുകൾ, കാലാവധി കഴിഞ്ഞ ഗുളികകൾ, ക്യാസ്റ്റുകൾ, സിറിഞ്ച്, സിറിഞ്ചിനോടൊപ്പമുള്ളതോ പ്രത്യേക മായതോ ആയ സൂചികൾ എന്നിവ ശേഖരിക്കുന്നതിനും സംഭരിക്കുന്നതിനും കൊച്ചി അമ്പലമേടിൽ സ്ഥാപിതമായിട്ടുള്ള കേരള എൻവൈറോ ഇൻഫ്രാസ്ട്രക്ചർ ലിമിറ്റഡിന് ശാസ്ത്രീയമായ സംസ്കരണത്തിനായി കൈയൊഴിയുന്നതിനും താല്പര്യമുള്ള വ്യക്തികൾ, സംരംഭകർ, സംഘടനകൾ എന്നിവരിൽ നിന്നും നിശ്ചിത ഫോറത്തിൽ താല്പര്യ പത്രം ക്ഷണിക്കുന്നു. താല്പര്യ പത്രം ..... തീയതിക്ക് മുമ്പായി ..... നഗരസഭാ സെക്രട്ടറിക്ക് ലഭിക്കണം.

**1. യോഗ്യതകൾ**

1. മുനിസിപ്പൽ ഖര/ദ്രവ മാലിന്യ സംസ്കരണ മേഖലയിലെ മൂന്നരഭവം - കുറഞ്ഞത് 3 വർഷം (സ്റ്റാർട്ടപ്പുകൾ, നൂതന സാങ്കേതിക വിദ്യ ഉപയോഗിക്കുന്നവർ എന്നിവർക്ക് മുൻപരിചയം ആവശ്യമില്ല)
2. സാമ്പത്തിക ശേഷി - കഴിഞ്ഞ 2 വർഷത്തിലെ ആഡിറ്റ് റിപ്പോർട്ട് (2018-19, 2019-20) പ്രകാരം വാർഷിക വിറ്റുവരവ് 5 ലക്ഷം രൂപയിൽ കുറയാതെ.
3. GST/PAN രജിസ്ട്രേഷൻ ഉണ്ടായിരിക്കണം.

സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ് നൽകിയിട്ടുള്ള കൺസന്റ് ടു ഓപ്പറേറ്റ് സർട്ടിഫിക്കറ്റ്.

4. സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ് നൽകിയിട്ടുള്ള കൺസന്റ് ടു ഓപ്പറേറ്റ് സർട്ടിഫിക്കറ്റ്

2. ശേഖരിക്കേണ്ട വസ്തുക്കളുടെ വിശദാംശം

ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങളെ ഡ്രൈ വേസ്റ്റ്, വെറ്റ് വേസ്റ്റ് എന്നീ രണ്ടായി തിരിച്ചിരിക്കുന്നു.

1. ഡ്രൈവേസ്റ്റ്

ഉപയോഗിക്കാത്തതും കാലാവധി കഴിഞ്ഞതുമായ ഖരരൂപത്തിലുള്ള മരുന്നുകൾ, ഉപയോഗ ശേഷം ഒഴിഞ്ഞ മരുന്നുകളുടെ കവറുകൾ, (സ്ട്രിപ്പ്സ് ചെയ്ത) ഒഴിഞ്ഞ പ്ലാസ്റ്റിക്/ഗ്ലാസ് മരുന്നുകൾ, ഉപയോഗിച്ച സിറിഞ്ചുകൾ, സിറിഞ്ചിനോടൊപ്പമോ പ്രത്യേകമായുള്ളതോ ആയ സൂചികൾ മുതലായവ.

2. വെറ്റ് വേസ്റ്റ്

ഉപയോഗിച്ച് ഉപേക്ഷിക്കുന്ന സാനിട്ടറി നാപ്കിൻ, കുട്ടികളുടെ ഡയപർ, മുതിർന്നവരും കിടപ്പുരോഗികളും ഉപയോഗിച്ച ഡയപ്പറുകൾ

3. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങൾ ശേഖരിക്കേണ്ട രീതി

വിവിധ ഇനം ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യം ശേഖരിക്കുന്നതിന് വ്യത്യസ്ത നിറങ്ങളിലുള്ള പോളിത്തീൻ ബാഗുകൾ ഉപയോഗിക്കണം.

1. സാന്നിട്ടറി നാപ്കിൻ, ഡയപ്റ്റുകൾ, രക്താംശമുള്ള മറ്റ് വസ്തുക്കൾ - മഞ്ഞ നിറത്തിലുള്ള പോളിത്തീൻ ബാഗുകൾ.
2. ഉപയോഗ ശൂന്യമായ മരുന്നുകൾ, ഗുളികകൾ, മരന്ന് സ്പ്രിപ്പുകൾ മുതലായവ - നീലനിറത്തിലുള്ള പോളിത്തീൻ ബാഗുകൾ.
- 3 . സൂചി ഘടിപ്പിച്ച സിറിഞ്ചുകൾ, സൂചികൾ, ബ്ലേഡ്, മലിനമായ മുൻച്ചയേറിയ മറ്റ് വസ്തുക്കൾ - വെള്ള നിറത്തിലുള്ള പോളിത്തീൻ ബാഗുകൾ.
4. ഡിസ്സോസിബിൾ ഇനങ്ങളായ കഴലുകൾ, ഗ്ലാസ്സുകൾ, യൂറിൻ ബാഗ്, സൂചി ഇല്ലാത്ത സിറിഞ്ചുകൾ പ്ലാസ്റ്റിക്/ഗ്ലാസ് മരുന്നുകൾ കപ്പികൾ - ചുവപ്പ് നിറത്തിലുള്ള പോളിത്തീൻ ബാഗുകൾ.
5. എവിടെ നിന്നാണോ മാലിന്യം ശേഖരിക്കാൻ ഉദ്ദേശിക്കുന്നത് അതത് സ്ഥലങ്ങളിൽ വ്യത്യസ്ത നിറങ്ങളിലുള്ള പോളിത്തീൻ ബാഗ് മുൻകൂട്ടി വിതരണം ചെയ്യണം. ആവശ്യമെങ്കിൽ ഈ ബാഗുകൾ കെ.ഇ.ഐ.എല്ലിൽ നിന്നും വാങ്ങാവുന്നതാണ്.
- 6 . പോളിത്തീൻ ബാഗുകളിൽ ശേഖരിക്കുന്ന വസ്തുക്കൾ ശേഖരിച്ച ശേഷം യാതൊരു കാരണവശാലും ബാഗ് തുറന്ന് പുറത്തെടുക്കുവാൻ പാടുള്ളതല്ല.
- 7 . ശേഖരിക്കുന്നതിനായി നിയോഗിക്കപ്പെടുന്നവർക്ക് പ്ലേണൽ പ്രൊട്ടക്ഷൻ കിറ്റ് ലഭ്യമാക്കണം.

4. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യം സംസ്കരിക്കുന്നതിനുള്ള ചെലവ്

1. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യത്തിന്റെ ശേഖരണം, സംഭരണം, സംസ്കരണത്തിനായി കയ്യൊഴിയൽ എന്നീ പ്രവർത്തനങ്ങൾക്ക് വേണ്ടി വരുന്ന ചെലവ് മാലിന്യം ഉല്പാദിപ്പിക്കുന്നവരിൽ നിന്നും ഈടാക്കേണ്ടതാണ്.
2. ഇതിനുവേണ്ടി വരുന്ന ചെലവ് യാതൊരു കാരണവശാലും നഗരസഭ വഹിക്കുന്നതല്ല.
3. മാലിന്യം ശേഖരിക്കുന്നതിനു വേണ്ടി വരുന്ന പോളിത്തീൻ ബാഗുകൾ നിശ്ചിത വിലക്ക് കെ.ഇ.ഐ.എല്ലിൽ നിന്നോ പൊതുവിപണിയിൽ നിന്നോ വാങ്ങാവുന്നതാണ്.
4. മാലിന്യം ശേഖരിച്ച ശേഷം സംസ്കരണ കേന്ദ്രമായ കെ.ഇ.ഐ.എല്ലിലേക്ക് നീക്കം ചെയ്യുന്നതിനുവേണ്ടി വരുന്ന വാഹന ചിലവ്, കയറ്റിറക്ക് ചെലവ്, ഈ പ്രവർത്തനങ്ങൾക്കായി നിയോഗിക്കപ്പെടുന്നവരുടെ വേതനം, കെ.ഇ.ഐ.എല്ലിൽ സംസ്കരിക്കുന്നതിനുള്ള ചെലവ് എന്നിവ ഈ പ്രവർത്തനം ഏറ്റെടുക്കുന്ന സംരംഭകൻ, സ്ഥാപനം, സംഘടന ആരാണോ



അവർ വഹിക്കേണ്ടതാണ്.

5. കേരള എൻവൈറോ ഇൻഫ്രാസ്ട്രക്ചർ ലിമിറ്റഡ് (കെ.ഇ.ഐ.എൽ) അവരുടെ ബയോമെഡിക്കൽ പ്ലാന്റിൽ മാലിന്യം സംസ്കരിക്കുന്നതിന് ഒരു കിലോഗ്രാമിന് 28.50 രൂപയായി നിശ്ചയിച്ചിട്ടുണ്ട്.
  6. കെ.ഇ.ഐ.എൽ-ന്റെ വാഹനം ഉപയോഗിക്കുകയാണെങ്കിൽ വാഹനത്തിൽ കയറ്റാവുന്ന ഭാരത്തിന്റെ (ടണ്ണേജ്) അടിസ്ഥാനത്തിൽ കിലോമീറ്റർ നിരക്ക് നിശ്ചയിച്ചിട്ടുണ്ട്.
  7. മുകളിൽ 3,4,5,6 ഖണ്ഡികകളിൽ സൂചിപ്പിച്ചിട്ടുള്ള ചെലവിനങ്ങൾ കണക്കാക്കി മാലിന്യത്തിന്റെ തൂക്കത്തിനനുപാതികമായി ഒരു കിലോ ഗ്രാമിന് 50 രൂപയും ജി.എസ്.ടിയും ഉല്പാദകരിൽ നിന്ന് ഈടാക്കാവുന്നതാണ്.
  8. മാലിന്യം ശേഖരിക്കുമ്പോൾ തന്നെ വേസ്റ്റ് പ്രോസസിംഗ് എക്സ്പെൻസ് (WPE) ഉല്പാദകനിൽ നിന്നും ഈടാക്കാവുന്നതാണ്.
  9. മാലിന്യം ഉല്പാദിപ്പിക്കുന്നവരിൽ നിന്നും ചിലവ് ഈടാക്കുമ്പോൾ അതിന് ശരിയായ രസീത് നൽകേണ്ടതാണ്. രസീതിൽ നഗരസഭയുടെ സീൽ പതിക്കേണ്ടതും നഗരസഭ നൽകുന്ന ട്രൈബുണലിന്റെ നമ്പർ അച്ചടിച്ചിരിക്കേണ്ടതുമാണ്.
  10. കെ.ഇ.ഐ.എൽ മുഖേന മാലിന്യം സംസ്കരിക്കുമ്പോൾ പ്രസ്തുത സ്ഥാപനവുമായി ഉണ്ടാകുന്ന സാമ്പത്തിക ഇടപാടുകൾ കരാറുകാരൻ തന്നെ തീർപ്പാക്കേണ്ടതും യാതൊരു കാരണവശാലും നഗരസഭ ഉത്തരവാദിയാകുന്നതുമല്ല.
  11. സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡിൽ നിന്നും കൺസൻറ് ടു ഓപ്പറേറ്റ് സർട്ടിഫിക്കറ്റ് ലഭിച്ചതിനു ശേഷം മാത്രമേ ശേഖരണ പ്രക്രിയ ആരംഭിക്കാവൂ.
  12. ജി.പി.എസ് ഘടിപ്പിച്ച വാഹനത്തിലായിരിക്കണം മാലിന്യം സംസ്കരണ കേന്ദ്രത്തിലെത്തിക്കേണ്ടത്.
5. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യത്തിന്റെ ഉല്പാദനവും സംസ്കരണവും

ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യം ഉല്പാദിപ്പിക്കപ്പെടുന്ന വീടുകൾ, അപ്പാർട്ട്മെന്റുകൾ, റോട്ടറികൾ, ലോഡ്ജുകൾ തുടങ്ങിയ വാസസ്ഥലങ്ങളുടെ ഉടമസ്ഥർ, ചുമതലപ്പെട്ടവർ, അസോസിയേഷനുകളുടെ ഭാരവാഹികൾ യാതൊരു കാരണവശാലും നഗരസഭയുടെ അംഗീകാരമില്ലാത്ത ഏജൻസികൾക്ക്/വ്യക്തികൾക്ക് മാലിന്യം കൈമാറാൻ പാടുള്ളതല്ല. മാലിന്യം കത്തിക്കുന്നതും അലക്ഷ്യമായി വലിച്ചെറിയുന്നതും ഇതര അജൈവ

മാലിന്യത്തിനൊപ്പം കൈമാറുന്നതും 2016 ലെ ബയോമെഡിക്കൽ റൂൾസ് പ്രകാരം ശിക്ഷാർഹമാണ്. ജൈവ-അജൈവമാലിന്യങ്ങൾ ഉറവിടത്തിൽ തരംതിരിക്കുകയും ജൈവമാലിന്യങ്ങൾ ഉറവിടത്തിൽ സംസ്കരിക്കുകയും അജൈവമാലിന്യങ്ങൾ കൈയൊഴിയുകയും ചെയ്യുന്നതുപോലെ ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങൾ പ്രത്യേകമായി ലഭ്യമാകുന്ന പോളിത്തിൻ ബാഗിൽ സൂക്ഷിക്കേണ്ടതും അംഗീകാരമുള്ള ഏജൻസിക്ക് മാത്രം കൈമാറുകയും ചെയ്യേണ്ടതാണ്. ഗാർഹിക ബയോമെഡിക്കൽ മാലിന്യങ്ങൾ സംസ്കരിക്കുന്നത് ചെലവേറിയ പ്രവർത്തനമായതിനാൽ പ്രതിനാശി നിയോഗിക്കപ്പെട്ടിട്ടുള്ള ഏജൻസികൾക്ക് തുക്കത്തിനനുപാതികമായി സർക്കാർ നിശ്ചയിക്കുന്ന വേസ്റ്റ് പ്രോസസിംഗ് എക്സ്പെൻസായി 50 രൂപയും ജി.എസ്.ടി യും സർവ്വീസ് ചാർജായി നൽകേണ്ടതാണ്.

- 6. നിശ്ചിത ഫാറത്തിലുള്ള അപേക്ഷയോടൊപ്പം താൽപര്യ പത്രം ക്ഷണിച്ചു കൊണ്ടുള്ള അറിയിപ്പും എല്ലാ പേജുകളിലും ഒപ്പിട്ടു സമർപ്പിക്കേണ്ടതാണ്.

## DOMESTIC BIO MEDICAL WASTE DISPOSAL

### FORMAT FOR REGISTRATION – WASTE COLLECTING AGENCY

Name of LSGI : .....

District : .....

|    |  |                   |             |         |                    |          |
|----|--|-------------------|-------------|---------|--------------------|----------|
| 1  | Name of applicant  |                   |             |         |                    |          |
| 2  | Name of Agency   |                   |             |         |                    |          |
| 3  | Address  |                   |             |         |                    |          |
| 4  | Mobile Number  |                   |             |         |                    |          |
| 5  | Ward : No and Name where organization located  |                   |             |         |                    |          |
| 6  | Whether your organization is authorized to collect waste by any LSGI? If so details of authorization including prior work experience (Attach copy) |                   |             |         |                    |          |
| 7  | Nature of business entity  | Single enterprise | Partnership | Company | Charitable society | Start up |
| 8  | No and details of registration (Attach copy)   |                   |             |         |                    |          |
| 9  | Does your organization has obtained <b>Consent to Operate</b> from PCB ? If so details (Attach copy)   |                   |             |         |                    |          |
| 10 | Business turnover for the last two years (2019-20 and 2020-21) Copy of Audit report  |                   |             |         |                    |          |
| 11 | GST/PAN Details (Copy to be attached)  |                   |             |         |                    |          |

**Guidlines for Managing Construction  
and Demolition Waste - 2022**



## GOVERNMENT OF KERALA

### Abstract

Local Self Government - Guidelines for managing Construction and Demolition waste in Kerala - approved - orders issued

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### LOCAL SELF GOVERNMENT (W.M.) DEPARTMENT

G.O.(Ms)No.168/2022/LSGD Dated,Thiruvananthapuram, 30-07-2022

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- Read 1 Construction and Demolition Waste Management Rules 2016  
2 Draft guidelines submitted by Executive Director, Suchitwa Mission on 30.06.2022

### ORDER

Rapid urbanization in the State has resulted in the proliferation of civil structures. Many new buildings are either constructed in new premises or after the demolition of existing buildings. Renovations also result in the generation of significant material waste in the form of Construction & Demolition (C&D) Waste.

2. The roles of local authorities as per the Construction and Demolition Waste Management Rules 2016 include instructions and incentives to waste generators regarding proper disposal of waste, arrangements for transportation, containment and disposal, keeping track of C&D waste generated and maintaining data base and incentivising processing of C&D waste. Currently reusable C&D waste materials like steel, window & door frames, wood, roofing tiles etc generated in the State are being collected by various scrap dealers and the major portion of concrete waste generated are being used for ground leveling activities including road construction. There have been few instances reported with regard to C & D waste being illegally used to fill up water bodies and wetlands around urban centres. It is necessary to frame State guidelines for managing C&D waste and to set up adequate C&D waste processing facilities to prevent haphazard management, violation of the rules and damage to the environment.

3. In these circumstances, Government are pleased to issue the guidelines attached as Annexure, for management of Construction and Demolition waste in Kerala State.

(By order of the Governor)  
SARADA MURALEEDHARAN I A S

ADDITIONAL CHIEF SECRETARY

To:

The Executive Vice Chairperson, Haritha Kerala Mission  
The Principal Director, LSGD  
Director, Local Self Government (Urban) Department  
Director, Local Self Government (Rural) Department  
The Chief Town Planner, L.S.G.D Planning  
The Commissioner , Rural Development Department  
The Chief Engineer, L.S.G.D  
The Executive Director, Kudumbhasree  
The Mission Director, AMRUT  
The Managing Director, IMPACT Kerala  
The Executive Director, Suchitwa Mission  
The Director General, KILA  
The Principal Accountant General (A & E)(Audit - I/Audit-II) Kerala  
The Executive Director, Information Kerala Mission

Forwarded /By order



Section Officer

Copy To,

Private Secretary to Hon'ble Minister for L.S.G.D  
P.A to Additional Chief Secretary, L.S.G.D  
C.A to Special Secretary, L.S.G.D



**GUIDELINES FOR MANAGING  
CONSTRUCTION & DEMOLITION WASTE IN  
KERALA**

## 1. BACKGROUND

The rapid urbanization in the State has resulted in the coming up of a number of civil structures, either new ones or renovated ones. The new ones are either constructed in new premises or after the demolition of an existing building. Such construction activities including renovation generate huge quantities of material waste termed as Construction & Demolition (C&D) Waste. Proper management including segregation, collection, processing, and reuse of C&D waste has been the focus of various bodies of the Government; **C&D Waste Management Rules, 2016** has been issued by MoEF&CC vide notification no. GSR 317(E) dated 29th March 2016, **Guidelines on Environmental Management of C&D wastes** has been issued by CPCB in March 2017, **Integrated SWM Strategy** in which the strategy on management of C&D Waste generated in the State is included has been issued by the Government of Kerala Vide G.O (Rt) 811/2020/LSGD dated 01/05/2020. In addition to this, in order to have a clear strategy on managing the C&D waste, these State-level guidelines are framed.

Major Components of C&D Waste are (Ref-CPCB guidelines, 2017):

- Cement concrete – 36 %
- Bricks Masonry – 31 %
- Soil, Sand and Gravel – 23 %
- Steel (from RCC, door/window frames, roofing support, railings of staircase, etc.) – 5 %
- Bitumen (In road excavations) – 2 %
- Timber/wood (especially demolition of old buildings) – 2 %
- Stone (marble, granite, sandstone) – 1 %

Currently reusable C&D waste materials like steel, window & door frames, wood, roofing tiles etc generated in the State are being collected by various scrap dealers and the major portion of concrete waste generated are being used for ground leveling activities including road construction. Cases often reported are C & D wastes are used to illegally fill up water bodies and wetlands around urban centres for ‘creating land’ for real estate development. It is necessary to frame State guidelines for managing C&D waste and to set up adequate



C&D waste processing facilities to prevent C&D waste from getting dumped in public places/water bodies/drains or being managed haphazardly in the State.

## 2. GOVERNING LEGISLATIONS

C&D waste management in the State shall be governed by the following legislations:

### a. Construction and Demolition (C&D) Waste Management Rules 2016.

Duties of various stakeholders like waste generator, service provider and their contractors, local authority, pollution control board, State Government, Central Government agencies, and Schedules & Forms as mentioned in the C&D rules 2016 shall be deemed to be applicable regarding C&D waste management.

### b. KMBR/KPBR Amendment Rules 2020

Amendments were made in Kerala Municipality Building Rules and Kerala Panchayat Raj Building Rules vide G. O. (P) No. 57/2020 /LSGD dated 24/09/2020 and G. O. (P) No. 56/2020/LSGD dated 24/09/2020 respectively with an objective to manage the C&D waste generated in the State. The amendments made in the building rules through inserting 'section 79A: Management of Construction and Demolition Waste' are as below:

- i. Every permit holder for construction of a building, and for demolition of an existing building or concrete structure shall be responsible for safe disposal of waste generated during the process of such construction and demolition in accordance with the Construction and Demolition Waste Management Rules, 2016.
- ii. The Government shall from time to time fix the Waste disposal charges for municipalities or a group of municipalities payable by applicants at the time of submitting applications seeking permits. It shall be competent for the Government to fix differential charges depending on load and distance factor.
- iii. The Government shall in consideration of the provisions of the said Rules by notification provide for mechanisms for transportation, utilization, processing and downstream uses of the finished and intermediary products for construction and other purposes including their mandatory usage in specific types of infrastructure.
- iv. Municipalities shall establish or cause to establish waste processing facilities for such wastes on Public Private Partnership mode or outsourced model or lease franchise model or on any structure utilizing the funds accrued from the charges and other receipts with them including plan fund.
- v. The Government shall provide technical and financial support to Municipalities for the above purposes

### 3. OBJECTIVES

The objectives of these guidelines are to:

- a. standardise the facility requirement for C&D Waste Management in all Local Self Government Institutions (LSGIs) in the State
- b. standardise the procedure for licensing and operation of C&D Waste Management facilities in all LSGIs.
- c. regulate the management of C&D Waste in the State.
- d. promote reuse of C&D waste and thereby reduce the quantum of waste to be processed
- e. make recycling of C&D waste mandatory in the State
- f. enable cities to achieve garbage-free city star rating as per SBM Urban 2.0 guidelines
- g. develop a monitoring mechanism in the State for managing C&D waste

### 4. DEFINITIONS

In these guidelines unless the context otherwise requires,-

**“bulk waste generator”** means C&D waste generators generating more than 20 tons or more in one day or 300 tons per project in a month.

**"construction"** means the process of erecting of building or built facility or other structure, or building of infrastructure including alteration in these entities.

**"construction and demolition waste"** means the waste comprising of building materials, debris and rubble resulting from construction, re-modeling, repair and demolition of any civil structure.

**“demolition”** means breaking down or tearing down buildings and other structures either manually or using mechanical force (by various equipment) or by implosion using explosives.

**"facility"** means any establishment wherein the C&D waste management processes namely segregation, recovery, storage, collection, recycling, processing, treatment or safe disposal are carried out

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

**"processing"** means any scientific process by which segregated C&D waste is handled for the purpose of reuse, recycling or transformation into new products

**"recycling"** means the process of transforming segregated C&D 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

**“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 at the landfill

**“transportation”** means conveyance of C&D waste, either processed, partly processed or unprocessed from one location to another location in an environmentally sound manner through specially designed and covered transportation system so as to prevent air pollution, littering and unsightly conditions

**“waste generator”** means any person or association of persons or institutions, residential and commercial establishments including Indian Railways, Airport, Port and Harbour and Defence establishments who undertakes construction of or demolition of any civil structure which generates construction and demolition waste.

## 5. QUANTIFICATION OF C&D WASTE

Quantification of C&D waste is a primary requirement for managing the waste. Various approaches which can be considered for quantifying the C&D waste generation are listed below:

### a. Activity-wise C&D waste quantification

Technology Information, Forecasting and Assessment Council's (TIFAC) estimation to quantify activity-wise C&D waste generation is as follows:

- i. 40-60 kg per sq.m of C&D waste will be generated during new construction,
- ii. 40-50 kg per sq.m of C&D waste will be generated during building repair,
- iii. 300-500 kg per sq.m of C&D waste will be generated during the demolition of buildings.

Based on the study conducted by LSGD planning, Kozhikode (February,2022) in the selected LSGIs in the Kozhikode district the estimated C&D waste generation is as follows:

- i. 20-30 kg per sq.m of C&D waste will be generated during new construction,
- ii. 300-350 kg per sq.m of C&D waste will be generated during the demolition of buildings.

A study similar to that undertaken at Kozhikode may be carried out by all ULBs taking the above-estimated values as reference to assess the activity-wise C&D waste generation in their jurisdiction.

### b. Local Self Government wise C&D waste quantification

10 % of total Municipal Solid Waste generated in the Local Self Governments may be taken as the approximate quantity of C&D waste generation for planning purposes.

However, LSGIs shall be responsible for carrying out the C&D waste quantification in their jurisdiction. The Study on “Construction & Demolition Waste Generation and Management- Kozhikode” conducted by the LSGD Planning Kozhikode, could be taken as a pointer to the quantity of C&D Waste being generated in various districts in the State. The methodology followed in the report could be adopted for further studies on the quantitative estimation of C&D Waste in Kerala.

## 6. SPECIFICATIONS OF C&D WASTE COLLECTION CENTRES

The location of collection centres shall be identified and decided by the Local Self Government Institutions. LSGI shall facilitate collection of C&D waste from premises of non-bulk generators through:

- Mobile collection units (on call basis facility and weekly schedule); and/or
- Designated collection centres within reasonable distance for the generator to bring and deposit the C&D waste

LSGIs shall ensure suitable vehicles of different capacities (such as Tempos, Tractors, Trucks etc) are made available at a fixed rate, and staff is assigned at each level to ensure C&D waste collection from various generation points are carried out properly.

### a. C&D waste collection centres may be of the following types

- i. Local Self Government owned
- ii. LSGI cluster type
- iii. PPP model
- iv. Private owned

### b. Minimum area required for C&D waste collection centres-

Identified C&D waste collection centres shall be well fenced demarcating a minimum area of 100 SqM for the facility. It shall be ensured that the debris and dust do not interfere with the adjacent plots.

The existing dumpsites shall not be used as C&D waste collection centres and if areas adjacent to the existing dumpsites are to be used for C&D waste collection, it is to be ensured that the mixing up of waste does not happen at any instance. Dumpsites after remediation may be used for managing C&D waste in a scientific manner.

**c. Distance between C&D waste collection centres-**

Collection centres shall be established at regular intervals such that a non-bulk generator of C & D waste is not required to transport the debris to a distance more than 5 km or this distance can be fixed by the concerned LSGIs based on the C&D waste generation potential of the area. Mobile collection units may also be adopted at the discretion of LSGs to ensure smooth C&D waste collection operations.

**d. C&D waste collection centres shall be included in the storage category ‘H’ of the building rules****e. Facilities required at collection centres:**

Collection centres shall have a weighing bridge, C&D waste unloading area and segregated waste storage facility with roofing.

**f. C&D waste collected shall be segregated at the collection centres in the designated areas with clear separation or in separate storage bins into the following categories:**

Concrete, soil, steel, wood, plastics, bricks & mortar, paper (eg: paper sack cement bags), electrical items and metallic items.

**g. Required pollution control measures are to be adopted at the collection centres as specified in the **CPCB Guidelines on Environmental Management of C&D wastes.******h. Storage of C&D waste shall be in a permanently enclosed area wherever possible or else in a fenced area with a roofing facility.****i. Adequate number of water sprinkling arrangements shall be provided in the collection centres to mitigate the dust generated.****j. The unloading area shall be enclosed appropriately to prevent dust pollution during unloading operations.****k. SOP- Siting requirements and pollution control measures in construction & demolition waste processing plants by Kerala Pollution Control Board No. PCB/HO/SEE-3/TECH/139/2022 dated 04/04/2022 shall be adhered to (Annexure VI)****7. SPECIFICATIONS OF C&D WASTE TRANSPORTATION MECHANISM**

C&D waste collection/transportation mechanism may be of the following types:

- i. LSGI owned
- ii. Private owned

The required C&D waste collection/transportation mechanism-including the capacity

of vehicles, staff strength, equipment/machinery needed for collection operations shall be adequate to meet the assessed C&D waste generation of the concerned local bodies. Whether an in-house mobile collection facility is to be provided or it may be an on-call private service facility to be decided by the concerned local bodies.

#### **8. STANDARD OPERATING PROCEDURE FOR C&D WASTE TRANSPORTATION**

C&D waste transporting agencies shall maintain a manifest in the format as attached in **Annexure I**. C&D waste transportation operation shall be without causing any traffic issues or disturbance to the public. All the environmental norms and safety precautions as specified in the CPCB guidelines on environmental management of C&D waste are to be followed by the authorised agency engaged in C&D waste transportation. Proper transportation of C&D waste includes but not limited to the following conditions:

- a. Transportation of C&D waste from collection centres to processing facilities shall be done within a time period not exceeding 7 days to prevent the accumulation of C&D waste at the collection facility.
- b. Transportation of C & D wastes shall be done in covered vehicles to prevent fugitive dust emission.
- c. There shall be various compartments inside the vehicle to prevent mixing of waste or non mixing type of waste shall only be transported during a trip.
- d. Vehicles engaged in C&D transportation shall be fitted with GPS tracking facilities.
- e. C&D waste management operations shall be carried out avoiding peak times of 8AM to 11AM and 3PM to 8PM
- f. Regular checking and maintenance of vehicles should be ensured (valid PUC)

#### **9. PROCEDURE TO BE FOLLOWED BY THE SECRETARY WHILE PROCESSING APPLICATION FOR C&D WASTE COLLECTION CENTRE/ TRANSPORTATION MECHANISM AT THE LSGI**

The format of application to be submitted to the Secretary for establishing C&D waste collection centres shall be as per **Annexure II** and the format of application for C&D waste collection/transportation mechanism shall be as per **Annexure III**. On receipt of the application, if any supporting document is missing with the application, the Secretary or Officer authorised by him shall immediately inform the applicant and allow the applicant to submit the missing document at the earliest, but not later than 7 days from the date of receipt of application. On filing the application in full, the Secretary or the Officer authorised by him shall issue an acknowledgement to the applicant with the date of inspection not exceeding 7 working days. Secretary or the Officer authorised by him shall visit the premises/inspect the infrastructures as per the time fixed for inspection and shall verify that all the compliances have been met and approve/reject the application within 14 days from the date of inspection.

#### **10. HANDING OVER OF C&D WASTE BY THE GENERATOR AND THE CHARGES TO BE PAID**

- a. Non bulk-generator of small quantity of C&D waste for one time upto 2 tonnes in total (not per day) can register the requisition with the local authority for the collection of the segregated C&D waste and they shall be exempted from paying collection fees. This will encourage them to comply with the law. They may also deposit the segregated waste at designated collection centres by their own arrangement.
- b. Non bulk-generator of C&D waste exceeding the above quantity and **less than 20 tonne** per day can register the requisition with the local authority for the collection of the segregated C&D waste and in such case collection charges as fixed by the local authority shall be payable by generator or may deliver the C&D waste material duly segregated to the designated **C&D waste collection centres** notified by the local authority at their own cost.
- c. Bulk generator of C&D waste of **more than 20 tonnes per day or 300 tonnes per project in a month** shall deliver the C&D waste to the **processing plant site** at their own cost. **Processing charges for C&D waste as may be fixed by the local authority shall also be paid by the bulk generator** (eg: South Delhi Municipal

Corporation has imposed a processing fee of Rs 205 per MT at time of sanctioning building plan and Rs 225 per MT for lifting waste. The transportation charges would be increased by 10% every two years, **Ref. CPCB guidelines, 2017)**

#### **11. APPLICATION FORMAT & WASTE MANAGEMENT PLAN TO BE SUBMITTED BY THE WASTE GENERATOR**

The format of application to be submitted by the C&D waste non-bulk generator shall be as per the format attached as **Annexure IV**. Before new construction/repairing works/demolition activities which generate C&D waste, the non-bulk generators handing over C&D waste through accredited third-party agencies shall come into agreement with the respective agencies. A nominal charge as fixed by the LSG may also be levied for new constructions at the time of approval of the building plan by the LSGI.

Bulk generators of C&D waste shall submit a waste management plan to Local Self Government in the format attached as **Annexure V**. LSGI to accord the approval with or without modifications for C&D waste management plan submitted by the generator within a month

#### **12. C & D WASTE COLLECTION/TRANSPORTATION CHARGES**

Maximum charge for the collection/transportation of C&D waste by LSGI owned vehicles shall be fixed by the District Level Facilitation and Monitoring Committee (DLFMC) in Rupees per tonne for a distance upto 10 kms. This distance include distance from the construction/demolition site or collection centre to the processing facility. For distance more than this an additional charge of in Rupees per km shall also be fixed. This collection/transportation charges shall be reviewed and modified by the DLFMC from time to time.

Maximum charge for the collection/transportation of C&D waste by the accredited private agencies shall be fixed by the DLFMC after due consideration of the quantum of waste generated in the area and the distance to the facility for collection and processing of C&D waste.

#### **13. DISTRICT LEVEL FACILITATION AND MONITORING COMMITTEE**

A District Level Facilitation and Monitoring Committee (DLFMC) with the structure specified in this guideline shall be constituted in each district to regulate the C&D waste management charges and monitor the C&D waste management operations.



The structure of the committee shall be as follows;

- District Collector-Chairman
- District Co-ordinator, Suchitwa Mission - Convener
- District Co-ordinator, Haritha Keralam Mission- Member
- Joint Director (LSGD) in charge of the district - Member
- Representative of Kerala Pollution Control Board- Member
- Representative of Town and Country Planning Department - Member
- Representative from District Industries Department- Member

DLFMC shall fix the maximum C&D collection charges and tipping fee that can be levied by the C&D processing units accepting wastes for processing based on the following parameters from time to time:

- a. Quantity of C&D waste collected/processed
- b. Transportation expenses
- c. Operational expenses of the Plant
- d. Geography of the district (spatial data)

#### **14. C&D WASTE PROCESSING FACILITIES**

Local Self Government Institutions shall be responsible for assessing the quantity of C&D waste generated in their jurisdiction to arrive at the required capacity of C&D waste processing facility. In the study conducted by LSGD planning, Kozhikode ( February, 2022) the volume of C&D waste generated in Kozhikode district is worked out to be 1,240 TPD and assuming that only half of the present volume of C&D waste is likely to reach the processing plant, a plant of capacity 500 Tpd is suggested in the study for the district to handle the present C&D waste.

DLFMC shall be responsible for proposing the capacity and number of plants required in the district. Existing quarries, crusher units can be utilized for processing C&D waste as these units are already having installed machinery and with some alterations, the same can be made suitable for processing C&D waste. Hollow brick manufacturing units, paver brick manufacturing units etc may be involved in C&D waste processing activities to ensure forward linkage. This will lead to easier and timely setting up of C&D processing facilities in the State.

The secondary transportation to the off-site (centralized) C&D waste processing plant may be taken up by the ULB or third party or processing facility management agency. In addition, the bulk generators/service providers can directly transport their C&D waste to the processing facility as per their waste management plan by paying the required charges to the local authority.

C&D processing facility in the State shall comply with the following conditions:

- a. C&D waste processing facilities can be of the following types**

- i. Local Self Government owned
- ii. PPP model-
  - A. Land shall be owned by the Government and a facility to handle a minimum of 100 TPD C&D waste including the logistic facility shall be created by the private party. The operational cost shall also be met by the private party. The land has to be wisely selected by the LSG such that it has proper road connectivity for the movement of trucks and road development itself won't become a burden for the project. The processing or recycling plant shall be large enough to last for 20-25 years. The collection centres of C&D waste shall be pre-approved by the LSG. The primary sources of benefits are disposal fees (Tipping fee) and sale of recycled products. The price of recycled materials has to be lower than that of primary virgin materials. This gives a strong motivation to buy the recycled materials. LSG may give a buy-back assurance to the plant owner that it will use a certain percentage of the recycled materials in its various projects. Notification for user charges for C&D processing shall be fixed by the LSG.
  - B. Minimum waste assurance: ULB shall ensure that the bidder will be the sole agency responsible for collection of C&D Waste in the project area. The ULB shall assure the bidder a minimum quantity of C&D Waste on a monthly/quarterly basis to ensure financial viability of the project. If minimum guaranteed amount is not met, the ULB shall provide monetary compensation to the bidder at a rate quoted in the tender by the bidder.
  - C. Mobile type Mini-C&D waste crushing & processing enterprise providing rental services- The case considers a scenario in which an agency (public or private) invests in a mini-mobile crusher suitable to be transported easily to different demolition sites where C&D waste is crushed according to the needs of the client. The business model considers that the mini-crusher is rented out to the clients in ULBs where the C&D waste is crushed in-situ and used in-house by the client. In this case the income for investor is through renting out the machine.
  - D. Mobile type Mini-C&D waste crushing & processing and sales enterprise- In this case the agency (public or private) invests in a mini-mobile crusher suitable to be transported easily to different demolition sites where C&D waste is crushed transported back and stock piled by the entrepreneur in his stockyard. The processed material is later marketed by the entrepreneur. This is a mini-mobile version of the standalone crushing units.
- iii. Private owned- Both land and the facility owned by the private party

- b. Minimum area of at least 1 hectare is preferred for construction & demolition waste processing plant (because of its similarity to crusher units). However, considering the non availability of adequate land, a thumb rule of one acre per 100 tons/day may be taken as the minimum requirement. ie, for 200 tons/day plant, area of two acre is required and 75 tons/day plant area of 75 cents is required. However, in no case, the minimum area shall be less than 75 cents, however small the capacity is.
- c. The non-availability of C&D waste due to improper collection/transportation/enforcement of law can adversely affect the economical functioning of the C&D waste processing plants. C&D plants may not be needed in all the districts since in some districts the waste generation may be low. Hence, one common C&D waste processing plant may be sufficient for multiple districts.
- d. There shall be no residence/public building/place of worship within 100m of the processing facility. Minimum setback of 10m shall be available on all sides.
- e. The processing facility shall consists of the following components
  - i. Compound Wall / Fencing Arrangements
  - ii. Weigh bridge at entry/exit gate
  - iii. C&D waste unloading platform
  - iv. Sorting/Segregation Area
  - v. Conveyor belt to the crusher plant
  - vi. Crusher plant
  - vii. Wet Processing Plant
  - viii. Screening Mechanism to screen various size of aggregates
  - ix. Processed Material Storage Area
  - x. Material Testing / Administrative block buildings
  - xi. Processing or recycling site shall be fenced or hedged and provided with proper gate to monitor incoming vehicles or other modes of transportation.
  - xii. The crushing plant shall be fully enclosed in a brick/concrete walled building

- with opening for material handling only.
- xiii. Adequate water storage facilities and water sprinkling and dust suppression systems have to be provided in the plant.
  - xiv. The waste received, the waste processed, the products and the rejects shall be correctly quantified using weigh bridge.
  - xv. The owner of the facility shall prepare annual reports as per the prevailing rules and submit to the local bodies & the PCB
  - xvi. There shall be earmarked areas for parking vehicles and carrying out vehicle cleaning operations
  - xvii. The approach and or internal roads shall be concreted or paved so as to avoid generation of dust particles due to vehicular movement and shall be so designed to ensure free movement of vehicles and other machinery
  - xviii. Utilities such as drinking water and sanitary facilities (preferably washing/bathing facilities for workers) and lighting arrangements for easy landfill operations during night hours shall be provided and Safety provisions including health inspections of workers at landfill sites shall be carried out made.
  - xix. Provision of storm water drains to prevent stagnation of surface water
  - xx. fire protection equipment and other facilities as may be required shall be provided.
  - xxi. provision for the prevention of NOISE pollution from processing and recycling plant:
  - xxii. provision for treatment of effluent if any, to meet the discharge norms as per Environment
  - xxiii. Work Zone air quality at the Processing or Recycling site and ambient air quality at the vicinity shall be monitored.
  - xxiv. the measurement of ambient noise shall be done at the interface of the facility with the surrounding area, i.e., at plant boundary.
  - xxv. A vegetative boundary shall be made around Processing or Recycling plant or

site to strengthen the buffer zone.

- xxvi. Pollution control measures as specified in the CPCB Guidelines on Environmental Management of C&D wastes.
- xxvii. SOP- Siting requirements and pollution control measures in construction & demolition waste processing plants by Kerala Pollution Control Board No. PCB/HO/SEE-3/TECH/139/2022 dated 04/04/2022 shall be adhered to (Annexure VI)

## 15. MANDATORY USE OF C&D WASTE PRODUCTS

As and when a C&D waste recycling plant is commissioned in a district and recycled products are available within 100 km from construction site, it shall be mandatory for below listed construction activities to use specified percentage of available building construction materials manufactured from recycled C&D waste.

- a. All Government constructions including shall mandatorily use at least 20 percent of recycled C & D waste products.
- b. All renovation projects involving demolition, even in the private sector, shall mandatorily use at least 20 percent of recycled C & D waste products.

Example: Delhi government advisory C & D waste utilization-The Delhi government has issued an advisory on the use of products made out of recycled C & D waste by the Public Works Department (PWD). All Delhi government agencies will be required to incorporate a clause in their tenders that mandates use of a minimum of 2 per cent recycled products from construction waste in all future contracts for building works and 10 per cent recycled products for road works, **Ref- CPCB Guidelines, 2017.**

## 16. C&D ITEM REUSE AND C&D WASTE RECYCLED PRODUCTS

Various options to ensure the best possible use of C&D items and C&D waste recycled products are depicted below:

- a. **REUSE OF C&D ITEMS**
  - i. According to waste management hierarchy, the priority should be to extract the maximum practical benefits from products and to prevent and minimize the waste that

is generated. Prevention is the most desirable waste management option as it eliminates the need for handling, transporting, recycling or disposal of waste. Reuse of C&D waste is important as it helps to reduce the dependence on natural resources and eliminates adverse environmental impacts like mining which is an energy intensive activity. Reuse of C&D wastes has the additional advantage of controlling the quantum of C&D waste destined for disposal and recycling besides reducing transportation costs.

- ii. The list of reuse and salvage materials include appliances, bathroom fixtures, bricks, blocks, masonry stone, structural steel, cabinets, carpeting, ceiling tiles, timber and timber based boards, door and window frames and shutters, flooring tiles, stone tiles/platforms, insulation, landscaping materials, lighting fixtures, metal framing including for partitions and ceiling, panelling, pipes, antique mouldings, accessories and hardware of furniture, PVC water tanks, roofing sheets used for garages, outdoor areas, fabric of tensile structures etc.
- iii. When the opportunities for reuse or salvage are exhausted, recycling is the next level.
- iv. C&D waste materials that can be recycled include acoustical ceiling tiles, asphalt, asphalt shingle, carpets, concrete, drywall, fluorescent lights, land clearing debris (vegetation, dirt), metals and metal alloys, structural steel, plastic film (sheeting, packaging), glass, wood etc.

#### **b. THE DIRECT PRODUCE OF RECYCLING OF C&D WASTE**

- i. **Fine aggregate**-The produce of C&D waste processing i.e. fine and coarse aggregates are good materials for road construction. Road stretches have been already constructed in India using these materials.
- ii. **Recycled Concrete Aggregates**-It is derived from concrete after requisite processing of different sizes (5-10 mm, 10-20 mm, 20-40 mm or as required)
- iii. **Recycled Aggregates**- It is made from C&D waste, which may comprise concrete, brick, tiles,stone, etc. of different sizes (5-10 mm, 10-20 mm, 20-40 mm or as required)

- iv. **Manufactured soil-** The manufactured soil is quite suitable for landfill, landscaping as a substitute of excavated soil. Fine and coarse aggregates are ready raw materials for Ready Mix Concrete plants and construction sites. The manufactured soil is also a good substitute for soil for construction of road and fly over embankments. It saves precious topsoil.

**c. THE VARIOUS DOWNSTREAM PRODUCTS WHICH CAN BE MANUFACTURED USING RECYCLED C&D WASTE**

- i. **Tetrapods** and other similar structures which can be used for coastal protection (As Kerala is having long coastline, the demand for bulk materials to be used in coastal protection is high and C&D waste recycled products can substitute enormous quantity of natural materials in this aspect)
- ii. Bricks, blocks, tiles, hollow bricks, wall tiles;
- iii. Pavers, kerb stones;
- iv. Park benches, drain covers, planters, compound wall, fence post, tree guards, tree pit covers, manhole covers, underground cable covers, precast boundary wall panels and poles, etc.

**17. INCENTIVIZE UTILISATION OF RECYCLED C&D WASTE PRODUCTS**

The tipping fee for delivery of C & D waste to the recycling plant, terms & conditions of the civic body with the concessionaire shall be designed to keep the price of C & D waste recycled products atleast 20 per cent lower than the corresponding conventional products. The price of C&D waste recycled products shall be published in the State Schedule of rates.

**18. QUALITY CONTROL FOR C&D WASTE RECYCLED PRODUCTS**

C&D waste recycled product use shall be according to the following specifications/guidelines:

- a. IS: 383(2016) Indian Standard COARSE AND FINE AGGREGATE FOR CONCRETE – SPECIFICATION. Utilisation of C&D waste permitted in various concrete works by IS: 383(2016) are as below:

| <b>C &amp; D waste<br/>BIS IS: 383</b> | <b>Plain<br/>Concrete</b> | <b>Reinforced<br/>Concrete</b> | <b>Lean Concrete<br/>( &lt; M15 grade)</b> | <b>Extent of<br/>Utilization</b> |
|--|---------------------------|--------------------------------|--|----------------------------------|
| Recycled Concrete Aggregate (RCA)      | 25%                       | 20% (only upto M25 grade)      | 100%                                       | as Coarse Aggregate              |
| Recycled Aggregate (RA)                | nil                       | nil                            | 100%                                       | as Coarse Aggregate              |
| Recycled Concrete Aggregate (RCA)      | 25%                       | 20% (only upto M25 grade)      | 100%                                       | as Fine Aggregate                |

- b. National Building Code (NBC- CED 46) of India 2005 : Part 11 of NBC 2005 on ‘Approach to Sustainability’(Chapter 11), states that :
- i. Recycled Coarse Aggregate may be used in concrete for bulk fills, bank protection, base/fill of drainage structures, pavements, sidewalks, kerbs and gutters etc.
  - ii. Up to 30 percent of natural crushed coarse aggregate can be replaced by the recycled concrete aggregate
  - iii. This percentage can be increased up to 50 percent for pavements and other areas which are under pure compression specific to the standards and practices pertaining to construction of roads.’
- c. Building Materials and Technology Promotion Council (BMTPC) in 2016 released “Guidelines for utilization of C & D waste in construction of dwelling units and related infrastructure in housing schemes of the Government”.
- d. The PART IV of Central Public Works Division (CPWD): The “Guidelines for Sustainable Habitat (March 2014)” discusses ‘Guidelines on reuse and recycling of Construction and Demolition (C & D) waste’.
- e. Indian Road Congress has permitted the use of produce of C&D waste processing and has issued IRC: 121-2017 “Guidelines for use of construction and demolition waste in road sector”.

**Note-** The Concerned Departments in the State need to ensure the above criteria through separate orders.

## 19. MONITORING MECHANISMS

Strict enforcement of rules combined with regular monitoring procedures and supporting policies can serve as effective systems for the management of C&D waste. A series of monitoring and inspection mechanisms should be in place for disposal practices of C&D waste in order to prevent unauthorised dumping. Tracking systems involving multiple stakeholders to be in place to ensure proper disposal and handling



of C&D waste. For effective monitoring, the ULBs can make use of extensive IT systems such as GPS tracking of vehicles and centralized data entry for movement of waste streams from one place to another besides appropriate tests and inspections.

## **20. PUNISHMENTS TO ILLEGAL COLLECTION, TRANSPORTATION AND DUMPING OF C&D WASTE**

- a. Mixing construction debris with municipal solid waste-Rs.10,000
- b. Dumping C&D waste in public places- Rs.20,000
- c. Dumping C&D waste into water bodies and drains- Punishment with imprisonment for a term which may extend to three years or with fine which may extend to Rs.2,00,000 or with both (Ref-Kerala Irrigation & Water Conservation (Amendment) Act, 2018, dated 03.07.2018 )
- d. Penalty for not removing C & D waste from the site within 7 days after the completion of construction/demolition works- Rs. 5,000/- per tonne
- e. Penalty for not delivering Construction and Demolition waste in a segregated manner Rs. 10,000
- f. Improper transportation of C&D waste- Rs.10,000
- g. Carrying out C&D management operations without necessary licence- Rs.10,000

**Note-** For recurring incidents, the above fine shall be doubled.

## **21. ROLES AND RESPONSIBILITIES OF VARIOUS STAKEHOLDERS**

### **a. LOCAL SELF GOVERNMENT INSTITUTIONS**

Local Self Government Institutions shall:

- i. issue detailed directions with regard to proper management of construction and demolition waste within its jurisdiction in accordance with the provisions of C&D waste management rules and the local authority shall seek detailed plan or undertaking as applicable, from generator of construction and demolition waste;
- ii. chalk out stages, methodology and equipment, material involved in the overall activity and final clean up after completion of the construction and demolition ;

- iii. seek assistance from concerned authorities for safe disposal of construction and demolition waste contaminated with industrial hazardous or toxic material or nuclear waste if any;
- iv. shall make arrangements and place appropriate containers for collection of waste and shall remove at regular intervals or when they are filled, either through own resources or by appointing private operators;
  - v. shall get the collected waste transported to appropriate sites for processing and disposal either through own resources or by appointing private operators;
  - vi. shall give appropriate incentives to generator for salvaging, processing and or recycling preferably in-situ;
- vii. shall examine and sanction the waste management plan of the generators within a period of one month or from the date of approval of building plan, whichever is earlier from the date of its submission;
- viii. shall keep track of the generation of construction and demolition waste within its jurisdiction and establish a data base and update once in a year;
- ix. shall device appropriate measures in consultation with expert institutions for management of construction and demolition waste generated including processing facility and for using the recycled products in the best possible manner;
- x. shall create a sustained system of information, education and communication for construction and demolition waste through collaboration with expert institutions and civil societies and also disseminate through their own website;
- xi. shall make provision for giving incentives for use of material made out of construction and demolition waste in the construction activity including in non-structural concrete, paving blocks, lower layers of road pavements, colony and rural roads.
- xii. operate helpline toll free number for citizens for availing C&D waste management services
- xiii. incorporate the details of the expected quantity of C& D waste in the building permit. The proposed mode of disposal of C&D waste shall also be specified in the building permit.
- xiv. issue licence to C&D waste Management facilities as per the provisions of these guidelines
- xv. regulate illegal collection, transportation and dumping of C&D waste and penalise the defaulters as per the legal provisions
- xvi. facilitate C&D waste generators to enter into tie up with authorised C&D waste management facilities. Mobile collection facility is always preferable under Kerala circumstances.

- xvii. take action regarding non-collection of C&D waste by authorised agencies
- xviii. collect and maintain records from the C&D waste generators regarding the quantum of waste generated, transported, processed and disposed by them
- xix. Shall prepare and submit an annual report to the PCB as per the rule.
- xx. fix maximum tipping fee in consultation with DLFMC that can be levied by the C&D waste management facilities accepting C&D wastes for processing based on the following parameters from time to time;
  - A. Quantum of C&D waste processed
  - B. Operational expenses of the facility
  - C. Transportation expenses
  - D. Geography of the district (spatial data)
- xxi. Intervene if any social issues related to functioning of C&D waste management facilities arise.

**b. STATE GOVERNMENT**

Duties of State Government-

- i. The concerned department in the State Government dealing with land shall be responsible for providing suitable sites for setting up of the storage, processing and recycling facilities for construction and demolition waste.
- ii. The Town and Country planning Department shall incorporate the site in the approved land use plan so that there is no disturbance to the processing facility on a long term basis.
- iii. Procurement of materials made from construction and demolition waste shall be made mandatory to a certain percentage (say 10-20%) in municipal and Government contracts subject to strict quality control.

**c. KERALA STATE POLLUTION CONTROL BOARD**

Kerala State Pollution Control Board shall:

- i. monitor the implementation of C&D waste management rules by the concerned local bodies and the competent authorities and the annual report shall be sent to the Central

Pollution Control Board and the State Government or Union Territory or any other State level nodal agency identified by the State Government or Union Territory administration for generating State level comprehensive data. Such reports shall also contain the comments and suggestions of the State Pollution Control Board or Pollution Control Committee with respect to any comments or changes required;

- ii. grant authorization to construction and demolition waste processing facility in Form-III as specified under C&D waste management rules after examining the application received in Form I;
- iii. prepare annual report in Form IV with special emphasis on the implementation status of compliance of C&D rules and forward report to Central Pollution Control Board before the 31<sup>st</sup> July for each financial year.
- iv. issue NOC/Consent to Operate to C&D waste management facilities that follow required conditions
- v. prepare and publish Standard Operating Procedure (SOP) for (collection, storage, transportation and processing) C&D waste management facilities in the State from time to time. SOP attached as annexure VI.
- vi. ensure that the C&D waste management facility operators are following the SOP through periodical inspection and submit quarterly reports to the Government
- vii. bring to the notice of Local Self Government, any case of non-compliance of SOP by approved C&D waste management facilities
- viii. ensure that the C&D waste management facilities maintain proper records of all their activities including quantity of wastes managed, processing done etc.
- ix. ensure that C&D waste management facilities have appropriate pollution control systems.

#### **d. C&D WASTE GENERATOR**

C&D Waste generator shall ensure proper management of C&D waste and its site as per C&D waste management rules 2016 including but not limited to following aspects:

- i. Every waste generator shall prima-facie be responsible for collection, segregation of concrete, soil and others and storage of construction and demolition waste generated, as directed or notified by the concerned local authority in consonance with these rules.
- ii. The generator shall ensure that other waste (such as solid waste) does not get mixed with this waste and is stored and disposed separately.

- iii. Waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month shall segregate the waste into different streams such as concrete, soil, steel, wood and plastics, bricks and mortar and shall submit waste management plan and get appropriate approvals from the local authority before starting construction or demolition or remodeling work and keep the concerned authorities informed regarding the relevant activities from the planning stage to the implementation stage and this should be on project to project basis.
- iv. Every waste generator shall keep the construction and demolition waste within the premise or get the waste deposited at collection centre so made by the local body or handover it to the authorised processing facilities of construction and demolition waste; and ensure that there is no littering or deposition of construction and demolition waste so as to prevent obstruction to the traffic or the public or drains.
- v. Every waste generator shall pay relevant charges for collection, transportation, processing and disposal as notified by the concerned authorities; Waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month shall have to pay for the processing and disposal of construction and demolition waste generated by them, apart from the payment for storage, collection and transportation. The rate shall be fixed by the concerned local authority or any other authority designated by the State Government.
- vi. The reusable items such as bricks, doors, windows, cupboards, kitchen & bathroom fittings, other fittings, wooden items, glass, wall panels, roof slabs, other structural elements, etc. may be removed first without damaging these items and be stored separately and supplied to re-users/ second hand markets.
- vii. The recyclable items like electrical wires, metals, glass, plastics, paper boards, gypsum boards, etc. be collected separately and supplied to re-melters.
- viii. Concrete debris be kept separately and be processed/ supplied to the processing plant without mixing with masonry, soil and other debris.
- ix. MSW, toxic waste, electronic waste, hazardous waste etc. are not to be mixed with the C&D waste and are to be disposed off separately in a safe manner as prescribed in Solid Waste Management Rules, 2016.
- x. C&D waste is to be segregated in different streams such as concrete, soil, steel, wood, plastic, bricks & mortar, paper (eg:paper sack cement bags), electrical items, metallic items and other streams stated above for supply to second raw materials market/ re-melters/re-users/ processors.
- xi. Separate storage area to be earmarked for segregation & storage of construction waste

- xii. The C&D waste generated at the site is to be evacuated promptly to avoid mix up and spilling over to neighbouring areas
- xiii. C&D waste generators shall identify the nearest collection centre notified by LSGI and transport the C&D waste to the facility.
- xiv. Safety of equipment and manpower is to be ensured.
- xv. The C&D waste generation site shall not allow littering of debris or create any type of pollution as specified in CPCB guidelines
- xvi. Rules and regulations of local agencies regarding permissions required and other aspects be followed.
- xvii. Details of C&D waste generated and its disposal/ re-use/ processing, etc. as may be reported to the local authority as may be required.
- xviii. strictly adhere to the Standard Operating Procedures of CPCB and KSPCB in handling and storage of C&D waste
- xix. Bulk generators shall enter into an agreement with authorized C&D waste management facility operators for the removal of the waste and shall strictly abide by the protocol for storage, collection, transportation and processing of C&D waste as per the directions and guidelines of PCB
- xx. shall have appropriate pollution control measures as specified by Central Pollution Control Board/KSPCB
- xxi. ensure that C&D waste is handed over only to authorized C&D managing facilities and not to any other agency/ person.
- xxii. pay Tipping fee as approved by the concerned authority
- xxiii. inform the LSGI, if the C&D waste is not regularly picked up by the authorised agencies
- xxiv. shall maintain proper records/manifests regarding quantum of waste generated, quantity transferred to authorised agencies

**e. C&D WASTE MANAGEMENT FACILITY OWNERS**

C&D Waste Management facility owners/operators shall:

- i. collect, transport, store and process the C&D waste as per the prevailing Standard Operating Procedure (SOP) and based on the agreement with the bulk generators

without fail.

- ii. collect, transport, store, process the C&D waste from collection centres notified by LSGIs as per the SOP
- iii. levy Tipping fee only as per the LSGI recommendations.
- iv. obtain statutory clearance/s (and renew it correctly on expiry) as per prevailing rules and provisions of these guidelines
- v. maintain the C&D waste storage and processing facilities in an environment friendly manner without littering/ spill over of C&D waste material
- vi. own/ rent and maintain enough vehicles and logistic equipments in good condition for transportation of C&D wastes. Ensure that the crew carry proper manifests/documents when waste is transported.
- vii. ensure that the transport crew have proper uniforms and Personal Protective Equipments (PPEs) while in duty
- viii. ensure that the C&D waste is not transferred to other vehicles/dumped anywhere during transport
- ix. ensure that no disturbance to public occurs during transport
- x. treat all wastes generated as a part of processing
- xi. maintain all records/manifests related to clients, quantity collected, transported, processed, product obtained and sold, waste generated and treated etc
- xii. maintain on its website real time information about availability of produce of C&D waste and downstream products as well as their quality report and price along with the system for placing online order and payment
- xiii. inform the LSGI in case the generators fails to provide the C&D waste to the facility regularly

**f. SUCHITWA MISSION**

Suchitwa Mission shall:

- i. provide technical support and issue guidelines regarding C&D waste management in the State
- ii. monitor and supervise the implementation of these guidelines

- iii.** empanel C&D waste management operators/service providers in the sector
- iv.** convene the district level committees
- v.** facilitate setting up of C&D waste management facilities
- vi.** ensure that adequate C&D waste collection points are arranged by the LSGs
- vii.** channelise resources and facilitate setting up of C&D processing facilities by public sector institutions/local governments
- viii.** undertake education and capacity building activities for the demolition contractors as well as builders to adopt modern technologies/ techniques for de-construction of structures and maximize recovery of reusable items than demolition
- ix.** guide and facilitate the C&D waste processors for utilization of produce & downstream products in various construction projects



## Annexure I

## Format of C&amp;D Waste Transportation Manifest

|    |  |   |
|----|--|---|
| 1  | Sender's name and address<br>(including Phone No. and email)   |   |
| 2  | Manifest Document No.  |   |
| 3  | Transporter's name and address:<br>(including Phone No. and email)   |   |
| 4  | Type of vehicle  | (Truck/Tempo/Tractor/others please specify)   |
| 5  | Vehicle registration No.   |   |
| 6  | Collection Centre/Processing facility/Sanitary Land Fill name and address<br>(including Phone No. and email) |   |
| 7  | Waste description (predominant type of waste)  |   |
| 8  | Total quantity   | .....m3 or MT   |
| 9  | Purpose of transportation  | To collection centre/processing plant/recycling/scientific landfilling/others please specify                                |
| 10 | Sender's Certificate   | I hereby declare that the contents of the consignment are fully and accurately described above with proper shipping details |
|    | Date: _____ Name and designation: _____ Signature: _____   |   |
| 11 | Transporter acknowledgement of receipt of Wastes:  | I hereby declare that the contents of the consignment described above has been received for transportation and are          |

|           |   |   |
|-----------|---|---|
|           |   | <p>properly covered and are in all respects in proper conditions for transport by road according to applicable government regulations.</p>    |
|           | <p>Date: _____ Name and designation: _____ Signature: _____</p> |   |
| <p>12</p> | <p>Receiver's certification for receipt of C&amp;D waste</p>    | <p>I hereby declare that the contents and quantity of waste as described above has been received for temporary storage/treatment/disposal</p> |
|           | <p>Date: _____ Name and designation: _____ Signature: _____</p> |   |

## Annexure II

### Application format for the service provider for obtaining approval from LSG for setting up C&D waste collection centre

1. Consent to establish obtained from KSPCB: Yes / No
  
2. Basic Information
  - a. Name& address of Applicant/Company:
  
  - b. Contact number :
  
  - c. Email address :
  
  - d. Type of ownership :
  
3. Land details
  - a. Survey No :
  
  - b. Ownership : Own land/ Leased land
  
  - c. If leased, copy of lease agreement : Attached/ Not attached
  
  - d. Plot area : .....(cents)
  
  - e. Width of approach road : .....(metres)
  
  - f. Distance of the plot boundary from nearest
    - i. Building: .....metres
  
    - ii. Water body : .....metres

**Declaration**

I hereby declare that all the statements made in and all documents submitted along with this applications are true.

Place:

Name & Signature

Date:

### Annexure III

#### Application format for the service provider for obtaining approval from LSG for carrying out C&D waste collection/transportation operations

##### A. Basic Information

- a. Name & address of Applicant/Company:
- b. Contact number :
- c. Email address :
- d. Type of ownership :

##### B. Collection/transportation capacity details

- a. Total C&D waste collection capacity : .....(Tons/day)
- b. Vehicle details
  - i. Number of trucks proposed to be used for collecting C&D waste:
  - ii. Number of trucks which are of closed type:
  - iii. Total capacity in tons of vehicles:
  - iv. Vehicle List: Specify number and capacity in tons of each
- c. Details of equipments/ machineries:
- d. Staff strength of waste collection crew:

##### C. Details of pollution control measures and safety measures proposed to be provided:

- i. Pollution control measures-
- ii. Safety measures-

**Declaration**

I hereby declare that all the statements made in and all documents submitted along with this application are true.

Place:

Name & Signature

Date:

## Annexure IV

### Application format for the C&D waste non-bulk generator for obtaining approval from LSG before commencing construction or demolition activities

#### A. Basic Information

- a. Name & address of Applicant:
- b. Contact number :
- c. Email address:

#### B. C&D waste management details

- a. Type of activity- New construction/Repair/Demolition
- b. Area of proposed demolition/construction structure-
- c. Proposed C&D waste handing over arrangement:
  - i. Agency name (copy of agreement with the C&D collecting agency)  
or
  - ii. Collection center name (if handing over of C&D waste done through LSG arrangements or by the generator themselves-

#### Declaration

I hereby declare that all the statements made in and all documents submitted along with this application are true. I shall abide by all rules and regulations pertaining to C&D waste management issued by the State and Central Government.

Place:

Name & Signature

Date:

## Annexure V

### Format of Waste Management Plan to be submitted by C&D bulk waste generators to LSGI

#### A. Basic Information

- a. Name & address of Applicant:
- b. Contact number :
- c. Email address :

#### B. C&D waste generation details

- a. Type of activity- New construction/Repair/Demolition
- b. Area of proposed demolition/construction-
- c. Approximate quantity of C&D waste generation-
- d. Segregation arrangements for C&D waste-

#### C. Details of pollution control measures proposed to be provided:

- a. Details of air pollution control measures-
  - i. details of covering of site boundaries-
  - ii. details of water sprinkling system-
- b. Details of Noise pollution control measures-
- c. Other pollution control measures-

#### Declaration

I hereby declare that all the statements made in and all documents submitted along with this applications are true and correct to the best of my knowledge & belief. I shall abide by all rules and regulations pertaining to C&D waste management issued by the State and Central



Government.

Place:

Name & Signature

Date:

## Annexure VI



No. PCB/HO/SEE-3/TECH/139/2022

Date: 04/04/2022

**SOP- Siting requirements and pollution control measures in  
construction & demolition waste processing plants**

1. "Construction and demolition waste" means the waste comprising of building materials, debris and rubble resulting from construction, re-modeling, repair and demolition of any civil structure. Waste generated during construction & maintenance of roads also comes under this category.
2. "Demolition" means breaking down or tearing down buildings and other structures either manually or using mechanical force (by various equipment) or by implosion using explosives.
3. The major components of construction & demolition waste are concrete, brick masonry, steel, wood, stone (marble/granite etc), soil/sand/gravel.
4. Processing of construction waste is aimed at segregation/conversion of the construction & demolition waste for reuse, recycling and/or transformation into new products.
5. The quantum of construction waste generated as per CPCB Guidelines are as follows:
  - a. Range 40-60 kg per sq.m of new construction,
  - b. Range 40-50 kg per sq.m of building repair,
  - c. Range 300-500 kg per sq.m for demolition of buildings.
6. Construction & demolition waste is approximately 10% of the municipal solid waste.

1

7. Demolition of buildings can be done either by manual methods (using excavators, bulldozers, sledge hammers, jack hammer, drillers etc) or by engineering methods (wrecking

ball, pusher arm, concrete saw, implosion etc).

8. The contractor doing the demolition does the segregation in the site itself. Materials that can be recycled are collected by the scrap dealers. The concrete waste shall be dispatched to the collection centres or transported directly to the processing centres.

Pollution control measure to be provided in construction sites

The following facilities shall be provided in the construction/demolition sites:

1. Construction & demolition waste need to be segregated into concrete, soil, steel, wood, plastic, brick & mortar, paper (eg:paper sack cement bags), glass, ceramic, electrical items and metallic items.
2. Separate storage area need to be earmarked in the construction site for segregation & storage of each type of construction/demolition waste.
3. Construction waste shall not mix with domestic waste.
4. Enclosure of the construction site using garden nets/GI sheets shall be done to prevent spreading of dust to the nearby areas.
5. Water storage facilities with adequate number of waste sprinklers shall be provided for containing the dust generated.
6. Only DG sets having acoustic enclosure shall be used in the site.
7. Facilities for treatment of sewage generated from the workers quarters shall be provided. Domestic solid waste generated from the workers quarters shall be segregated and bio-degradable solid waste shall be treated using bio-gas plant, compost etc.

A detailed construction waste management plan shall be submitted by the proponents of medium & large scale industries (incorporating the mode of segregation, storage, reuse, transportation & disposal of construction waste) along with the application for ICE of the Board.

## 2

### Collection Centres

1. Facilities required at collection centres include weighing facility, unloading area & storage area. The weight of the incoming & outgoing waste shall compulsorily be recorded at the centre.

2. The collection centres shall have the control measures mentioned below:
  - a. Enclosures with GI sheets shall be provided for the loading & unloading and storage areas.
  - b. Adequate water storage facility shall be provided.
  - c. Adequate number of water sprinklers shall be provided in the collection centres to mitigate the dust generated.
3. The collection centre shall have adequate land area to ensure that the facilities mentioned above can be provided comfortably.
4. The local bodies shall provide the details of collection centres in its jurisdiction to the Board.

#### Processing Centres

1. Construction & demolition (C & D) waste processing activity falls under orange category (as per CPCB guidelines). C & D waste processing facility shall inspect each waste load before unloading debris and shall accept only C & D Debris - no industrial waste shall be accepted at the C & D facility (as per CPCB guidelines). The primary step in the processing plant is the segregation of waste. The waste need to be segregated into concrete, soil, steel, wood, plastic, brick & mortar, paper (eg: paper sack cement bags), electrical items and metallic items. Only stationary processing facilities are permitted (mobile or semi-mobile are not permitted because of possibility of public resistance).
2. Such facilities are equipped for carrying out crushing, screening as well as purification to separate the contaminants. In the usual construction waste processing plant, concrete waste is fed into the hopper and then crushed in crusher (jaw or horizontal impact crusher) resulting in particles size

### 3

reduction from 400mm to less than 80mm. The under 80mm size particles are discharged into grizzly feeder (vibrating feeder) through conveyor and then into log washer (intensive washing in an inclined washer {sloped} using shaft and paddles) for removal of plastic/wood/silt/clay and then sorted in vibrating screens to generate particles in the size range 80mm – 20mm, 20mm – 8.5mm and < 8.5mm. The under 8.5mm particles are then sent to the cyclone separator to separate into two fractions of size 0.75mm – 3.75mm & 3.75 – 8.5mm. Processing methodology may vary from that mentioned above. However, the aim in all processing technology is to crush the concrete waste into uniform aggregates of specified size.

3. The resultant crushed aggregates can be used as follows:

80mm – 20mm : Road works

20mm – 8.5mm : Concreting other than for load bearing structures.

8.5mm – 3.75mm : As plaster sand

3.75mm – 0.75mm : Machine sand ( M sand).

Schedule II of the Construction and Demolition Waste Management Rules, 2016 may be followed if the products are used in the operation of sanitary land fill.

4. The processing or recycling site shall be away from habitation clusters, forest areas, water bodies, monuments, National Parks, Wetlands and places of important cultural, historical or religious interest.

5. There shall be no residence/public building/place of worship within 100m of the processing facility. Minimum setback of 10m shall be available on all sides.

6. Minimum area of at least 1 hectare is preferred for construction & demolition waste processing plant (because of its similarity to crusher units). However, considering the non availability of adequate land, a thumb rule of one acre per 100 tons/day may be taken as the minimum requirement. ie, for 200 tons/day plant, area of two acre is required and 75 tons/day plant area of 75 cents is required. However, in no case, the minimum area shall be less than 75 cents, however small the capacity is.

7. Usually, the capacity of the plant is specified in ton/hour. However, the land area may be fixed based on the construction waste processed per day.

#### 4

8. The control measures shall be as follows:

a. The entire plant (including the conveyors) shall be installed in building with side walls of brick/concrete of minimum thickness 23cm and with door opening for material handling only.

b. Minimum water storage facility of 10,000 litres per day shall be provided.

c. Adequate number of sprinklers & dust suppression system shall be provided.

d. Internal roads shall be concreted or paved.

e. Facilities for treatment of wash water including settling tank and sludge drying facilities for the sludge settled in the settling tank shall be provided.

f. Processing or recycling site shall be fenced or hedged and provided with proper gate to monitor incoming vehicles or other modes of transportation.

g. Storm water drains shall be provided. Adequate facilities to ensure that the storm water does not carry waste or waste water generated in the unit shall be provided.

h. Green belt with suitable species of trees/curtain plants shall be provided within and along the boundary of the premises.

9. Fire fighting/protection equipments may be provided in the site.

10. A buffer zone of no development shall be maintained around solid waste processing and disposal facility, exceeding 20 tonnes per day or 300 tonnes per project in a month of installed capacity (CPCB guidelines on environmental management of construction & demolition waste- March, 2017). This will be maintained within the total area of the solid waste processing and disposal facility. A vegetative boundary shall be made around Processing or Recycling plant or site to strengthen the buffer zone (see item 8.h).

11. The service providers shall submit along with the application for consent a comprehensive waste management plan covering segregation, storage, collection, reuse, recycling, transportation and disposal of construction and demolition waste generated within their jurisdiction. The consent

## 5

incorporates the authorization (Form II) as per the Construction and Demolition Waste Management Rules, 2016. The application for the consent of the Board shall be accompanied by the following details:

a. Average quantity (in tons per day) and composition of construction and demolition waste to be handled at the specific site.

b. Details of construction and demolition waste processing or recycling technology to be used.

c. Quantity of construction and demolition waste to be processed per day. Site clearance from Prescribed Authority.

d. Salient points of agreement between competent authority or local authority and operating agency (attach relevant document).

e. Expected amount of process rejects and plan for its disposal (e.g., sanitary landfill for solid

waste).

f. Measures to be taken for prevention and control of environmental pollution. Investment on project and expected returns.

g. Measures to be taken for safety of workers working in the processing or recycling plant.

h. Any preventive plan for accident during the collection, transportation and treatment including processing and recycling should be informed to the Competent Authority(Local Authority) or Prescribed Authority

12. The waste received, the waste processed, the products and the rejects shall be correctly quantified. Weigh bridge facilities shall be provided in the processing site. The unit shall submit annual report to the Board in the prescribed format.

#### Waste Transportation

1. The vehicle transporting construction waste shall be fully covered to prevent spreading of dust.

2. The vehicles shall be GPS tagged.

3. Regular checking and maintenance of vehicles should be ensured.

#### 6

4. For long distance, transportation routes of C & D wastes to be selected after discussion with local authorities (CPCB guidelines on environmental management of construction & demolition waste- March, 2017).

-sd-

04.04.2022

CHAIRMAN

Forwarded by order

ALEXANDER  
GEORGE

Senior Environmental Engineer-3

Digitally signed by ALEXANDER  
GEORGE  
Date: 2022.04.04 13:37:36 +05'30'

**Guidelines for Remediation of Legacy Waste Dumpsites  
Through Bio Remediation - 2022**





**GOVERNMENT OF KERALA**

**Abstract**

Local Self Government Department - Guidelines for Remediation of Legacy Waste Dumpsites through Bio Remediation - orders issued.

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**DEPARTMENT**

G.O.(Rt)No.2629/2022/LSGD Dated,Thiruvananthapuram, 29-10-2022

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Read 1 Letter No. 2683/C2/2022/SM dated 16.09.2022 from Executive Director Suchitwa Mission.

**ORDER**

As per the letter read above, Executive Director, Suchitwa Mission had submitted draft guidelines for implementation of project for remediation of Legacy Waste Dumpsites through Bio Remediation.

2) Government have examined the matter in detail and are pleased to approve the guidelines enclosed herewith for implementation of project for reclamation of legacy waste dumpsites through bio remediation.

(By order of the Governor)  
SHIBI ABRAHAM  
DEPUTY SECRETARY

To:

Principal Director Local Self Government Department  
Director Local Self Government(Urban) Department  
Director, Local Self Government (Rural) Department  
Executive Director, Suchitwa Mission  
Principal Accountant General (A&E/Audit-I/Audit-II)Kerala,  
Thiruvananthapuram.  
Executive Director, Information Kerala Mission.  
The Information Officer (Web & New Media ) I&PRD  
Stock File / Office Copy

Forwarded /By order

Signed by Prasanth C

Date: 29-10-2022 14:53:04

Section Officer

**Copy to:- PS to Minister LSGD**

**PA to ACS LSGD**

**CA to SS LSGD**

**ബയോമൈഡിയേഷൻ വഴി തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങളിലെ ലെഗസി മാലിന്യ നിക്ഷേപ സൈറ്റുകൾ/ഭൂമികൾ വീണ്ടെടുക്കുന്നതിലേക്കുള്ള പദ്ധതികൾ നടപ്പിലാക്കുന്നതിനുള്ള മാർഗ്ഗനിർദ്ദേശങ്ങൾ**

ഖരമാലിന്യ സംസ്കരണ ചട്ടങ്ങൾ 2016-ലെ വ്യവസ്ഥകൾ അനുസരിച്ച് കേന്ദ്ര മലിനീകരണ നിയന്ത്രണ ബോർഡ് പുറപ്പെടുവിച്ച മാർഗ്ഗനിർദ്ദേശങ്ങളുടെ അടിസ്ഥാനത്തിൽ ലെഗസി മാലിന്യങ്ങൾ നിർമ്മാർജ്ജനം ചെയ്യുന്നതിനും അത്തരം ഭൂമി വീണ്ടെടുക്കുന്നതിനും തദ്ദേശ സ്ഥാപനങ്ങളെ ചുമതലപ്പെടുത്തിയിട്ടുണ്ട്. ടി മാനദണ്ഡങ്ങൾ പ്രകാരം നിർമ്മാർജ്ജനം ചെയ്യേണ്ട മാലിന്യത്തിന്റെ സ്വഭാവവും അളവും വിലയിരുത്തൽ, ലെഗസി മാലിന്യ നിക്ഷേപങ്ങൾ ഇറക്കുന്നതിനുള്ള ഉത്ഖനന പ്രവർത്തനങ്ങൾ, മാലിന്യം തരംതിരിക്കുന്നതിനായി സ്കീനിംഗും സോർട്ടിംഗും, വീണ്ടെടുക്കപ്പെട്ട വസ്തുക്കളുടെ പുനരുപയോഗം, വിൽപ്പന/വിപണനം, തിരസ്കൃത വസ്തുക്കളുടെ ശാസ്ത്രീയ നിർമ്മാർജ്ജനം എന്നിങ്ങനെ വിവിധ പ്രവർത്തനങ്ങൾ ആയതിൽ ഉൾപ്പെടുന്നു. കൂടാതെ ഇത്തരം സൈറ്റുകൾ/ഭൂമികൾ വീണ്ടെടുക്കേണ്ടതിന്റെ ആവശ്യകത 17.07.2019 ലെ OA 519/2019-ലെ ഉത്തരവിൽ ബഹു ദേശീയ ഹരിത ട്രൈബ്യൂണൽ നിർദ്ദേശിച്ചിട്ടുണ്ട് ഇതിനെത്തുടർന്ന്, പ്രവർത്തനങ്ങൾ വേഗത്തിലാക്കുന്നതിനായി 22.03.2020 ലെ സ.ഉ (സാധാ) നം 702/2020/തസ്വഭവ പ്രകാരം ബയോമൈഡിയേഷൻ വഴി ലെഗസി മാലിന്യ നിക്ഷേപ ഭൂമികൾ വീണ്ടെടുക്കുന്നതിന് വിവിധ സ്റ്റേക്ക് ഹോൾഡർമാരുടെ ഉത്തരവാദിത്തം ഉൾപ്പെടെയുള്ള നിർവ്വഹണ സ്ട്രാറ്റജി അംഗീകരിച്ച് ഉത്തരവായിരുന്നു. എന്നാൽ, നാളിതുവരെ ഇത്തരം പദ്ധതികളുടെ നിർവ്വഹണത്തിൽ ബന്ധപ്പെട്ട തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങൾ പുരോഗതി കൈവരിച്ചിട്ടില്ലാത്തതാണ്. ലെഗസി മാലിന്യ നിർമ്മാർജ്ജന പദ്ധതികൾക്ക് പ്രോജക്ടിന്റെ അംഗീകാരം മുതൽ നടപ്പിലാക്കുന്ന രീതി (വീണ്ടെടുത്ത വസ്തുക്കളുടെ വിൽപ്പനയും സംസ്കരണവും ഉൾപ്പെടെ) വരെയുള്ള നടപടിക്രമങ്ങളിൽ വ്യക്തതയില്ലാത്തതാണ് ഒരു പ്രധാന കാരണമായി കണക്കാക്കുന്നത്. ഇത്തരം പദ്ധതികൾ പൊതു നിർമ്മാണ/സിവിൽ പ്രവൃത്തികൾക്ക് സമാനമല്ലാത്തതിനാലും, നിലവിലുള്ള ഒരു ലെഗസി ഡംപ്സൈറ്റിൽ നിന്ന് വീണ്ടെടുക്കാൻ കഴിയുന്ന വസ്തുക്കളുടെ സ്വഭാവം, ഗുണമേന്മ, അളവ് എന്നിവ അത്തരം ഡംപ്സൈറ്റുകൾ ഇറക്കാതെ കൃത്യമായി മുൻകൂട്ടി നിർണ്ണയിക്കാൻ കഴിയാത്തതിനാലും, മറ്റ് പൊതുമാമത്ത് പ്രവർത്തികൾ പോലെ ഇത്തരം പ്രവൃത്തികൾക്ക് എസ്റ്റിമേറ്റ് തയ്യാറാക്കുന്നത് പ്രായോഗികമല്ല. ഈ പ്രശ്നങ്ങൾ പരിഹരിക്കുന്നതിനായി, സ്വച്ഛ് ഭാരത് മിഷൻ (അർബൻ)-നും സെൻട്രൽ പബ്ലിക് ഹെൽത്ത് & എൻവയോൺമെന്റൽ എഞ്ചിനീയറിംഗ് ഓർഗനൈസേഷനും (CPHEEO) ചേർന്ന് "അഡ്വൈസറി ഓൺ ലാൻഡ്ഫില്ല റീക്ലമേഷൻ (Advisory on Landfill Reclamation)" പുറപ്പെടുവിച്ചിട്ടുള്ളതാണ്. ആയതിലെ അനുയോജ്യമായ വ്യവസ്ഥകൾ കേരളത്തിൽ ഇത്തരം പദ്ധതികൾ നടപ്പിലാക്കുന്നതിന് സ്വീകരിക്കാവുന്നതാണ്. മേൽ സാഹചര്യത്തിൽ, സർക്കാർ ഇക്കാര്യം വിശദമായി പരിശോധിക്കുകയും തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങൾ മുഖേന ലെഗസി മാലിന്യ നിർമ്മാർജ്ജന പദ്ധതികൾ നടപ്പിലാക്കുന്നതിന് ഇനിപ്പറയുന്ന മാർഗ്ഗനിർദ്ദേശങ്ങൾ പുറപ്പെടുവിക്കുന്നു.

**പാലിക്കേണ്ട മാനദണ്ഡങ്ങളും മാർഗ്ഗനിർദ്ദേശങ്ങളും**

- കേന്ദ്ര മലിനീകരണ നിയന്ത്രണ ബോർഡ് 2019-ൽ പുറത്തിറക്കിയ "ഗൈഡ്ലൈൻസ് ഫോർ ഡിസ്സോസൽ ഓഫ് ലെഗസി വേസ്റ്റ് (ഓൾഡ് മൂനിസിപ്പൽ സോളിഡ് വേസ്റ്റ്)"
- കേന്ദ്ര പാർപ്പിട-നഗരകാര്യ മന്ത്രാലയവും (MoHUA) സെൻട്രൽ പബ്ലിക് ഹെൽത്ത് & എൻവയോൺമെന്റൽ എഞ്ചിനീയറിംഗ് ഓർഗനൈസേഷനും (CPHEEO) ചേർന്ന് 2020 ൽ പ്രസിദ്ധീകരിച്ച "സ്വച്ഛ് ഭാരത് മിഷൻ (അർബൻ)-അഡ്വൈസറി ഓൺ ലാൻഡ്ഫില്ല റീക്ലമേഷൻ (SBM U - Advisory on Landfill Reclamation) "
- പ്രസ്തുത വിഷയവുമായി ബന്ധപ്പെട്ട് കാലാകാലങ്ങളിൽ കേരള സർക്കാർ പുറപ്പെടുവിക്കുന്ന മാർഗ്ഗനിർദ്ദേശങ്ങൾ

**തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങൾ മുഖേന ലെഗസി മാലിന്യ നിർമ്മാർജ്ജന പദ്ധതികൾ നടപ്പിലാക്കുന്നതിനുള്ള മാതൃകകൾ**

- 100 % ഔട്ട്സോഴ്സ് ചെയ്ത മോഡൽ (MoHUA-യും CPHEEO-യും പ്രസിദ്ധീകരിച്ച "സ്വച്ഛ് ഭാരത് മിഷൻ (അർബൻ)-അഡ്വൈസറി ഓൺ ലാൻഡ്ഫില്ല റീക്ലമേഷൻ" പ്രകാരം)

**ലെഗസി മാലിന്യ നിർമ്മാർജ്ജന പദ്ധതികളുടെ നിർവ്വഹണ ഉദ്യോഗസ്ഥൻ**

- ലെഗസി മാലിന്യ നിർമ്മാർജ്ജന പദ്ധതികളുടെ നിർവ്വഹണ ഉദ്യോഗസ്ഥൻ തദ്ദേശ സ്വയംഭരണ സ്ഥാപനത്തിന്റെ എഞ്ചിനീയർ ആയിരിക്കും

**നിർമ്മാർജ്ജനം ചെയ്യേണ്ട ലെഗസി മാലിന്യ നിക്ഷേപങ്ങളുടെ അളവ് തിട്ടപ്പെടുത്തൽ**

- പൊതുവായി, നിർമ്മാർജ്ജനം ചെയ്യേണ്ട ലെഗസി മാലിന്യത്തിന്റെ അളവ്(ക്യൂബിക് മീറ്ററിൽ) ടോട്ടൽ സ്റ്റേഷൻ സർവ്വെയിലൂടെ കണ്ടെത്താവുന്നതാണ്. എന്നാൽ ടോട്ടൽ സ്റ്റേഷൻ സർവ്വേ സാധ്യമല്ലാത്ത സാഹചര്യത്തിൽ ഒരു ലക്ഷം ക്യൂബിക് മീറ്റർ വ്യാപ്തിയിൽ കൂടുതലുള്ള വലിയ ഡംപ്സൈറ്റുകളുടെ കാര്യത്തിൽ ഡ്രോൺ സർവ്വേ രീതി സ്വീകരിക്കാവുന്നതാണ്.
- ആവശ്യമുള്ള പക്ഷം, പുറമെയുള്ള സർവ്വേ ഏജൻസികളെ നിശ്ചിത നടപടിക്രമങ്ങൾ പാലിച്ച് ഇതിനായി ഏർപ്പെടുത്താവുന്നതും, അതിനുള്ള ചെലവ് ലഭ്യമായ ഫണ്ടിൽ നിന്ന് തദ്ദേശ സ്വയംഭരണ സ്ഥാപനം വഹിക്കേണ്ടതുമാണ്.
- സൈറ്റിന്റെ കോണ്ടൂർ മാപ്പ് തയ്യാറാക്കേണ്ടതും ആയത് തദ്ദേശ സ്വയംഭരണ സ്ഥാപന എഞ്ചിനീയർ പരിശോധിച്ച് അംഗീകരിക്കേണ്ടതുമാണ്.

**എസ്റ്റിമേറ്റ് തയ്യാറാക്കലും പദ്ധതി രൂപീകരണവും**

- സൈറ്റിന്റെ നിലവിലെ അവസ്ഥ, മാലിന്യത്തിന്റെ സ്വഭാവം/തരം, മാലിന്യ നിക്ഷേപത്തിന്റെ കാലയളവ്, മറ്റ് അടിസ്ഥാന വിശദാംശങ്ങൾ എന്നിവയെക്കുറിച്ചുള്ള വിശദമായ റിപ്പോർട്ട് അനുബന്ധം- I ൽ നൽകിയിരിക്കുന്ന പ്രൊഫോർമയിൽ തയ്യാറാക്കേണ്ടതാണ്
- അനുബന്ധം-II ൽ നൽകിയിരിക്കുന്ന സ്പെസിഫിക്കേഷനും ഡാറ്റയും അനുസരിച്ച് ബയോമൈനിംഗ് മുഖേന പ്രവൃത്തി നടപ്പിലാക്കുന്നതിന് എസ്റ്റിമേറ്റ് തയ്യാറാക്കേണ്ടതാണ്.
- പ്രൊപ്പോസൽ തയ്യാറാക്കുന്നതിന്റെ ഭാഗമായി പ്രസ്തുത പദ്ധതി നിർവ്വഹണം നടത്തുന്നതിനുള്ള എല്ലാത്തരം ചെലവുകളും പരിഗണിക്കേണ്ടതാണ്.
- വാർഷിക പദ്ധതിയുടെ ഭാഗമായി പ്രോജക്ട് ഏറ്റെടുക്കേണ്ടതും ലഭ്യമായ സ്രോതസ്സുകളിൽ നിന്നും ഫണ്ട് വകയിരുത്തേണ്ടതുമാണ്.

**സാങ്കേതിക അനുമതി**

നിലവിലുള്ള സാമ്പത്തിക അധികാരങ്ങൾ അനുസരിച്ച് തദ്ദേശ സ്വയംഭരണ വകുപ്പ്(ലോക്കൽ ഇൻഫ്രാസ്ട്രക്ചർ & എഞ്ചിനീയറിംഗ് വിങ്) ലെ ബന്ധപ്പെട്ട എഞ്ചിനീയർ പ്രോജക്റ്റിന് സാങ്കേതിക അനുമതി നൽകുകയും മാനദണ്ഡങ്ങൾ പാലിക്കുന്നതിനായി ചീഫ് ടെക്നിക്കൽ എക്സിക്യൂട്ടീവ് ഓഫീസർ (ഫിനാൻസ് വിംഗ്) ആവശ്യമായ റിപ്പോർട്ടിംഗ് ഉറപ്പാക്കുകയും ചെയ്യേണ്ടതാണ്.

തദ്ദേശ സ്വയംഭരണ സ്ഥാപനങ്ങൾ ലെഗസി മാലിന്യ നിക്ഷേപ സൈറ്റുകൾ/ഭൂമികൾ വീണ്ടെക്കുന്നതിനുള്ള പദ്ധതി നിർവ്വഹണം നടത്തുന്നതിനുള്ള നടപടി ക്രമങ്ങൾ

**ടെൻഡറിംഗ്**

- ലെഗസി മാലിന്യ നിക്ഷേപ സൈറ്റുകൾ വീണ്ടെടുക്കുന്നതിനുള്ള പ്രവൃത്തിയുടെ വിശദമായ സ്കോപ്പ് ഓഫ് വർക്ക് നിബന്ധനകളും വ്യവസ്ഥകളും മുതലായവ വ്യക്തമായി പരാമർശിക്കുന്ന 'ടു കവർ ബിഡ്ഡ് താല്പര്യപത്രം'(Request for Proposal - Two Cover Bid) തയ്യാറാക്കേണ്ടതും ആയത് നടപടിക്രമങ്ങൾ പാലിച്ച് പ്രസിദ്ധീകരിക്കുകയും ചെയ്യേണ്ടതാണ്.
- കേന്ദ്ര പാർപ്പിട-നഗരകാര്യ മന്ത്രാലയവും (MoHUA) സെൻട്രൽ പബ്ലിക് ഹെൽത്ത് & എൻവയോൺമെന്റൽ എഞ്ചിനീയറിംഗ് ഓർഗനൈസേഷനും (CPHEEO) ചേർന്ന് പ്രസിദ്ധീകരിച്ച "സ്വച്ഛ് ഭാരത് മിഷൻ (അർബൻ)-അഡ്വൈസറി ഓൺ ലാൻഡ്ഫിൽ റിക്ലമേഷൻ" ൽ നൽകിയിരിക്കുന്ന മാർഗ്ഗനിർദ്ദേശങ്ങളെ

അടിസ്ഥാനമാക്കി RFP-യിലെ വ്യവസ്ഥകൾ/യോഗ്യതാ മാനദണ്ഡങ്ങൾ നിശ്ചയിക്കാവുന്നതാണ്

- കേന്ദ്ര മലിനീകരണ നിയന്ത്രണ ബോർഡ് പുറപ്പെടുവിച്ച "ഗൈഡ്ലൈൻസ് ഫോർ ഡിസ്പോസിംഗ് ഓഫ് ലെഗസി വേസ്റ്റ് (ഓൾഡ് മൂനിസിപ്പൽ സോളിഡ് വേസ്റ്റ്)" പ്രകാരം ലെഗസി മാലിന്യ നിക്ഷേപങ്ങൾ നിർമ്മാർജ്ജനം ചെയ്യേണ്ടതാണെന്ന നിബന്ധന പ്രവൃത്തിയുടെ 'സ്റ്റോപ്പ് ഓഫ് വർക്കിൽ' ഉൾപ്പെടുത്തുന്നുണ്ടെന്ന് ഉറപ്പ് വരുത്തേണ്ടതാണ്.
- ലഭ്യമാകുന്ന ടെക്നിക്കൽ ബിഡ്ഡുകൾ പരിശോധിച്ചു വിലയിരുത്തേണ്ടതും സാങ്കേതിക യോഗ്യത നേടുന്ന ബിഡ്ഡർമാരെ ബിഡ്/ടെൻഡർ അംഗീകാരത്തിന്റെ തുടർ ഘട്ടത്തിനായി ഷോർട്ട്ലിസ്റ്റ് ചെയ്യേണ്ടതുമാണ്. ടെക്നിക്കൽ ബിഡ്ഡുകളുടെ മൂല്യനിർണ്ണയം നടത്തുന്നതിനായി താഴെപ്പറയുന്ന അംഗങ്ങളെ ഉൾപ്പെടുത്തി തദ്ദേശ സ്വയംഭരണ സ്ഥാപന തലത്തിൽ സാങ്കേതിക സമിതി രൂപീകരിക്കേണ്ടതാണ്;
  - സെക്രട്ടറി
  - LSGD (LID & EW) എഞ്ചിനീയർ
  - ഹെൽത്ത് വിഭാഗം ഉദ്യോഗസ്ഥൻ (നഗര തദ്ദേശ സ്ഥാപനങ്ങളുടെ കാര്യത്തിൽ)
  - ജില്ലാ ശുചിത്വ മിഷനിൽ നിന്നുള്ള സാങ്കേതിക വിദഗ്ധൻ
  - ജില്ലാ മലിനീകരണ നിയന്ത്രണ ബോർഡിന്റെ പ്രതിനിധി
  - അക്കാദമിക് സ്ഥാപനങ്ങളിൽ നിന്നുള്ള മറ്റ് വിദഗ്ധർ
- തദ്ദേശ സ്വയംഭരണ സ്ഥാപന തലത്തിൽ സാങ്കേതികമായി ഷോർട്ട്ലിസ്റ്റ് ചെയ്ത ബിഡ്ഡർമാരുടെ ഫിനാൻഷ്യൽ ബിഡ്ഡുകൾ ഉറക്കേണ്ടതും നടപടിക്രമങ്ങളും മാനദണ്ഡങ്ങളും പാലിച്ച് അംഗീകരിക്കേണ്ടതുമാണ്.
- തിരഞ്ഞെടുത്ത കരാറുകാരന്/ഏജൻസിക്ക് ലെറ്റർ ഓഫ് അവാർഡ് ( L O A ) നൽകുകയും കരാറിൽ ഏർപ്പെടേണ്ടതുമാണ്.

നിർവ്വഹണം, മേൽനോട്ടം, ബിഡ്ഡുകൾ തയ്യാറാക്കൽ

- തദ്ദേശ സ്വയംഭരണ സ്ഥാപന തലത്തിൽ തദ്ദേശ സ്വയംഭരണ സ്ഥാപന എഞ്ചിനീയറും മാലിന്യ പരിപാലന പ്രവർത്തനങ്ങളുടെ നിരീക്ഷണ ചുമതലയുള്ള ഉദ്യോഗസ്ഥനും അടങ്ങുന്ന ഒരു മേൽനോട്ട സമിതി (Supervision Committee) രൂപീകരിക്കേണ്ടതാണ്
- R F P ഡോക്യുമെന്റിലും കരാറിലും ഉൾപ്പെടുത്തിയിട്ടുള്ള 'സ്റ്റോപ്പ് ഓഫ് വർക്ക്' കരാറുകാരൻ കൃത്യമായി പാലിക്കുന്നുണ്ടോ എന്ന് നിരീക്ഷിക്കുന്നതിനായി തദ്ദേശ സ്വയംഭരണ സ്ഥാപനം മേൽനോട്ട സമിതിയെ ചുമതലപ്പെടുത്തേണ്ടതാണ്.
- പ്രസ്തുത പ്രവൃത്തി 'സ്റ്റോപ്പ് ഓഫ് വർക്കിൽ' നിഷ്കർഷിക്കുന്ന പ്രകാരമാണോ നടപ്പിലാക്കുന്നതെന്ന് മേൽനോട്ട സമിതി കൃത്യമായും പരിശോധിക്കുകയും നിരീക്ഷിക്കുകയും ചെയ്യേണ്ടതാണ്.
- തദ്ദേശ സ്വയംഭരണ സ്ഥാപന എഞ്ചിനീയർ കരാറുകാരന് ഏജൻസിയ്ക്ക് സൈറ്റ് ഹാൻഡ് ഓവർ ചെയ്ത് നൽകേണ്ടതും പ്രവൃത്തി നടപ്പിലാക്കുന്നതിനുള്ള/ നിർവ്വഹിക്കുന്നതിനുള്ള പിന്തുണ നൽകുകയും ചെയ്യേണ്ടതാണ്
- മാലിന്യ പരിപാലന പ്രവർത്തനങ്ങൾ നിരീക്ഷിക്കുന്നതിന്റെ ചുമതലയുള്ള ഉദ്യോഗസ്ഥൻ പ്രസ്തുത പ്രവൃത്തിയിൽ ഉൾപ്പെടുന്ന മാലിന്യ പരിപാലനവുമായി ബന്ധപ്പെട്ട പ്രവർത്തനങ്ങളായ വിൻഡ്രോ ഫോർമേഷൻ, മാലിന്യം

തരംതിരിക്കൽ, മലിനീകരണ നിയന്ത്രണ മുൻകരുതലുകളും ആരോഗ്യപരമായ കാര്യങ്ങളും ഉറപ്പുവരുത്തൽ എന്നിവയ്ക്ക് മേൽനോട്ടം വഹിക്കേണ്ടതും കരാറുകാരന്/ഏജൻസിക്ക് മേൽനോട്ട സമിതി മുഖേന ആവശ്യമായ നിർദ്ദേശങ്ങൾ നൽകേണ്ടതുമാണ്.

- തദ്ദേശ സ്വയംഭരണ സ്ഥാപന എഞ്ചിനീയർ എംബുക്കിൽ 'ഇനിഷ്യൽ', 'ഇന്റർമീഡിയറ്റ്', 'ഫൈനൽ' ലെവലുകൾ എന്നിവ എടുത്ത് അളവുകൾ രേഖപ്പെടുത്തേണ്ടതും, തദ്ദേശ സ്വയംഭരണ വകുപ്പിന് ബാധകമായ അധികാരമനുസരിച്ച് ബന്ധപ്പെട്ട തദ്ദേശ സ്വയംഭരണ വകുപ്പ് (എൽ.ഐ.ഡി & ഇ.ഡബ്ല്യു) എഞ്ചിനീയർ ചെക്ക് മെഷർമെൻറ് നടത്തുകയും ചെയ്യേണ്ടതാണ്.
- കരാറിൽ വിശദമാക്കിയിട്ടുള്ള ജോലിയുടെ വിവിധ ഘട്ടങ്ങൾ പൂർത്തിയാക്കിയ ശേഷം കരാറുകാരൻ/ഏജൻസി ക്ലെയിം ചെയ്യുന്ന പ്രവൃത്തിയുടെ വർക്ക് ബില്ലുകൾ തദ്ദേശ സ്വയംഭരണ സ്ഥാപന എഞ്ചിനീയർ തയ്യാറാക്കേണ്ടതും തദ്ദേശ സ്വയംഭരണ സ്വയംഭരണ വകുപ്പിന് ബാധകമായ അധികാരമനുസരിച്ച് ബന്ധപ്പെട്ട തദ്ദേശ സ്വയംഭരണ വകുപ്പ് (എൽ.ഐ.ഡി & ഇ.ഡബ്ല്യു) എഞ്ചിനീയർ ചെക്ക് മെഷർമെൻറ് നടത്തുകയും ചെയ്യേണ്ടതാണ്.

• **GUIDELINES FOR IMPLEMENTATION OF PROJECTS FOR RECLAMATION OF LEGACY WASTE DUMPSITES THROUGH BIO REMEDIATION (BIO MINING AND MANAGEMENT OF RECOVERABLES AND REJECTS)**

As per the provisions of Solid Waste Management Rules 2016, local bodies are mandated to remediate legacy waste dumpsites and reclaim the land based on the guidelines issued by CPCB. Remediation of legacy dumpsites involves various activities such as assessment of the nature and quantity of waste to be remediated, excavation works to open the dumps, screening and sorting to segregate the waste fractions, reuse and sale/marketing of recovered materials, scientific disposal of rejects as per the norms. The remediation of dumpsites is further directed by Honorable NGT in its order on OA 519/2019 dated 17.07.2019. Subsequent to this, the Government of Kerala approved the Implementation Strategy for legacy waste remediation including demarcating the responsibility of various stakeholders for remediation of historical dumpsites through bio mining vide G.O (Rt) No.702/2020/LSGD dated 22.03.2020. However, the progress of implementation of such projects has not been satisfactory so far. One of the main reasons is that there is a lack of clarity in the procedures to be followed for legacy waste remediation projects right from the approval of the project to the mode of execution (including sale and disposal of recovered materials) by LSGIs since the nature of such projects is not similar to the general public construction/civil works. Also, the nature, quality and quantity of material that can be recovered from an existing legacy dumpsite cannot be accurately predetermined without opening up such dumpsites and hence it is not practical to prepare a workable estimate for the same like other public works . In order to tackle these issues, Swachh Bharat Mission(Urban) and CPHEEO have issued an “Advisory on Landfill reclamation”, and suitable provisions of this advisory can be adopted for the State of Kerala. In these circumstances, the Government has examined this matter in detail, and the following guidelines are issued for the implementation of projects for remediation of legacy dumpsites by Local Self Government Institutions.

**Standards, guidelines and advisories to be followed**

- "Guidelines for Disposal of Legacy Waste (Old Municipal Solid Waste)" issued by Central Pollution Control Board
- “SBM-U Advisory on Landfill Reclamation” published by MoHUA and

## CPHEEO

- Guidelines issued by Government of Kerala in this regard from time to time

### **Models for implementing legacy waste dumpsite remediation by LSGI's**

- 100% outsourced model (As per "SBM -U Advisory on Landfill Reclamation" published by MoHUA and CPHEEO)

### **Implementing officer for legacy waste dumpsite remediation projects**

The implementing officer for legacy waste remediation shall be the Engineer of the LSGI

### **Quantification of legacy waste to be remediated**

- The volume of legacy waste (in m<sup>3</sup>) to be remediated shall be generally assessed through Total Station Survey. If a total station survey is not feasible, a drone survey may be adopted for large dumpsites having a volume of more than 1 (One) Lakh m<sup>3</sup>.
- If required, external survey agencies may be engaged following laid down procedures and the cost for the same shall be met by LSGI from available funds.
- Contour mapping of the site shall be prepared and approved by the Engineer of the LSG

### **Project Cost Estimation and Formulation by LSGI**

- Detailed report regarding the site conditions, nature of dump, history of dumping and other basic details shall be prepared in the format given in **Annexure - I**
- The estimate for biomining shall be prepared as per the specification and data given in
  - **Annexure -II**
- The overall cost for the implementation of the project shall be considered as part of the proposal.
- Project shall be taken up as per annual projects and funds from available sources shall be ear marked

### **Technical Sanction**

- Technical sanction for the project shall be issued by the concerned Engineer in LSGD (LID & EW) as per the existing financial powers and necessary reporting to the Chief Technical Examiner (Finance Wing) may be ensured for compliance as per norms

### **Implementation steps for remediation of legacy waste dumpsites by LSGIs**

#### **Tendering**

- Request for Proposals (RFPs-Two cover bid) clearly mentioning the scope of work, terms and conditions for reclamation of legacy waste dump sites shall be prepared and published as per laid down procedures.
- Conditions/eligibility criteria in the RFP shall be fixed based on the guidelines given in “**SBM-U Advisory on Landfill Reclamation**” published by MoHUA and CPHEEO
- It shall be ensured to mention in the scope of work that remediation of legacy waste dumpsites shall be undertaken as per the “**Guidelines for Disposal of Legacy Waste (Old Municipal Solid Waste)**” issued by Central Pollution Control Board.
- The technical proposals received should be evaluated and technically qualified bidders shortlisted for further stage of bid approval. A Technical committee shall be formed at LSGI level for evaluation of the technical bids with the following members;
  - Secretary
  - LSGD (LID & EW) Engineer
  - Health Official (in the case of Urban local bodies)
  - Technical expert from District Suchitwa Mission
  - Representative from District Pollution Control Board
  - Other experts from academic institutions if any
- Financial bids of the technically shortlisted firms should be opened at LSGI level and approved as per procedures and norms
- Letter of Award (LoA) is to be issued to the selected contractor/agency and agreement executed.

### **Execution, Supervision and preparation of bills**

- LSGI shall constitute a supervision committee consisting of LSGI Engineer and the officer in charge of monitoring waste management activity
  - LSGI shall authorise the supervision committee to monitor that the contractor correctly follows the scope of work included in the RFP document and agreement.
- The supervision committee shall inspect and monitor that the work is being carried out as per the scope defined.
- LSGI Engineer shall hand over the site and provide support for execution of work at the site by the contractor/agency
- The officer in charge of monitoring waste management shall oversee the waste management related activities such as formation of windrows, segregation of waste into various streams, ensuring pollution control measures and health matters involved in the project and shall give direction to the contractor/agency through the supervision committee.



- LSGI Engineer shall measure, record quantities by taking initial, intermediate and final levels in M-book and Check measurements shall be done by the officials of LSGD (LID & EW) as per the powers vested with in the Local Self Government Department.
- LSGI Engineer shall prepare the work bills claimed by the contractor/agency after completing stages of work detailed in the agreement and check measurement shall be made by the officials of LSGD (LID & EW) as per the powers vested within Local Self Government Department.

അനുബന്ധം - I

**PROPOSAL FOR BIO – MINING / BIO REMEDIATION OF LEGACY WASTE DUMPSITE AT  
..... CORPORATION /MUNICIPALITY/ GRAMA PANCHAYAT**

**BASIC DETAILS OF DUMPSITE**

|   |   |  |
|---|---|--|
| Name of LSGI  | : |  |
| Name of location of legacy dumpsite                           | : |  |
| Extend of land (Acres)  | : |  |
| Survey No   | : |  |
| Land owned by   | : |  |
| Volume of waste (m3)  | : |  |
| Maximum depth below ground level (m)                          | : |  |
| Maximum height above ground level (m)                         | : |  |
| Approx. level of water table (m)                              | : |  |
| GPS location (Co-ordinates & link to google map)              | : |  |
| Period from which dumping is done (in Years)                  | : |  |
| Whether waste is still dumped at the site (Yes/No)            | : |  |
| Availability of water source for remediation process (Yes/No) | : |  |
| Availability of Electricity (Yes/No)                          | : |  |

**DETAILED REPORT**

- Introduction (Brief about the site including site photograph)
  
- Survey details (Methodology adopted, Details of level measurements and quantity calculation)
  
- Cost estimate
  - Abstract estimate
  
  - Detailed estimate
  
  - Data

**Signature**

**Designation of Engineer in charge**

**Name of LSGI**

അനുബന്ധം - II

**SPECIFICATION & OBSERVED DATA FOR RECLAMATION OF LEGACY DUMPSITE THROUGH BIO  
REMEDICATION (Bio mining, managing recoverable and rejects)**

Bio remediation (Bio mining, managing recoverable and rejects) by

- a. Excavating the existing mixed compacted garbage which underwent biological degradation in the land portion allocated and spraying with microbial inoculum for sanitising and stabilising the excavated mass, sieving them using Mechanical sieving machine or any other equipment,
  
- b. Control of mal odour using deodorizing agent and stabilizing the waste using Bio Culture for aerobic composting.
  
- c. Eco friendly and non-polluting process in order to reduce the impact of dumping site in the adjacent areas.
  
- d. Segregate the excavated garbage in the land portion earmarked, into as many kinds and categories as possible by mechanical means including the cost of any power or fuel consumption.
  
- e. Creation and maintenance of infrastructure, facilities and amenities for sieving, the excavated garbage, storing the segregated materials.
  
- f. Deployment of necessary manpower, materials, equipment, tools and creation of facilities for handling, separating, segregating and storing for the operation of the plant.
  
- g. Leveling the earth's surface by bull-dosser or any other earth moving equipment

h. Providing security arrangements for the plan project site, machineries, equipments etc.

DSR 2018 Cost Index- 1.00 (For reference)

| Code | Description of items                        | Unit | Quantity | Rate    | Amount          |
|------|---|------|----------|---------|-----------------|
|      | <i>Details of cost for 50 m3/day</i>        |      |          |         |                 |
|      | <b>LABOUR</b>                               |      |          |         |                 |
| 115  | Coolie                                      | day  | 20.00    | 558.00  | 11160.00        |
|      | <b>MACHINERY</b>                            |      |          |         |                 |
| MR   | Double stage screener with conveyor         | day  | 1.000    | 7200.00 | 7200.00         |
| MR   | Magnetic separator- capacity 5HP            | day  | 1.000    | 600.00  | 600.00          |
| MR   | Dust screening remover                      | day  | 1.000    | 900.00  | 900.00          |
| MR   | Bailing press                               | day  | 1.000    | 450.00  | 450.00          |
| 17   | Hire and running charges of tipper 5 m3     | day  | 2.000    | 1700.00 | 3400.00         |
| 20   | Hydraulic excavator 3D with driver and fuel | day  | 1.000    | 7000.00 | 7000.00         |
| 18   | Hire and running charges of loader          | day  | 1.000    | 5000.00 | 5000.00         |
| 9999 | Deodorizer & Inoculum                       | L.S  | 124.860  | 2.00    | 249.72          |
|      | <b>Total</b>                                |      |          |         | <b>35959.72</b> |
|      | <b>Market Rate cost</b>                     |      |          |         | <b>9150.00</b>  |
|      | Add water charges 1% on MR                  |      |          |         | 91.50           |
|      | <b>Net Total ( A )</b>                      |      |          |         | <b>9241.50</b>  |
|      | Total excluding Market rate                 |      |          |         | 26809.72        |
|      | Add water charges 1% on this                |      |          |         | 268.10          |
|      | <b>Net Total (B)</b>                        |      |          |         | <b>27077.82</b> |
|      | <b>Total A + Cost index B</b>               |      |          |         | <b>36319.32</b> |
|      | Add CPOH 15%                                |      |          |         | 5447.90         |
|      | <b>Total for 50 m3</b>                      |      |          |         | <b>41767.22</b> |
|      | <b>Hence for 1 m3</b>                       |      |          |         | <b>835.34</b>   |

NB:- \*Rates shall be prepared based on the cost index applicable to each locality





**ജലാകത്ത് നിങ്ങൾ കാണാനാഗ്രഹിക്കുന്ന  
മാറ്റത്തിന്റെ തുടക്കം നിങ്ങളിൽ നിന്നാകട്ടെ**

**മഹാത്മാ ഗാന്ധി**



**SUCHITWA  
MISSION**  
LOCAL SELF GOVERNMENT DEPARTMENT KERALA

## **SUCHITWA MISSION**

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