

MINISTRY OF URBAN DEVELOPMENT
CENTRE OF EXCELLENCE IN URBAN DEVELOPMENT

in the area

SOLID WASTE AND WASTE WATER MANAGEMENT

MUNICIPAL SOLID WASTE (HANDLING & MANAGEMENT) BYE-LAW



CENTRE FOR ENVIRONMENT AND DEVELOPMENT

THIRUVANANTHAPURAM

OCTOBER 2011

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PREFACE

The Ministry of Urban Development (MoUD), Government of India, through its activities proposed under the Capacity Building Scheme for Urban Local Bodies (CBULB) established Centres of Excellence (CoE) in reputed institutions in the country to create the necessary knowledge base for improving municipal service delivery and management. The establishment of CoEs is an acknowledgement of the need for high quality Indian-context-specific research and creative interventions in the areas of governance, institution and capacity building, citizen-centric administration and resource and performance management. In establishing the CoEs, the MoUD expected that the CoEs would be able to find solutions to the many issues faced by Urban India. The basic objective of the CoEs is to foster cutting-edge and crosscutting research, capacity building and technical knowledge base in the area of urban development. The CoEs will address urban development issues at national, state and local levels and will provide support to state and local governments in:

The MoUD has approved a project to Centre for Environment and Development to set up a Centre of Excellence on 'Solid Waste and Waste Water Management'. The basic objective was to develop the capacity of the institution to support the Urban Local Bodies(ULB) in the country on solid waste and waste water management related activities. The CoEs will work with selected ULBs to develop strategies and framework to implement activities.

The CoE at CED which is concentrating on 'Solid Waste and Waste Water Management' has been focusing on three major aspects (i) Development of Strategy and Framework for Solid Waste and Waste Water Management in ULBs (ii) Capacity Building, Training and Awareness and (iii) Development of Knowledge Centre and Technical Support Unit on Solid Waste and Waste Water Management. CED is also working with Thiruvananthapuram City Corporation and Payyannur Municipality on these two sectors and trying to integrate the field experience to develop the strategy and framework.

The CoE team at CED has developed eight Resource Materials on SWM such as (1) Strategy and Framework for MSW Management (2) SWM Technology Manual (3) Operation and Maintenance Manual (4) Byelaw for ULBs on Solid Waste(Handling &Management) (5) Strategy and Framework for Wastewater Management (6) Course Material on Solid Waste Management (7) Course Material on Wastewater Management and (8) Capacity Building and Training Manual. These documents had already submitted to MoUD and also to ASCI for Peer Review and their comments has also been incorporated in this final document.

The solid waste management in the ULBs are mainly governed by the Municipal Solid Waste(Handling & Management)Rules,2000 of the Ministry of Environment and Forests, Government of India and supported by state governments Acts in some states like Kerala. As part of the activities of CoE, we critically studied these Rules and Acts and also held discussion with many legal experts. Based on this, we identified many gaps in the MSW Rules to deal with the situation in the ULBs. The Team analysed each clause in the Rule and arrived at a conclusion to prepare a Byelaw on MSW Management to supplement and support the efforts of ULBs to implement solid waste management in an effective manner. A Model Byelaw on Municipal Solid Waste Management was drafted. The ULBs may adopt these Byelaws with necessary changes as applicable considering the local situation.

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MUNICIPAL SOLID WASTE (HANDLING AND MANAGEMENT) BYE LAW

Municipality/ Municipal Corporation (Name)

Bye-laws framed under section _____ of the (Municipalities Act) (Year), for regulating all matters and things connected with the collection, removal, processing and disposal of solid waste.

(Approved by the ULB under Resolution No. _____ dated _____ and confirmed by the Government of (Name) under their Notification No. _____ of this _____ day of (Year)).

Introduction

In the modern era of urbanization the Urban Local Bodies are vested with umpteen numbers of responsibilities including providing a wholesome environment to its citizens. The 42nd amendment to the Constitution was brought in the year 1974 makes it the responsibility of the State Government to protect and improve the environment and to safeguard the forests and wildlife of the country. The State's responsibility with regard to environmental protection has been laid down under Article 48-A of our Constitution. Article 51 A(g) of the Constitution, under Fundamental Duties, makes it the fundamental duty of every citizen to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures. The State's responsibility with regard to raising the level of nutrition and the standard of living and to improve public health has been laid down under Article 47 of the Constitution which reads as follows: "The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties". Local self governments being constitutional bodies are required to perform these functions.

Pursuant to the Municipal Solid Wastes (Management and Handling) Rules, 2000, framed under the Environmental Protection Act, 1986 ULBs shall be primarily responsible for the solid waste management in their respective jurisdictions. There are separate rules for handling Bio-medical wastes and industrial hazardous wastes framed under the Environmental Protection Act, 1986. There are provisions in certain Acts such as Kerala Municipality Act 1994 for the processing and disposal of solid waste. According to Section 330 of this Act all rubbish and other solid waste generated in the municipal area is the property of the Municipality. Section 332 makes it obligatory for the ULBs to process the solid waste and section 331 provide for final disposal of the waste. By Section 326 it is the duty of the municipality to arrange for the removal of rubbish, solid wastes and filth. Section 327 embodies the duty of owners and occupiers for storage and deposit of rubbish and solid waste in receptacles. Section 334 of the Act provides the right to the municipality for the removal of solid waste, rubbish and solid waste accumulated on non-residential premises. It can be seen that the Act is not comprehensive to deal with many situations arising out of solid waste management.

The absence of comprehensive enactments on the national or state levels to deal with handling, processing and disposal of solid waste considering all aspects of waste management resulted in the preparation of this draft Bye law. The Bye law is to provide legal basis for planning of the collection, storage, transportation, processing and disposal of municipal waste for the ULBs; requiring ULB's within their boundaries to manage the waste ; resource recovery and recycling; imposing and collecting fees; establishing certain rights for the ULBs; granting powers to ULBs; authorizing the ULB to implement this Bye law through a City Sanitation Society ; providing remedies; prescribing penalties; and making repeals whenever needed.

By introducing these Byelaws, the ULB intends to penalize erring citizens as well as the erring staff. ULB intends to convey the importance of sanitation to all its citizens and it acknowledges the role of people and their participation in effective governance. Active Citizen Groups, NGOs & Resident's Associations can make valuable contribution in effective implementation of the Byelaws.

Preliminary

1. SHORT TITLE AND COMMENCEMENT

This Bye law may be called the (Name of ULB) Municipal Solid Waste (Handling and Management) Bye Law, 2010

It shall come into force in (Name of ULB) areas from the date of their publication in the official Gazette.

2. EXTEND

It extends to the whole of the Municipal areas including public places, private places, dwellings, trade and commercial centres. This Byelaw shall apply to every public place, private places, dwellings, trade and commercial centers, to every generator of Municipal Solid Waste and to every premise under the ownership or occupation of any person within the limits of (name of ULB)

3. DEFINITIONS

In this Byelaw, unless the context otherwise requires,--

(1) Agent / Agency

Means any person/entity appointed or authorized by the Municipality to act on its behalf, based on a mutual agreement between the Agent and the Municipality for discharge of duties or functions such as collection of waste, collection of charges/taxes/rates, segregation, treatment, disposal, etc

(2) Bio-degradable waste

Means the waste of plant and animal origin, of a bio-degradable nature (compostable), putriciable or putrefied e.g. kitchen waste, food , flower , leaf litter, garden waste, animal dung, fish/meat waste and dead animals

(3) Bio-medical wastes

Means any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biological materials

(4) Bio-methanation

Means a process, which involves the enzymatic decomposition of organic matter by microbial action to produce methane- rich biogas

(5) Bulky wastes

Shall refer to waste materials which cannot be appropriately placed in separate containers because of either its bulky size, shape or other physical attributes. These include large worn-out or broken household, commercial, and industrial items such as furniture, lamps, bookcases, filing cabinets, and other similar items

(6) Bulk generator

Means the owner, occupier or any other person representing owners and occupiers of any housing society / housing complexes, restaurants, hotels, markets, industrial estates and shopping complexes / malls and includes any government or public office building, or other users such as clubs, marriage halls, recreation/ entertainment complexes or any other source/premises that are specifically identified and notified by the Secretary of the concerned ULB to be so

(7) Bye law

Means a bye law made under the Municipal Act, by notification in the Official Gazette

(8) Compost

The product obtained by the controlled action of microbes/ earthworms on bio-degradable matter. Composting means a controlled process involving microbial decomposition of organic matter and includes vermi-composting also

(9) Construction and demolition waste (C & D waste)

Means non-hazardous waste from building materials, debris and rubble resulting from construction, remodeling, and repair and demolition operations

(10) Corporation

Means the (Name) Municipal Corporation and, where the context requires, its Agent(s), contractors

(11) Delivery

Means handing over of any category of solid waste to a Municipal worker or any other person appointed/ authorized or licensed by the ULB for taking delivery of such waste or depositing it in any vehicle provided by the ULB or by any other authorized or licensed vehicle provided by the ULB to do so

(12) Drain

Includes a .sewer, a house drain, a drain of any other description, a tunnel, a culvert, a ditch, a channel and any other device for carrying of sewage, offensive matter, polluted water, waste water, rain water or subsoil water

(13) E-waste

Means electronic appliances, parts and accessories thereof; and also which is not usable, has no reuse or not recyclable

(14) Energy

Means the energy used for processing and those generated by the processing or in the clearing thereof or in the removal of such matter there from

(15) Filth

Includes offensive matter and sewage

(16) Fuel

Means the energy consumed for the collection, transportation, processing and disposal of wastes or generated as a bye product of processing in the form of solid, liquid or gas

(17) Fuel charges

Fuel charges incurred for the collection, transportation, processing and disposal of waste

(18) Garbage

Means Biodegradable waste resulting from the handling, storage, sale, preparation, cooking, and serving of foods.

(19) Garden waste

Means waste from parks, gardens, or originating from the process of maintaining them, and includes grass clippings, weeds, woody material such as pruning, branches, twigs, wood chipping, dead leaves and tree trimmings, which cannot be accommodated in the daily collection system for bio-degradable waste

(20) Generator

Those who generate or cause to the generation of waste

(21) Hazardous waste

Means any waste that directly or indirectly causing danger or is likely to cause danger to human or animal health or environment, whether alone or when in contact with other wastes or substances and may initiate one or more of the following risks

- explosions or fire
- induce chemical reactions
- toxic to human beings and animals

It also includes bio-medical waste

(22) House gully

Means a passage or strip of land constructed, set apart or utilized for the purpose of serving as or carrying a drain or affording access to a latrine, urinal, cesspool or other receptacle for filth or other polluted matter, by ULB employees or other person employed in the cleaning thereof or in the removal of such matter there from

(23) Horticultural wastes

Means bulk waste from parks, gardens, traffic islands etc. and includes grass clippings, annual weeds and woody 'brown' carbon-rich material such as pruning, branches, twigs, wood chipping, straw or dead leaves and tree trimmings, which cannot be accommodated in the daily collection system for bio-degradable waste

(24) Landfill

Means a waste disposal site for the deposit of residual solid waste in a facility designed with protective measures against pollution of ground water, surface water and air fugitive dust, wind-blown litter, bad odour, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion

(25) Municipality

Means the (Name of Municipality) and, where the context requires, its Agent(s), contractors

(26) Municipal Solid Waste

Includes commercial, residential and other wastes generated in the Municipality area in either solid or semi-solid form excluding industrial hazardous waste, but including treated bio-medical waste

(27) Nuisance

Includes any act, omission, place or thing which comes or is likely to cause injury, danger, annoyance or offence to the sense of sight, smelling or hearing or which is or may be dangerous to life injurious to health or property

(28) Litter

Domestic or commercial solid/liquid waste thrown or deposited which by its shape, size, quantity, nature create or tends to create uncleanliness or a danger or nuisance to public health, safety or welfare and prevent the legitimate use of the place

(29) Littering

Means putting litter as prohibited by the byelaw in such manner and in locations that it falls, descends, blows, is washed, percolates or otherwise escapes or is likely to fall, descend blow, be washed, percolate or otherwise escape into or onto any public place. Or causing, permitting or allowing litter to fall, descend, blow, be washed, percolate or otherwise escape into or onto any public place

(30) Narrow gully

Means a passage, constructed, or utilized for the purpose of serving as or carrying a drain or affording access to the latrine, urinal, cesspool or other receptacle for filling with polluted matter or in the clearing thereof or in the removal of such matter there from

(31) Neighbour

Means a clearly defined locality, with reference to its physical layout, character or inhabitants

(32) Occupier

Includes any person or entity who for the time being is in occupation of, or otherwise using, any land or building or part thereof, for any purpose whatsoever

(33) Offensive matter

Includes animal carcasses, kitchen or stable refuse dung, dirt and putrid or putrefying substances other than sewage

(34) Owner

- a. means any person who exercises the rights of an owner of any building, or land or part thereof or with whom from time to time is vested the legal title to premises; and if owner is not present for the time being those lease holder and tenants are considered as owners for the purpose of the Bye law
- b. in the case where the person in whom the legal title is vested is insolvent or deceased, or is under any form of legal disability whatsoever, the person in whom the administration and control of such person's property is vested as curator, trustee, executor, administrator, judicial manager, liquidator or other legal representative
- c. in any case where the ULB is unable to determine the identity of such person, a person who is entitled to the benefit of the use of the premises or a building or buildings thereon

(35) Person

Means any person or persons and shall include any shop or establishment or firm or juristic person company or association or body of individuals whether incorporated or not and their Agents

(36) Place of origin

Means public or private places which are not the point of origin but intended for the storage, segregated collection by the owner, tenant or those who are engaged in the management.

(37) Point to point collection

Means the system of collection of Municipal Solid Waste from specific pick-up points as designated by the Municipality, up to which the generator must bring the collected and stored waste for delivery to vehicle so appointed by the Municipality

(38) Premises

Means any land or building or part of a building and includes

- (a) the garden, ground and out-houses, if any, appertaining to a building or part of a building and
- (b) any fittings affixed to a building or part of a building for the more beneficial enjoyment thereof

(39) Private Street

Means any street which is not a public street and includes any passage securing access to two or more places belonging to the same or different owners

(40) Public place

Includes any road, arch road, viaduct, lane, footway, alley or passage, highway, causeway, bridge, square alley or passage whether a thoroughfare or not, over which the public have a right of passage, and such places to which the public has access such as parks, gardens, recreation grounds, playgrounds, beaches, water bodies, water courses, public plazas and promenades, government and municipal buildings, public hospitals, markets, slaughter houses, courts, etc.

(41) Public road

Means any road, street or thoroughfare or any other place (whether a thoroughfare or not) which is commonly used by the public or any section thereof or to which the public has a right of access, and includes -

- a. the verge of any such road, street or thoroughfare
- b. any bridge, ferry or drift traversed by any such road, street or thoroughfare and
- c. any other work or object forming part of or connected with or belonging to such road, street or thoroughfare

(42) Receptacle

Means any container, including bins and bags, used for the storage of any category of municipal waste

(43) Recycling

Means the process of transforming segregated non-biodegradable solid waste into raw materials for producing new products, which may or may not be similar to the original products

(44) Refuse

Means any waste matter generated out of different activities, processes, either degradable/non-degradable/inert in nature in either solid or semi-solid form which cannot be consumed, used or processed by the generator in its existing form

(45) Refuse removal charges

Means fees or charges notified by the ULBs from time-to-time for collection, transport and disposal of Municipal Solid Waste from different categories of waste generators

(46) Rubbish

Includes ashes, broken bricks, broken glasses, dust, mortar and refuse of any kind which is not filth

(47) Sanitation

Means the promotion of hygiene and the prevention of disease and other consequences of ill health relating to environmental factors

(48) Schedule

Means a schedule appended to these Byelaws

(49) Segregation

Means to separate Municipal Solid Waste into the specified groups of bio-degradable, hazardous, bio-medical, construction and demolition, bulk garden and horticultural, and all other inert waste

(50) Solid waste

Means any discarded solid or semi solid material generated or brought in the municipal limits

(51) Source

Means the premises in which waste is generated primarily or a community storage centre used by owners / occupiers of one or more premises for segregated storage of Municipal Solid Waste

(52) Street

Shall mean any road, footway, square, court, alley, gully or passage, accessible whether permanently or temporarily to the public and whether a thoroughfare or not, and shall include every vacant space and shall include also the drains or gutters therein, or on either side or the land, whether covered or not by any pavement, varandah or other erection, up to the boundary of any abutting property, not accessible to the public

(53) Storage

Means the temporary containment of Municipal Solid Waste in a manner so as to prevent littering, attraction to vectors, stray animals and excessive foul odour.

(54) Transportation

Means conveyance of Municipal Solid Waste from place to place for the purpose of collection, processing and disposal

(55) Transfer

The transfer of waste generated within the ULBs limits to agents or employees of the ULBs or to the vehicles, storage area or places designated for the purpose

(56) Urban Local Bodies (ULBs)

Means the Notified Area Council or Municipality or City Corporation

(57) Vehicle

Includes a carriage, truck, hand-cart, bicycle, tricycle, auto-rickshaw, motor vehicle and every wheeled conveyance which is used or is capable of being used on a street

(58) Ward

Means an administrative ward of ULB unless specified otherwise

4. POWER TO DECLARE SOLID WASTE FREE /SANITATION ZONES

- (1) The ULB has the power to declare in such manner as may be prescribed, any area or areas within the ULB as sanitation zone or waste free area or areas for the purposes of this Byelaw.
- (2) In such areas, the ULB by notification can prohibit the dumping or depositing of any waste in such area or part thereof with effect from such date (being not less than three months from the date of publication of the notification) as may be specified in the notification.

5. PROHIBITIONS**Dumping and littering**

- (1) No person shall dump, deposit, discharge, spill or release waste, or cause or permit such waste to be dumped, discharged, spilled or released, whether or not the waste is in a container or receptacle, in or at any place, whether publicly or privately owned, including but not limited to vacant land, rivers, waterways, catchments, sewers and storm water drains, except in a container or at a place which has been specially indicated, provided or set apart for such purpose. No person shall place or cause to be placed rubbish or offensive matter on a public street at the time other than the time specified and except in the receptacle provided or specified and not to dispose outside the containers.
- (2) No person shall allow rubbish, filth etc, to accumulate on premises for more than twenty four hours.
- (3) The prohibition referred to in section (5)(1) shall apply to any person who, for whatever reason, opens a receptacle containing waste material and dumps, deposits, discharges, spills or releases such waste onto a public street and who thereafter fails to return such waste material to the receptacle.
- (4) No person shall deposit rubbish, solid waste, skin, carcasses or filth (a) in any street or on any unoccupied ground alongside any street or on any public or private place (b) in any dustbin or in any vehicle not intended for the removal of the same; or (c) in any vehicle or vessel intended for such removal save for the purpose of deodorising or disinfecting the same.
- (5) No person shall, while driving a vehicle, or while being conveyed in a vehicle, throw or deposit waste on any public road or on any private premises within the ULB and no driver of a vehicle shall allow or permit any passenger in such vehicle to throw or deposit such waste in a like manner.
- (6) The occupant of any premises within the ULB shall be primarily responsible for the sanitary condition of the premises and any receptacle or container on the premises. The owner of any

unoccupied property shall be primarily responsible for the sanitary condition of the property. It shall be unlawful for any person to place, deposit, or allow to be placed or deposited on his premises or property any solid waste, except as permitted by the terms of this Bye law.

(7) No one shall indulge in the production, distribution, storage, sale and use of banned plastic items.

6. SEGREGATION, COLLECTION, STORAGE AND DELIVERY OF MUNICIPAL SOLID WASTE

(1) Segregation of waste into six specified groups: Every generator of Municipal Solid Waste shall store unmixed in or separate the waste at the source of waste generation into the following six categories:

- a. Bio-degradable waste
- b. Hazardous waste generated from households /establishments
- c. Bio-medical waste from households
- d. Construction and demolition waste
- e. Bulk garden and horticulture waste including recyclable tree trimmings.
- f. All other non-biodegradable waste including recyclable and non-recyclable waste.

(2) The 'bins' shall have 'easy to operate' design for handling and transfer of wastes. Bins for storage of bio-degradable wastes shall be painted Green, those for storage of recyclable wastes shall be printed White and those for storage of other wastes shall be printed Black

(3) Delivery of segregated waste

Waste shall be kept unmixed / segregated and stored and delivered in the above specified groups to those who are specifically detained for the purpose. If the waste delivered is found to be mixed, this will be considered a breach of the Byelaws, and a fine will be applied as per the Schedule of Fines. Repeated breach may also result in other penal measures.

(4) Bio-degradable waste

Segregated Bio-degradable Municipal Solid Waste if not composted by the generator, shall be stored by generators of such waste within their premises in closed containers and its delivery shall be ensured by every such generator to the persons employed for collection. Wet wastes (food and other) should not be delivered of in plastic carry bags.

It shall be the responsibility of the commercial generators of bulk bio-degradable waste such as hotels, restaurants, catering units, marriage halls, hospitals, private markets, fish/meat processing units, etc., to setup their own facilities for waste treatment. It is made mandatory by this notification to setup and maintain such facilities and made a condition when issuing license to them.

If it is of the opinion of the Municipal Council after inspection that certain commercial generators are not in a position to setup such facility due to land constraint, shall deliver the bio-degradable waste to collection vehicle provided for specified commercial generators of bulk bio-degradable waste or to the designated biodegradable waste storage centers from where the ULB shall collect such wastes daily at such times as the concerned Secretary/Executive Officer/Commissioner may notify from time to time. The generators of such wastes are liable to pay fees for the service provided to them by the ULB as fixed depending on the quantity of wastes.

(5) The ULB shall, where possible, provide a refuse removal service for all occupied premises within the refuse removal area and the occupier of any premises shall be liable for all charges levied for such service, irrespective of whether or not such service is utilised, and regardless of

- whether or not the service is provided on a day other than the normal day of collection. Any charges levied for such service shall be prescribed in the ULB's tariff of charges.
- (6) The occupier of premises shall within seven days of the occupation of such premises notify the ULB in writing that the premises have been occupied and whether the service the occupier requires relates to the removal of domestic, or trade refuse, or a combination of these.
 - (7) The occupier of any premises shall ensure that all refuse generated on such premises is placed and kept in refuse containers, refuse bins, bags or other receptacles which shall be covered or sealed and retained on the premises until they are removed.
 - (8) No hot ash, unwrapped glass fragments or other refuse which may cause damage to the ULB's containers or bins, or injury to the persons or vehicles employed in removing refuse from any premises, shall be placed in any containers, bins or bags unless appropriate steps have been taken to avoid any damage or injury.
 - (9) No material, including any liquid, which by reason of its mass or other characteristics is likely to render any refuse container, refuse bin, bag or other receptacle unreasonably difficult for the ULB's employees to handle, shall be placed therein.
 - (10) Every refuse container or refuse bin on or outside any premises shall be covered by means of a lid or other covering so as to prevent any nuisance or health hazard, and any such container or bin shall be kept clean and in a hygienic condition.
 - (11) Tender coconut shells, banana leaf and bunches must be cut and collected separately and delivered separately
 - (12) PET bottles shall be taken back by the sellers and delivered to the collectors
 - (13) Whenever any hazardous waste is stored, generated or treated on any premises, the ULB may, by written notice served on the owner or occupier of such premises –
 - a. prohibit the removal, disposal, treatment, storage, conveyance or handling of such hazardous waste, or
 - b. order the removal, disposal or treatment of such hazardous waste in a specified manner and at certain times within a period stipulated in such notice.
 - (14) If such owner or occupier fails to comply with the terms of a notice contemplated by this Bye law, he / she shall be guilty of an offence and the ULB may remove, or cause to be removed, dispose of or treat such hazardous waste in any suitable manner and recover the expenses incurred in doing so from such owner or occupier.
 - (15) No person shall
 - a) remove or convey hazardous waste from any premises, or
 - b) convey or transport hazardous waste on or over any public road, unless such hazardous waste is securely and properly contained in a receptacle or vehicle designed to prevent spillage or contamination.
 - (16) The ULB may, by written notice served on the owner or occupier of premises on which hazardous waste is generated, stored, treated or disposed of, require such owner or occupier to provide the ULB in writing with such particulars, verified by a suitably qualified industrial chemist, as may be stipulated in such notice, relating to –
 - a) the quantity and composition of hazardous waste generated on such premises, and
 - b) the method of storage, treatment or disposal of such hazardous waste.
 - (17) The owner or occupier shall in similar manner inform the ULBs of any change in the quantity or composition or the method of storage, treatment or disposal of such hazardous waste.

- (18) Household hazardous waste shall be stored and delivered by every generator of waste to the collection vehicle which shall be provided weekly/periodically by municipality or any other Agency authorized by the ULB for collection of such waste.
- (19) House hold bio medical waste shall be stored and delivered by every generator of waste to the collection vehicle which shall be provided weekly/periodically by municipality or any other Agency authorized by the ULB for collection of such wastes. It shall be the responsibility of the ULB for disposal in a manner that is mandated by State Pollution Control Board in accordance with the Bio-Medical Waste (Management & Handling) Rules 1998 (as amended to date) through their own facilities or through the agencies that have setup such facilities.
- (20) It shall be the responsibility of the hospitals and health care establishments to store untreated bio-medical wastes in specified type of covered receptacles. It shall be the responsibility of the generators of such waste for disposal in manner that is mandated by State Pollution Control Board in accordance with the Bio-Medical Waste (Management & Handling) Rules 1998 (as amended to date) through their own facilities or through the agencies who have setup such facilities. Persons or establishments shall not dump bio-medical waste along with other wastes in any form in waste containers intended for storage of other wastes.
- (21) Construction and Demolition waste (C & D waste) shall be stored and delivered separately. It will be the responsibility of the generator to store the segregated C&D waste at source. The generator must then call a local Help-line of the ULB or the Agent of ULB, who will then send a vehicle to pick up the segregated C&D waste from the generator, with a specified charge, and then further transport this wastes to a processing centre or disposal site.
- (22) Wherein the opinion of the ULB, excessive rubble, rubbish, other debris or waste material is allowed to accumulate on a site before or during building operations, it may, by written notice, order the owner of such site to have such rubble, rubbish, other debris or waste material removed within the period specified in such notice.
- (23) Any owner who fails to comply with such notice shall be guilty of an offence and the ULB may remove such rubble, rubbish, other debris or waste materials from such site and may recover the costs of such removal from the owner.
- (24) Any person erecting or demolishing any building shall remove any surplus material and matter arising from such erection or demolition from the site and from any other land or public place affected by such material or matter during or after completion of such erection or demolition, failing which the ULB may, by written notice, order the owner of such building to have such surplus material and matter removed within a period specified in such notice.
- (25) Any person who fails to comply with a provision of or a notice served on such person in terms thereof, shall be guilty of an offence.
- (26) All other Non-biodegradable waste – recyclable and non- recyclable shall be segregated and stored and delivered by every generator of waste to the employees or agencies appointed by the ULBs on specified days and at such times as may be notified by the concerned Secretary, Executive Officer/Commissioner. Persons or establishments shall not mix trade wastes such as rubber chappal-cuttings, leather trimmings, car seat-covers, cloths, etc., with biodegradable waste.
- (27) Disposal by burning of any type of solid waste at roadsides, dump sites, or any private or public property is prohibited.
- (28) It shall be the responsibility of the owner to remove any obstruction caused in street by fall of trees, etc. within 12 hours of fall.

- (29) The organizers of a public event/gathering shall clean the hired hall/ground within 24 hours from the event
- (30) Contravention of any above said provisions shall invite penalty or punishments as specified in the Schedule.
- (31) Action against Transport Contractors / ULB Employees: ULB shall take strict and swift action against the Transport Contractor and/or Municipal employees, including levying a penalty, if any worker of the contractor or any Municipal employee mixes segregated waste at any point of collection; or does not pick up waste as per the specified time schedule.
- (32) The employees of the ULB engaged in rubbish and solid waste management service prohibited from depositing waste at a place other than specified etc.- No employee of the ULB engaged in rubbish and solid waste management service shall throw or place any domestic waste, dust, ashes, refuse, rubbish or trade refuse or any excrementitiously or polluted matter on any street or in any place not provided for the purpose or bury or burn or place or keep in any street any vehicle or carriage for the removal of solid waste, excrementitiously or polluted matter, or suffer the same to remain in any street for any greater length of time than is reasonably necessary.
- (33) It is mandatory for every household, hotels, restaurants, office complexes and all other commercial establishments to collect and dispose off the waste by adopting door to door garbage collection scheme on chargeable basis as approved by the ULB from time to time.

7. GENERAL PROVISIONS FOR SANITATION

- (1) No person shall bathe, spit, urinate, defecate, feed/slaughter animal or birds, repair/wash vehicles, utensils or any other object or keep any type of storage in any public place except in such public facilities or conveniences specifically provided for any of these purposes.
- (2) Temporary toilets shall be provided by the builder at construction sites, where a labour force is deployed for carrying out construction activities to prevent open defecation. Making of such prior provision should be one of the conditions while granting building permission and must be adhered to.

8. ACCESS TO PREMISES

- (1) The occupier of premises shall grant the ULB access to the premises for the purpose of collecting and removing refuse and shall ensure that nothing obstructs, frustrates or hinders the ULB in the carrying out its service.
- (2) Wherein the opinion of the ULB, the collection or removal of refuse from any premises is likely to result in damage to the premises or to the ULB's property, or injury to the refuse collectors or any other person, it may, as a condition of rendering a refuse collection service in respect of the premises, require the occupier to indemnify it in writing in respect of any such damage or injury or any claims arising out of either.

9. NOTICES AND PENALTIES

- (1) The ULB may serve a notice on the occupier of any premises, requiring such occupier to clear any waste on such premises in a manner and within a time specified in such notice.
- (2) If a person on whom a notice has been served, fails to comply with the requirements imposed by the notice, such person shall be guilty of an offence and liable on conviction to the penalties prescribed from time to time by law.

- (3) If a person on whom a notice is served, fails to comply with any requirements imposed by such notice, the ULB may –
- a. enter on the premises and clear the wastes; and
 - b. recover from the occupier the expenditure incurred in having done so.
- (4) **a.** Where on any occasion, an officer of the ULB finds any person who such officer has reason to believe on that occasion committed an offence under sections of the Byelaw, he may serve a notice on that person offering such person the opportunity of discharging any liability to conviction for that offence by payment of a fixed penalty.
- b.** A notice under this section shall give such particulars of the circumstances alleged to constitute the offence as are necessary for giving reasonable information of the offence and shall specify –
- (i) the period;
 - (ii) the amount of the fixed penalty; and
 - (iii) to whom, and the address at which, the fixed penalty may be paid.
- c.** The fixed penalty payable to the ULB in pursuance of a notice under this section shall be prescribed by the ULB from time to time.
- (5) Any person who contravenes or fails to comply with any provision of these bye laws shall be guilty of an offence and shall be liable on conviction to a fine or to imprisonment, or to both such fine and imprisonment or to such other penalty as determined by a Court of competent jurisdiction.
- (6) Any person who dump, deposit, discharge, spill or release waste, or cause or permit such wastes to be dumped, discharged, spilled or released, whether or not the waste is in a container or receptacle, in or at any place, whether publicly or privately owned, including but not limited to vacant land, rivers, waterways, catchments, sewers and storm water drains, except in a container or at a place which has been specially indicated, provided or set apart for such purpose is an offence and liable to be fined with Rs. 250/- on the spot; the order can be issued by an employee not below the rank of a Health Inspector of the ULB and one who contravenes the order shall be liable to be prosecuted.

10. PENALTIES FOR CONTRAVENTION OF THESE BYELAWS

- (1) On and after the date of commencement of these Byelaws, there will be a familiarization / warning period of 30 days, after which, any contravention of these Byelaws shall be punishable with fines as per the Schedule of Fines (Schedule I) for every instance of breach of these Byelaws. In case, the generator of waste is found contravening any of these Byelaws next time, the fine amount will be doubled. The defaulter shall be liable for prosecution if he/she fails to remit the prescribed fine within 15 days
- (2) The owner/ occupier shall be deemed to be guilty of the offence and shall pay the fine, if the responsible person for dumping waste in a private place is unidentified,
- (3) The establishments responsible for littering, dumping of dead animal carcasses shall be fined and will have to remit the fine
- (4) Any owner/occupier who dump, deposit, discharge, spill or release waste, or cause or permit such wastes to be dumped, discharged, spilled or released in any privately owned place shall be liable to pay a fine of a sum of Rs. 1000/- and in the case of continuing contravention, with an additional fine which may extend to five thousand rupees for every day during which such contravention continues after conviction for the first such contravention.

- (5) If it become necessary on the part of the ULB to remove the waste then the responsible person or entity shall be liable to pay the expenses to the ULBs and any failure will entail revenue recovery.

11. MISCELLANEOUS PROVISIONS

- (1) The information and documents in connection to the solid waste management is a public document. For citizens access to information under the control of ULB is provided under the Right to Information Act. In order to promote transparency and accountability in the working of ULB in this regard, the information will be available to the public subjected to the Municipalities Act and the Right to Information Act. The ULB Health Officer shall be nominated as the Public Information Officer and the Secretary/Executive Officer/Commissioner shall be the Appellate Authority.
- (2) The ULB shall constitute a committee to redress any matters related to grievances of public in solid waste management both in Wards and as a whole for the ULB. An appeal committee shall be constituted with the Municipal Chairman/Mayor as Presiding Officer.
- (3) The council shall review, amend, extend, revoke, frame rules as and when required
- (4) It shall be the duty of ULBs to protect all waste handlers from the ill-effects of their occupation and should be given annual medical examination and monitoring, given appropriate health education and free medical treatment if it is felt that the illness is occupation-related. ULB shall provide personal protection equipments and monitor that the same is used by the workers.
- (5) The ULB shall encourage the use of waste-polymer-modified bitumen for its roads and modify the PWD Manual accordingly. ULB shall seek the opportunity for using discarded tyres in bitumen for roads.
- (6) The ULB shall develop a management information system for effectively taking corrective measures as well as proper planning for future. Geographic Information System (GIS) shall be introduced and MIS may be integrated in this system. There should be route maps and duty charts with each of the supervisory staff, who should check whether work on site is going as per schedule and whether vehicles and manpower are giving their optimum output.

12. POWERS AND RESPONSIBILITIES OF THE ULBs

- (1) Rubbish and other solid waste to be the property of the ULB- All the rubbish and solid waste collected by the employees or contractors of the ULB and the carcasses of dead animals deposited in any public receptacles, depot or place shall be the property of the ULB and they may dispose of the same by auction or otherwise.
- (2) Every ULB shall make adequate arrangements for the daily removal of rubbish, solid wastes, filth and carcasses of animals generated within its limits including private places. The ULB shall arrange the daily sweeping and cleansing of the streets and removal of sweepings there from.
- (3) ULB has the right to review every five (5) years or as the need arises the Solid Waste Management Plan for purposes of ensuring its sustainability, viability, effectiveness and relevance in relation to local and international development in the field of solid waste management;
- (4) The ULB shall determine the capacity of refuse bins, bags or receptacles which shall minimize by occupiers for refuse removal purposes, or the number of such bins, bags or receptacles and the days on which the service shall operate.

- (5) The ULBs, or a private waste service provider, may deliver containers to premises if, having regard to the quantity of refuse generated on the premises concerned, the suitability of such refuse for storage in containers, and the accessibility and adequacy of the space provided by the occupier of any premises for refuse collection vehicles, such refuse would, in the opinion of the ULB, be more appropriately stored in containers rather than bins.
- (6) Any containers delivered by the ULBs, or a waste service provider, in terms of this section shall remain in the ownership of the ULBs or the private waste service provider, as the case may be.
- (7) An occupier of premises shall be liable for the replacement or repair costs of lost, stolen or damaged containers at the applicable replacement cost of such containers.
- (8) An occupier of any premises shall provide sufficient space and any other facilities deemed necessary on such premises for the storage of containers delivered by the ULB, or a private waste service provider.
- (9) Containers shall be so located as to permit convenient access to and egress from such premises by the ULB's refuse collection vehicles or by the vehicles of a private waste services provider.
- (10) It shall be the responsibility of the local bodies to market the compost and evolve suitable mechanism for the sale.
- (11) ULBs should utilize to the fullest extent practicable all available facilities and expertise within the scrap processing and recycling industry for processing and marketing recyclable materials from municipal waste.
- (12) The ULBs should, to the greatest extent practicable, procure and use products and materials with recycled content and procure and use materials that are recyclable
- (13) A resource recovery facility to be operated inside the ULB within city limits as part of a complete municipal waste management plan

13. PROVISION FOR PROCESSING OF SOLID WASTES

- (1) The ULBs may, for the purpose of recycling, treating, processing and disposing of solid wastes or converting such solid wastes into compost or any other matter construct, acquire, operate, maintain and manage any establishment within or outside the Municipal area and run it on a commercial basis or may contract out such activity.
- (2) Every ULB may make adequate arrangements for the treatment of solid wastes for the preparation of compost and the disposal of it by sale or other means
- (3) Within the sites for processing and disposal of waste identify suitable locations for:-
 - a) Weighbridge
 - b) Composting plant
 - c) Composting area
 - d) Compost storage area
 - e) Packing area
 - f) Shredded plastic storage area
 - g) Wash and change area
 - h) Security cabin
 - i) Secured landfill for the disposal of rejects
 - j) Site for RDF
 - k) Leachate treatment plant

- l) Parking area for vehicles
 - m) Vehicle washing area
 - n) Canteen
 - o) Quarters
 - p) Workshop for vehicles
 - q) Store room
 - r) Laboratory
 - s) Office space
- (4) While selecting site, the ULB shall take due care of the ground water table, land use etc of the site.
 - (5) It should be at least 500 m away from habitations, tourist areas, wetlands etc.
 - (6) It should be 3 meters above the local ground water level wherever possible, failing which the site level may need to be raised.
 - (7) A 500 m wide no development buffer zone to be declared to prevent objections by future inhabitants.
 - (8) The waste processing and disposal site must be fenced to prevent unauthorized entry.
 - (9) The ULBs shall improve existing roads or make new ones and maintain the same.
 - (10) ULBs shall provide a green belt to improve the environment
 - (11) The waste processing or disposal facilities shall include facility based on state-of-the-art technology duly approved by the State Pollution Control Board/Pollution Control Committees
 - (12) The waste processing area should be covered and it shall be provided with impermeable base with facility for collection of leachate and surface water run-off into lined drains leading to a leachate treatment and disposal facility;

14. PROVISION FOR FINAL DISPOSAL OF SOLID WASTE

- (1) Every ULB shall identify and notify suitable lands within or outside the municipal area for the purpose of final disposal of wastes.
- (2) While notifying the land, health and environmental aspects shall be taken into consideration by the ULBs.
- (3) The ULBs shall provide for decentralized processing plants wherever and whenever possible, and opt for centralized land fill site. The ULB shall find suitable and adequate land for processing and disposal of waste keeping in view the requirements for at least the next 20-25 years. The landfill site for the rejects should preferably be the same parcel of land as the composting site, or very nearby, to minimize the cost of handling, transporting and land filling the rejects.
- (4) Land fill site should be developed as specified in MSW rules (**Schedule III**)
- (5) Necessary precautions shall be taken to minimize nuisance of odour, flies, rodents, bird menace and fire hazard;
- (6) Process rejects shall be removed on a regular basis shall be sent for well designed landfill site.
- (7) Rejects and non biodegradable waste shall be landfilled according to standard procedure.
- (8) Wastes should be spread in thin layers and compacted to achieve a high density of waste.
- (9) The waste may be covered on a day to day basis with thick layer of inert materials such as construction wastes or soil to avoid any foul smell and breeding of rodents and insects.
- (10) After completion of landfill, a final cover shall be designed to minimize infiltration and erosion.

- (11) To minimize erosion of the final cover, plantation or vegetation cover may be made to sustain native plant growth.
- (12) Rain water flow into the land fill area should be prevented.
- (13) Run-off from landfilled areas should not enter any well or water body.
- (14) Regularly monitor nearby water quality.
- (15) Public gardens with land-scaping may be developed in stages on the landfill in such a manner that stagnation of rainwater does not take place and rainwater runs off the site.
- (16) Records may be maintained of date, time and quantity of wastes received site and the number of trips made by each transport vehicle.
- (17) After completion of land fill a minimum final raised cover of soil or construction waste of at-least 30 cm shall be provided and maintained to ensure run-off of rain-water from the surface.
- (18) Maintaining the integrity and effectiveness of final cover, including making repairs to the cover as necessary to correct the effective of settlement, subsidence, erosion or other events and preventing rain-water run-on and run-off from eroding or otherwise damaging the final cover;
- (19) Monitoring ground water in accordance with requirements and taking corrective measures as and when required;
- (20) Monitoring of landfill gases to assess levels of methane, for ensuring compliance as per the prescribed standards.
- (21) Planned use of closed landfill sites can commence after ensuring that the landfill gases, leachate and ground-water analysis permit such use.
- (22) Installation of landfill gas control system including gas collection system shall be made at landfill site
- (23) Ambient air quality at the landfill site and at the vicinity shall be monitored

15. PROVISION FOR LEACHATES COLLECTION AND TREATMENT

- (1) Provisions for management of leachates collection and treatment shall be made. The treated leachates shall meet the standards specified in Schedule- IV for of MSW Rules.
- (2) It shall be incumbent on the ULBs to establish a leacheate treatment plant along with a windrow composting facility and landfill site as per the MSW rules.
- (3) The leacheate plant shall be able to treat the leacheate both from the processing plant and the land fill.
- (4) The ULBs shall identify appropriate technology for leacheate treatment.

16. RESPONSIBILITY OF ELECTED MEMBERS

- (1) The administrative powers to implement the provisions of this Byelaw and the resolutions passed by a Council shall be vested in the Chairperson / Mayor and he/she shall be directly responsible for the proper discharge of the functions imposed by or under this bye law.
- (2) The Chairperson/Mayor shall-
 - a. Supervise and control the acts done and steps taken by the officers and employees of the ULB in solid waste management.
 - b. Exercise such other powers and perform such other functions that may be conferred or entrusted under the provisions of this Byelaw or the rules made there under.
 - c. The Chairperson/Mayor may, in emergent circumstances, direct the execution of any work or performance of any act related to solid waste management, in respect of which sanction of the Council is necessary and in his / her opinion the immediate execution or

performance of which is necessary for the safety of the public and may also direct that the expenses incurred for the execution of such work or performance of such act be paid from the fund of the ULB;

(3) Deputy Chairperson/ Deputy Mayor

In the absence of Chairperson exercise such powers as conferred on him

17. RESPONSIBILITY OF SECRETARY/COMMISSIONER OF THE ULB

The secretary/Commissioner of the ULB will also be the Member Secretary of the ULB, steering committee, standing committee and technical committee;

- a. He / She will be responsible for engaging temporary and permanent systems for the collection, storage, processing and disposal of solid waste
- b. To sign contracts for the solid waste management
- c. To deploy employees for the execution of solid waste management
- d. Publish and circulate notices and orders
- e. Utilize the resources as authorized in accordance with the decision of the council
- f. Prepare reports, documents and minutes and keep the same
- g. Direct to pay waste removal fees/charges to those concerned
- h. Order the payment of fines in respect of contraventions of the provisions of the Bye law
- i. Under necessary circumstances cancel contracts, notices or orders.
- j. Order on the spot fines on establishment of offences
- k. Order to control or stop the release or disposal of waste water
- l. The Secretary/Commissioner of the local governments have the right to enter at any reasonable time public or private property in the ULB's jurisdiction to inspect and investigate conditions concerning solid waste management and control.
- m. To take necessary steps after inspection regarding solid waste management

18. CITY SANITATION SOCIETY

The ULB shall form a City Sanitation Society that shall prepare, submit and implement a plan for the safe and sanitary management of solid waste generated in areas under its geographic and jurisdictional coverage.

The City Sanitation Society shall be a Society registered under the Charitable Societies Act and promoted and controlled by the ULB for the purpose. A separate Byelaw shall be prepared for the Society.

The City Sanitation Society shall have the following duties and responsibilities:

- a. Develop the Municipal Solid Waste Management Plan that shall ensure the long-term management of solid waste, as well as integrate the various solid waste management plans and strategies in its area of jurisdiction. In the development of the Solid Waste Management Plan, it shall conduct consultations with the various sectors of the community

- b. Monitor the implementation of the MSWM Plan through its various political subdivisions and in cooperation with the private sector and the NGOs;
- c. Adopt specific revenue-generating measures to promote the viability of its SWM Plan;
- d. Review every five (5) years or as the need arises the MSWM Plan for purposes of ensuring its sustainability, viability, effectiveness and relevance in relation to local and international developments in the field of solid waste management;
- e. Develop the specific benchmarks and protocols for monitoring and evaluation
- f. Recommended measures and safeguards against pollution and for the preservation of the natural ecosystem; and
- g. Mandatory public hearings for local government solid waste management plans shall be undertaken by the respective societies in accordance with process to be formulated in the implementing rules and regulations.

Schedule 1
Penalties

Sl.No.	Section	Subject of contravention/violation	Fine for violation	Fine for repeated violation
1	5. (1)	Dumping and littering in any public place	250/-	1000/- per day
2	5.(1)	Disposing wastes outside the storage containers	250/-	5.(2)
3	5. (2)	Allowing rubbish, filth etc, to accumulate on premises for more than twenty four hours	1000/-	
4	5. (4)	Unlawful and improper disposal of carcasses rubbish and filth	500/-	
5	5.(6)	Failure to keep once premises clean	250/-	500/-
6	5. (7)	Production, distribution, storage, sale and use of banned plastic items.	1000/-	5000/-
7	6. (3)	For delivering waste that is not segregated and stored in separate bins as specified:	250/-	500/-
		a) individual		
		b) bulk generator	1000/-	2000/-
8	6. (4)	Failure on the part of bulk generators to construct own facilities for waste treatment	5000/-	1000/- per day
9	6.(14)	Dumping hazardous waste in public or private places	250/-	500/-
10	6.(20)	Dumping bio-medical waste along with other wastes	10000/-	
11	6. (21)	For not removing Construction and Demolition waste in a segregated manner as specified	5000/ per ton	
12	6. (26)	For mixing and delivering trade waste with biodegradable waste.		
13	6.(27)	For disposal of waste by burning	250/-	

14	6.(28)	Failure to remove obstruction caused in street by fall of trees, etc. within 12 hours of fall.	1000/-	
15	6. (29)	Failure of organizers of a public event, gathering to clean the hired hall/ground within 24 hours from the event	1000/-	
16	6.(30)	Worker of the contractor or any Municipal employee mixes segregated waste at any point of collection; or does not pick up waste as per the specified time schedule	500/-	1000/-
17	6.(32)	Employees of the ULB depositing waste at a place other than specified etc	500/-	1000/-
18	6.(33)	Not taking part in the solid waste management system of ULB	2000/-	
19	7.(1)	Littering in any public place, bathing, spitting, defecating, urinating, washing clothes and utensils, washing vehicles etc	250/-	
20	7.(2)	For not providing temporary toilets at construction sites	1000/-	
21	8.(1)	Denial of access to ULB to the premises	1000/-	
22	9.(2)	Failure to comply with notices	500/-	

Schedule II
Product specifications of compost

Sl.No	Parameter	Specifications
1	Moisture, percent by weight	10.0-25.0
2	Color	Dark Brown to Black
3	Odour	Absence of foul odour
4	Particle size	Minimum 85% should pass through 4.0 mm IS sieve
5	Bulk Density (g/cm ³)	0-1.0
6	Total Organic Carbon, percent by weight, minimum	8.0-16.0
7	Total Nitrogen (as N), percent by weight, minimum	0.3-0.7
8	Total Phosphates (as P ₂ O ₅), percent by weight, minimum	0.5-2.0
9	Total potash (as K ₂ O), percent by weight, minimum	0.3-0.7
10	C:N ratio	20:1 or less
11	pH	6.0 - 8.0
12	Conductivity (as dsm ⁻¹)	Not more than 4.0 - 8.0
13	Pathogens	Nil
14	Heavy Metal contents, (as mg/kg) by weight, maximum	
	Arsenic (as As ₂ O ₃)	10
	Cadmium (as Cd)	5
	Chromium (as Cr)	50
	Copper (as Cu)	300
	Mercury (as Hg)	0.15
	Nickel (as Ni)	50
	Lead (as Pb)	100
	Zinc (as Zn)	1000

ANNEXURE.1

Comparison of provisions regarding SWM in MSW Rules and Draft Bye law

Sl.No	Parameters	MSW rules	Draft Bye law
1	Responsibility	Every municipality is responsible	In addition to the responsibilities made in MSW rules waste is regarded as the property of the ULB Daily removal of rubbish, solid wastes, filth and regular sweeping and cleansing of the streets and removal of sweepings. Marketing of compost.
		a)for providing integrated services for collection, storage, processing and disposal b) Infrastructure facilities for solid waste management within its jurisdiction.	
	Its responsibilities are defined	a)Preparing the community for segregated collection b).Inoffensive storage c)Transportation d) Appropriate processing e) Safe disposal	Same parameters are also addressed but elaborately Segregation is clearly defined into six categories Waste shall be kept unmixed / segregated and stored and delivered
	Management of municipal solid waste	a)It is stated municipal solid waste shall be managed and handled in accordance with Schedule-II . b) waste processing and disposal facilities to be set up as specified in Schedules III and IV	Same criteria followed but each component elaborated
2	Collection of municipal solid wastes	Littering of municipal solid waste prohibited and to facilitate compliance,	Dumping and littering of waste in any public, private place, water body, etc prohibited
		Recommend community bin collection (central bin),	
		Recommend door to door collection of segregated waste	Recommend door to door collection of segregated waste by delivering to the municipal collection system.
		Separate collection from slaughter houses, meat and fish markets, fruit and vegetable markets etc	Modern slaughter house with waste treatment facility For meat and fish markets their own facility and for vegetable markets municipal collection system

		While horticulture waste is supposed to be collected separately and disposed off by following 'proper norms' The Rules do not clarify what these norms could be.	Garden waste defined and to be delivered segregated from other wastes on specified days
3	Segregation of municipal solid wastes	a) Preparing the community for segregated collection b) Organize awareness programmers for segregation of wastes and shall promote recycling or reuse of segregated materials.	Segregation of waste into six specified groups Bio-degradable waste, house hold hazardous waste, Bio-medical waste, Construction and demolition waste, Bulk garden and horticulture waste, other non-biodegradable waste including recyclable and non-recyclable waste. Waste shall be kept unmixed / segregated and stored and delivered in the above specified groups
4	Storage of municipal solid wastes	a) Storage facilities to be set up by municipal authorities or any other agency	No storage for households, only temporary storage in their premises and delivery to waste collectors. For bulk generators collection on request directly to the vehicle Community bins avoided
		b) Storage facilities or 'bins' shall have 'easy to operate' design for handling, Bins for storage of bio-degradable wastes shall be painted green, those for storage of recyclable wastes shall be printed white and those for storage of other wastes shall be printed black;	Same is followed
		c) Manual handling of waste to be prohibited.	Direct transfer to transportation vehicle
5	Transportation of municipal solid wastes	Recommended covered vehicles	Covered vehicles to be designed by the ULB depending on the characteristics of waste, terrain etc Design the vehicle to contain leachate. In order to avoid odour, and nuisance, covered vehicle with leachate collection provision is included.
		Transportation vehicles shall be so designed that multiple handling of wastes, prior to final disposal, is avoided.	Direct transfer to vehicles envisaged

6	Processing of municipal solid wastes (Emphasis is on treatment) a) Biodegradable fraction	a) Recommend adoption of a suitable technology or a combination b) Recommend treatment by composting, vermicomposting, anaerobic digestion or any other appropriate biological process so as to stabilise it.	Recommend adoption of a suitable technology or a combination Recommend treatment by composting, vermicomposting, anaerobic digestion or any other appropriate biological process so as to stabilise it
	b) Others	Options of incineration with or without energy recovery and pellatisation are also suggested	No incineration. Recovery and recycle to the maximum possible extent
	c) Other state-of-the-art technologies	Recommend to get the approval of the Central Pollution Control Board before developing any project.	Recommend to get the approval of the Central Pollution Control Board before developing any project.
7	Disposal of municipal solid wastes		
	Land fill	a) Recommend land filling of only that type of waste which is neither recyclable nor biologically processable	Compost rejects to be land filled only
		b) Do not recommend land filling of mixed waste as long as it is found to be suitable for any processing.	
8	Processing plant and land fill site	Setting up a processing plant is considered to be a precondition for commissioning a sanitary landfill site.	Setting up a processing plant is considered to be a precondition for commissioning a sanitary landfill site.
9	Location of the treatment and disposal facilities	Recommend integration of landfill site with the processing plant and vice versa	Recommend integration of landfill site with the processing plant and vice versa
10	Planning stage	Environmental due diligence is recommended (Schedule III and IV)	Environmental due diligence is recommended (Reference to MSW rules) Ear marking of site for various uses
11	Mitigation measures and clearances	Necessary mitigation measures are incorporated and clearances to be obtained by the ULB (Schedule III and IV)	Necessary mitigation measures are incorporated and clearances to be obtained by the ULB (Reference to MSW rules)

		Provision of impermeable liners for the landfill leachate collection and treatment system Diversion of storm water drains Prevention of runoff into water bodies is mandatory.	Provision of impermeable liners for the landfill leachate collection and treatment system Diversion of storm water drains Prevention of runoff into water bodies is mandatory.
12	Ambient air quality management at a landfill site	Require installation of a landfill gas collection system from the point of view of odour control and safety of nearby properties. (Schedule III) concentration of methane gas generated at landfill site shall be controlled shall not exceed 25 per cent of the lower explosive limit (LEL) Thermal application, power generation and passive venting allowed Require Ambient Air Quality Monitoring	Collected gas at the landfill site shall be utilized for direct thermal applications like cooking in the canteen or the landfill gas shall be burnt (flared) Require Ambient Air Quality Monitoring
13	Burning of waste	a) Disposal by burning of solid waste (garbage, dry leaves) at roadsides, dump sites, or any private or public property is prohibited.	Disposal by burning of solid waste at roadsides, dump sites, or any private or public property is prohibited.
		b) Suggest gainful utilisation of the recovered gas through thermal application or power generation from the landfill site	
14	Bio-degradable waste	Community bins along with door to door collection	Segregated Bio-degradable shall be stored by generators within their premises in closed containers and delivered. Wet wastes (food and other) should not be delivered of in plastic carry bags.
15	Bulk bio-degradable waste generators	Not provided	Setup their own facilities for waste treatment. Exception- to those who have no land collection by the ULB charging fee
16	Household Hazardous waste	Not provided	Shall be stored and delivered by every generator of waste to the collection vehicle which shall be provided weekly/periodically by municipality or any other Agency authorized by the ULB for collection of such waste.

17	Bio-medical waste	As per bio medical waste handling rules	Same as per bio medical waste handling rules
18	Construction and Demolition waste	Construction or demolition wastes or debris shall be separately collected and disposed off following 'proper norms'. Norms not specified	Responsibility of the generators of such waste for storage and disposal through ULB mechanism Disposal by the ULB The generator shall make use of helpline of ULB
19	Non-biodegradable waste – recyclable and non- recyclable	Segregation at storage site and delivered on specified days	Segregated and stored and delivered by every generator on specified days
20	Temporary toilets	No provision	For labour force deployed at construction site by the builder
21	Solid waste free /sanitation zones	No provision	ULB can declare area or areas within the ULB as sanitation zone or waste free area or areas
22	Penalties	Not provided	Penalties for violation of the provisions of the bye law are provided in Schedule III of the bye law a) Fines b) Increased fine for repeated breach c) Prosecution
23	Specification for compost	Specifications provided in Schedule IV	Compost specifications provided along with those specified in MSW Rules (Schedule II of Bye law)
24	Responsibility of elected members	Not defined	Clearly defined
25	Responsibility of Secretary/Executive Officer/Commissioner of ULB	Not defined	Clearly defined
26	Leachate Treatment plant	Recommended only for the landfill leachate	Both from the landfill leachate and from the processing plant

27	Processing plant and Landfill site	Decentralized processing plant not mentioned	Provide for decentralized processing plants opt for centralized land fill site
28	Safety of workers	If manual handling is unavoidable due care for safety of workers to be ensured	Protection of waste handlers from occupational health hazards/diseases is the duty of ULB Annual medical examination and monitoring, health education and free medical treatment, personal protection equipments
29	Right to information	Not provided	Right to information to the public provided
30	Duty of police	Not provided	Aid ULB in carrying out the provisions
31	Public hearing	Not provided	Mandatory public hearings for local government solid waste management plans recommended
32	City Sanitation Society	Not provided	Functions, responsibilities of the society for the effective management of solid waste defined. Structure of the society also provided
33	Right to review	No provision	Right to review the Solid Waste Management Plan every five year or need arises ensuring its sustainability, viability, effectiveness and relevance