

## BRUHAT BENGALURU MAHANAGARA PALIKE

OFFICE OF THE COMMISSIONER, PALIKE OFFICE, N.R.SQUARE, BENGALURU - 560002.

Date:18-03-2016

## GUIDELINES FOR CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

In exercise of the powers vested under section 256 of Karnataka Municipal Corporations Act, 1976 (Karnataka Act, 14 of 1977) and enabling provisions U/s 257 and 260 of the said Act, a public is notified with regard to Collection and Delivery of Municipal Solid Waste (Construction and Demolition Waste) within the BBMP area, w.e.f.

01-03-2016.

WHEREAS, the Municipal Solid Waste(Management and Handling) Rules 2000, specify in schedule-II (1) (VII) that Construction and Demolition Waste or Debris shall be separately collected and disposed off. Consequently, following guidelines are issued.

- 01.**Definitions**:- In these Guidelines unless the context, otherwise requires:
  - (a) Construction and Demolition Waste(C & D Waste) means wastes from building materials, debris and rubble resulting from construction, re-modelling, repair and demolition operation. It excludes steel, aluminum, wood and other components

- currently being salvaged for reuse or recycling.
- (b) Construction/Demolition Waste Management Site (C & D waste Management Site) means a site designated by BBMP for each zone, after following the parameters enumerated in Annexure-7.
- c) Debris and Rubbish(Inerts): includes dust, road sweepings, drain silt, ashes, broken bricks, mortar, broken glass, Construction and Demolition Waste(C & D waste) and similar siliceous non-compostable and non-combustible waste but does not include non-recyclable wastes and rejects and hazardous wastes, such as those indicatively listed in Annexure-3.
- destruction, by jackhammers, bulldozers or similar means which results in huge quantities of mixed inerts(such indiscriminate destruction is to be avoided except in cases of unpredictable building collapse, earthquake, fire and similar disasters).
- (e) <u>Dismantling</u>: means reverse construction so as to obtain segregated types of C and D waste which will facilitate its reuse or recycling and shall be invariably practiced

- when bringing down or removing part or all of an existing structure.
- by BBMP after scrutiny and listed on its website as eligible to transport and/or process and/or recycles C & D waste and Debris from an occupier's site to a BBMP specified destination and may include the contractor approved by BBMP for building purposes.
- (g) Occupiers: includes builder/developer or any person for the time being owning or occupying any site, constructed portion or paying or liable to pay to the owner, the rent or any portion of the rent of any vacant land or building or part of the same or a party defined as Occupier in any building contractor Joint Development Agreement.
- 02. No wastes of any kind shall be deposited at any time by occupiers on streets/besides the streets, pavements, drains, public spaces or vacant sites, or any location which will lead to nuisance to the public.
- 03. No waste of any kind shall be deposited at any time in any low lying areas other than those listed in **Annexure-1** notified by BBMP for each Zone after KSPCB approval as it would affect movement of surface water, ground water recharge. Violations will attract fines as specified from time to time.
- 04. The respective occupiers/owners/developers of a construction project shall be solely responsible for

removal/transport/disposal of their C and D waste and debris in compliance of notice and his/her address and phone numbers shall furnish the name of the person(s) responsible for compliance at the time of applying for Plan Sanction. Guidelines for Estimating Waste General during Construction or Dismantling/ Demolition are given in **Annexure-2**.

- 05. For occupiers generating small quantities of C and D waste and debris during repair or minor renovation the occupiers shall keep all types of C and D wastes, inerts and debris within their own premises until arranged so by the occupier for collection by BBMP authorized C & D waste transporters or empanelled vendors. The occupiers can contact BBMP's website for hiring services of the C & D waste transporters or empanelled vendors.
- 06. They shall not mix such C & D wastes, inerts and debris with any other category of waste like wet waste, recyclable waste or any other types of wastes.
- 07. All hazardous wastes like those indicated in **Annexure 3** shall not be mixed with C and D waste but sent separately to KSPCB authorized recyclers or to hazardous waste disposal sites at their own cost and furnish proof of compliance whenever demanded.
- 08. Inert (especially C & D waste) lying un-transported for 7 days will be removed by the BBMP and the cost of such removal will be collected with penalty, alongwith property tax from the occupier of the site.
- 09. Occupiers wishing to construct, renovate, repair or dismantle any premises requiring plan approval shall

obtain prior sanction for the same from the concerned building plan approval authority. All C and D applications must be taken in advance specifying the expected nature and quantity of C and D waste or Debris. So as to ascertain the specified destination for such waste. All such applications would be disposed of within 15 days.

- 10.Plan Sanction will be granted on submission of the following documents by the occupier/builder/joint developer.
  - **10.1:** Application in **Annexure-4** (in duplicate one for applicant and another for BBMP record) for Construction Waste/Demolition Waste Management (C & D waste) during construction.
  - 10.2: Existing building plan / Proposed Building Plan.
- 11. A site plan to indicating and de-marketing, the areas proposed for temporary segregated storage/management/recycling/reuse of various categories of C & D waste, using the bench mark areas indicated as in **Annexure-5** for construction waste management.
- 12. The plan sanctioned would be final only on approval of the waste management plan submitted, the object of which is to minimize wastage and enable reuse/recycling of the discards.
- 13. The occupier to maintain a Format for construction waste monitoring as indicated in **Annexure-6** and to be made available for inspection on demand during working hours.
- 14. A Commencement Certificate would be issued only after

inspection and approval of the waste monitoring format and all such receipts for satisfactory disposal of C & D waste, only after obtaining a Clearance Certificate from the concerned authority.

- 15. A Completion Certificate/Occupancy Certificate would be issued only after inspection and approval of up-to-date waste monitoring format and after receipt of all proof for disposal at the designated disposal site.
- **16.** The BESCOM/BWSSB would be requested to provide Electrical connection/Water connection to the premises only upon a production of valid certificate from BBMP.

17. The inclusive list Annexure-8 to be in respect of an Awareness Programme, in the matters concerning small scale constructions.

Date: 18.03. 2016

Commissioner

Bruhat Bengaluru Mahanagara Palike Bengaluru

# LIST OF APPROVED C AND D WASTE MANAGEMENT SITES DESIGNATED BY BBMP FOR EACH ZONE

SI	Name of the	Address	Extent of	Nearby zone
No. location			area in acres	
01.	Mallasandra	Sy. No. 33, Mallasandra grama, Yeshwanthpura hobli Bangalore, North Taluk	30	R.R. Nagar/West
02.	Kadu Agrahara	Sy. No. 34, Kadu Agrahara grama, Bidhrahalli hobli, Bangalore East Taluk	18	Mahadevpura
03.	Srinivasapura & Kogilu	Sy No. 15, Srinivasapura & Kogilu grama, Yelahanka Hobli, Bangalore North Taluk	10	Yelahanka
04.	Gollahalli	Sy No. 58, Gollahalli grama, Uttarahalli Hobli, Bangalore South Taluk	60	Bommanahall i & South
05.	Kannur	Sy. No. 50, Kannur grama, Bidhrahalli hobli, Bangalore East Taluk	50	East
06.	Guddadahalli	Sy.No. 43, Guddadahalli grama, Hesaraghatta hobli, Bangalore North Taluk	46.31	Dasarahalli
07. Mittaganahalli		Sy.No. 02, Mittaganahalli grama, Bidhrahalli hobli, Bangalore East Taluk	10	East/Mahade vpura

#### ANNEXURE – 2

## GUIDELINES FOR ESTIMATING WASTE GENERATION DURING CONSTRUCTION

SL	Type of construction process	estimate waste generation		
No.				
1	Construction	40 – 60 kg/m2		
2	Renovation and repair work	40 – 50 kg/m2		
3	Demolition of pucca building	500 kg/m2		
4	Semi-pucca buildings	300 kg/m2		

## COMMON MATERIALS THAT ARE FOUND AT CONSTRUCTION SITE FOR PREPARING PLAN FOR C & D WASTE MANAGEMENT

SL NO.	Stage	Materials		
1		Explosives and related products and equipment used in excavations		
2		Fuels and heating oil and other volatile/flammable liquids, such as coolants and Grease		
3		Pesticides		
4		Chemical admixtures, sealants, adhesives, solvents		
5		Plastics, acrylics, silica and PC		
6	Excavation & foundation works, super structures	Electronic ballasts, PCBs, transformers, capacitors, switch gears, lead cable, and oil filled/gel-filled cables		
7		Tar and tar products (bitumen, felt and water proofing compounds)		
8		Centering oil and form work oil		
9		Asbestos products- insulations, tiles		
10		Product packaging (cement bags, cartons, containers & plastic covers)		
11		Tarpaulin		
12		Compressed gases/cylinders		
13		Batteries		
14		Wood dust		
15		Paints, pigments, dyes and primers		
16		Mercury containing lamps and tubes:		
	Finishing & interiors	fluorescent lamps intact and crushed,		
		halogen lamps, arc lamps, UV lamps, high pressure sodium lamps, mercury vapour lamps, neon lamps, and incandescent lamps		
17		Mercury containing devices, relays, regulators, thermostats, thermometers, manometers, and debris containing mercury		

#### Annexure - 4

Heading: Application in Annexure-4 (in duplicate one for applicant and another for BBMP record) for Construction Waste/Demolition Waste Management (C & D waste) during construction.

- 1. Application (with instructions below)
- a. Name of applicant
- b. Phone number of applicant
- c. Application Reference number (to be given by BBMP):
- d. Reference of Plan sanction / application for this work as applicable :
- 2. Type of Construction & Demolition activity (Please tick / give details)
- a. New Construction (with instructions below)
  - i. Less than 5000 sft
  - ii. 5000 to 15000 sft
  - iii. 15000 to 50000 sft
  - iv. 50000 to 100000 sft
  - v. 100000 to 200000 sft
  - vi. greater than 200000 sft
  - vii. Any other construction (pl give details)
- b. Demolition of Pucca buildings
  - i. Less than 5000 sft
  - ii. More than 5000 sft
- c. Demolition of semi pucca buildings
- d. Renovation & Repair
- 3. Location of construction / demolition structure
- a. Name of Occupier
- b. Correspondence Address of Occupier
- c. Address of the location of construction / Demolition Structure
- d. BBMP Zone
- e. BBMP ward name & number

#### 4. Estimated Generation of Waste

S.No	Particular	Data
1	Type of construction / Demolition	
2	Area in m2	
3	C & D Waste as per Notes below	
4	Estimated Quantity of C & D waste	
5	Estimated Start of activity	
6	Estimated End date of activity	

- 5. Identified site for disposal of waste (see notes):
- 6. Requirement for safe disposal (see Notes): After completion / Quarterly

#### **AFFIDAVIT**

That, I hereby confirm that the above application for management of C & D waste at our site is true to the best of our understanding. We understand that the confirmation of the BBMP to C & D disposal plan is not an approval for construction or demolition and will obtain the necessary plan approval for the construction, demolition or renovation proposed.

That, I hereby confirm we understand that C & D waste shall not be indiscriminately stored or disposed. We will follow the C & D waste guidelines of the BBMP.

That, I hereby confirm we understand that the completion certificate for the construction and demolition will not be given unless we provide the documentation as required under the C & D waste guideline for safe disposal of C & D waste.

Date Place	Signature of Applicant	
BBMP official order on Application		
BBMP hereby confirm that the application has The application number recorded in our records.	been received as on	date.
Date		

Signature with Stamp

BBMP confirmation of Safe disposal & Closure

We hereby confirm that we have checked the documents / visited the site & checked that the C & D waste has been disposed as per the provisions of the C & D waste guidelines

Date

Location

Signature with Stamp.

#### Instructions for the filling up of Application:

#### 1. Application

- a. Name of the authorized applicant on behalf of the occupier shall be provided.
- b. Phone number of the authorized applicant shall be provided.
- c. Reference number shall be provided by the BBMP office where the application has been submitted.
- d. Online database shall be maintained by the BBMP where the status of the application can be seen by any of the above three search options.

## 2. Type of Construction

The type of the construction and size shall be as per the format. The BBMP may seek additional information as confirmation of the same as required.

- 3. The complete address shall be provided as per format. Wrong or inadequate information shall be treated seriously and may lead to cancellation of plan sanctions.
- 4. Use the following standard for the estimation of waste generation.

SL	Type of construction process	estimate waste generation		
No.				
1	Construction	40 – 60 kg/m2		
2	Renovation and repair work	40 – 50 kg/m2		
3	Demolition of pucca building	500 kg/m2		
4	Semi-pucca buildings	300 kg/m2		

#### 5. Location of disposal:

From the list below please select the preferred authorized location of disposal. Additional sites may be added to this list from time to time by the BBMP. Kindly check the BBMP website for additional options. A receipt has to be obtained for disposal from the transport service provider or the gate office of the disposal site where the C & D waste is disposed.

SI. No	Name of the Location	Address	Extent of Area in acres	Near by Zone		
1 Mallasandra		Sy. No. 33, Mallasandra grama, Yeshwanthpura hobli Bangalore, North Taluk	30	R.R. Nagar/West		
2	Kadu Agrahara	Sy. No. 34, Kadu Agrahara grama, Bidhrahalli hobli, Bangalore East Taluk				
3	Srinıvasapura & Kogilu	Sy No. 15, Srinivasapura & Kogilu 10 grama, Yelahanka Hobli, Bangalore North Taluk		Yelahanka		
4	Gollahalli	Sy No. 58, Gollahalli grama, Uttarahalli Hobli, Bangalore South Taluk	60	Bommanahalli & South		
5	Kannur	Sy. No. 50, Kannur grama, Bidhrahalli hobli, Bangalore East Taluk	50	East		
6	Guddadahalli	adahalli Sy.No. 43, Guddadahalli grama, Hesaraghatta hobli, Bangalore North Taluk		Dasarahalli		
7	Mittaganahalli	Sy.No. 02, Mittaganahalli grama, Bidhrahalli hobli, Bangalore East Taluk	10	East/Mahadevpura		

6. Period of safe disposal of waste shall be as in Point I below. The Safe disposal report shall be submitted to the concerned office where the application was submitted using the format in Point II below.

### I. Period of Reporting

- a. For quantity less than 10000 kg: After completion.
- b. For quantity from 3000 kg to 10,000 kg:

## II. Format for quarterly report

- 1. Application Reference
- a. Name of applicant
- b. Phone number of applicant
- c. Application Reference number (to be given by BBMP):
- 2. Estimated Generation of Waste
- 3. Already generated waste
- 4. Proof of disposal of above quantity (please attach service provider / disposal point receipts)
- 5. Estimated Date of Completion of Work.

#### Date of Submission of Status

#### Signature of the Authorized person

ANNEXURE - 5
STORAGE AREA SIZE ESTIMATION TABLE

Project Built Up Area Size of	Size of storage area		
storage area			
<5000 Sq.ft	82 Sq.ft		
5001 – 15,000 Sq.ft	125 Sq.ft		
15,001 – 50,000 Sq.ft	175 Sq.ft		
50,001 – 100,000 Sq.ft	225 Sq.ft		
100,001 – 200,000 Sq.ft	275 Sq.ft		
> 200001 Sq.ft	500 Sq.ft		

## CONSTRUCTION WASTE MANAGEMENT MONITORING FORMAT

	ruction Wast et Name & A	e Management - ddress:	- Log Sheet				
SL No	Construction Materials	Total Quantity Proposed for the Project(kg)	Quantity of Waste Expected to be Generate at site (kg)	Quantity of Waste sent for recycling /reuse	Quantity of waste sent for landfill(kg)	Location of waste recycled/ reused	Scarp dealer name/ULBs as applicable

#### PARAMETERS FOR APPROVING C & D WASTE MANAGEMENT SITE

- ✓ Locate identified debris disposal site in a map, which will be easily accessible by the construction companies to locate the disposing sites
- ✓ Site to be appropriately selected based on the following:
  - Environmental Impact to be minimal
  - Site should be authorized / approved by the respective govt.

    Authority
  - Appropriate construction of the site to cause least disturbance to areas surrounding the location
    - > The process of segregation & level of waste storage to be clearly defined for each site

#### ✓ Facilities at site

- > Site should be envisaged with display signs to facilitate easy accessibility
- Proper accessibility to vehicle movement in / out of the site
- The site should be properly illuminated for night hour usage. Suggested to developers that the waste disposal is carried out during non peak hours i.e. post 10pm to 6 am to have minimum disturbance to the public and ease the traffic.
- Proper fencing & gates with security guard & guard room The entire site should be properly bifurcated for different wastes for easy segregation for recyclers to remove recyclable waste material
- o Recyclers will be allowed to take out materials for their recycling plants only from these locations by paying a tipping fee also the transportation will happen between 10pm to 6am.
- o Entry books for vehicles moving in & out with project name & complete address. For easy tracking, each project will be assigned with separate log sheet for entry to enable project team to submit the same log sheet for NOC clearance to demonstrate disposal quantities easily.
- o Bill book to be maintained for the fee applicable for disposal of waste into the site. This fee will help to manage the site in a self sustained manner.
- o Proper storm water drainage with filtration (such as screen meshes) to be planned at the site

#### GUIDELINES FOR SMALL SCALE CONSTRUCTION PROJECTS

- ✓ Awareness programs to be initiated for the public, which will mainly focus on spreading information about the construction waste management practices & guidelines.
- ✓ A user friendly customer service helpline (toll free number) will be created exclusively for this program.
- ✓ Helpline will be operational in one central location in Bangalore.
- ✓ Once call lands in the helpline, the intimation will be given to the respective zonal office of BBMP.
- ✓ The BBMP authorities will in turn send the vehicles to pick up the wastes from multiple locations in one go.
- ✓ After pick up, disposal of the waste in the designated debris disposal area will be carried out.
- ✓ Once disposal is completed, BBMP authority will report back to the call centre location who will in turn record the completion of work.