



Government of Odisha
Housing & Urban Development Department
Sachivalaya Marg, Bhubaneswar, PIN: 751001

PT-2
File No. HUD-SANT- CASE- OP- 0010/2018 Letter No.: 11195 Dated: 28/06/19

From

Sangramjit Nayak, IAS
Director, Municipal Administration &
State Mission Director, Swachh Bharat Mission (Urban), Odisha

To The Commissioners of all Municipal Corporations
The Executive Officers of all ULBs
The Municipal Engineers of all ULBs

Sub: Management of Drains in urban areas

Madam / Sir,

The Hon'ble National Green Tribunal in Order Dated 16.01.2019 issued in Original Application No. 606/2018 (vide paragraph 44) has directed to ensure that all the drains (big or small) are tapped with appropriate measures (wire nets etc.) and no municipal solid or plastic waste is allowed to reach our river system, lakes, waterbodies, ponds, marsh lands and wetlands etc.

1. In view of this, with help of a team of drainage experts, simple and effective method of screening in the form of bar screen has been developed for arresting and removal of floating materials which are mainly sachets, plastic sheet/ bits, leaves, fibres, rags, etc. These manually operated screens are preferred for installation in smaller drains (Secondary/Tertiary Drains) due to ease in operation & maintenance, easily available and can be fabricated in local markets.
2. A detailed information with specification of bar screen, installation procedure, operation & maintenance procedure, guidelines on placement of screen, etc. has been disseminated in the training programme to all ULB teams on 31.05.2019, which is enclosed as **Annexure-1**.

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3. The Municipal Engineers are hereby designated as Nodal Officer for the purpose.
4. In view of the onset of monsoon, you are requested to initiate action by 29th June, 2019 to install such bar screens at all critical points of drains, desilt all drains, restore missing slabs / repair damaged slabs.
5. Basic information pertaining to the aforesaid aspect (Format enclosed as **Annexure-2**) may be communicated in the online database through Google Sheets (Link shall be sent separately) and saturate the installation of bar screen in all drains before 7th July 2019. The key polluters who are responsible for letting municipal solid or plastic waste land in the drains are to be identified and stringent action may be taken to prevent recurrence of such incident.
6. In this Department Letter No. 8704 Dated 17.05.2019 (Copy enclosed for ready reference), ^{Annexure-3} instruction has already been issued to take effective steps to arrest solid waste from entering into water bodies in consultation with local officers of Water Resources Department so as to prevent any untoward incident of backflow of water in drains due to clogging.
7. It is reiterated that the Municipal Engineers will be squarely responsible / accountable for any mishap due to dereliction in duty / non-observance of these directions. Appropriate action including criminal prosecution will be taken up against the erring officials.

Yours faithfully,

Director, Municipal Administration &
State Mission Director, SBM(U)

Enclosure: As above

Memo No.

11196

Date:

28/06/19

Copy with attachment forwarded to the Member Secretary, OWSSB all Collectors / all PD-DUDAs / Sanitation Experts of PIU / Team Leader, SBM(U) PMU for information and necessary action.

Director, Municipal Administration &
State Mission Director, SBM(U)

Guidelines for Screening of Solid Waste from Storm Water Drains

OBJECTIVE

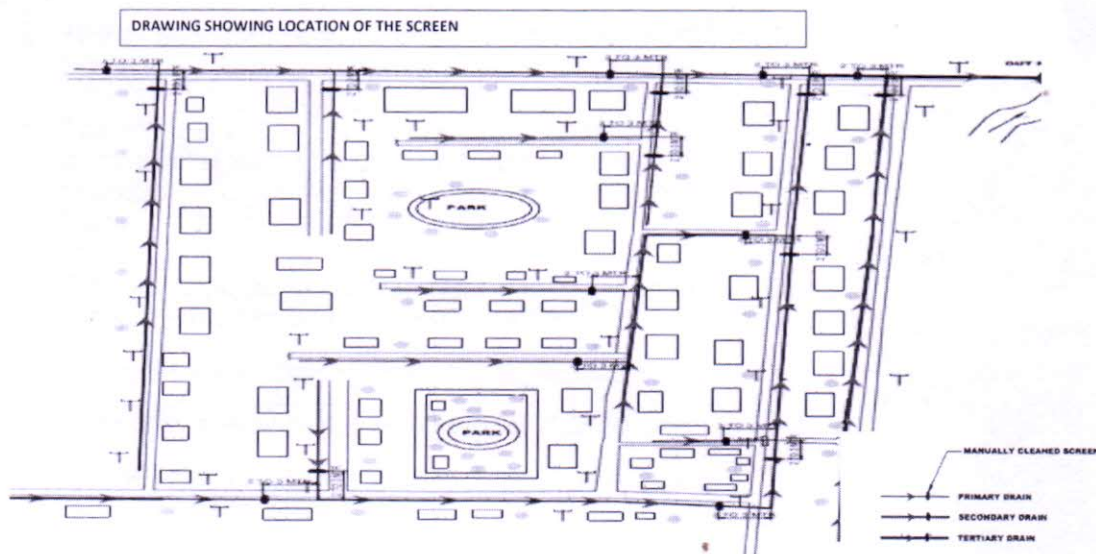
- As per the orders of National Green Tribunal, original Application No. 606/2018, date of hearing: 16.01.2019, in compliance of Municipal Solid Waste Management Rules, 2016,

“All the States and UTs may ensure that all the drains (big or small) are tapped with appropriate measures (wire nets etc.) and no municipal solid or plastic waste is allowed to reach our river system, lakes, waterbodies, ponds, marsh lands and wetlands etc.”

INTRODUCTION

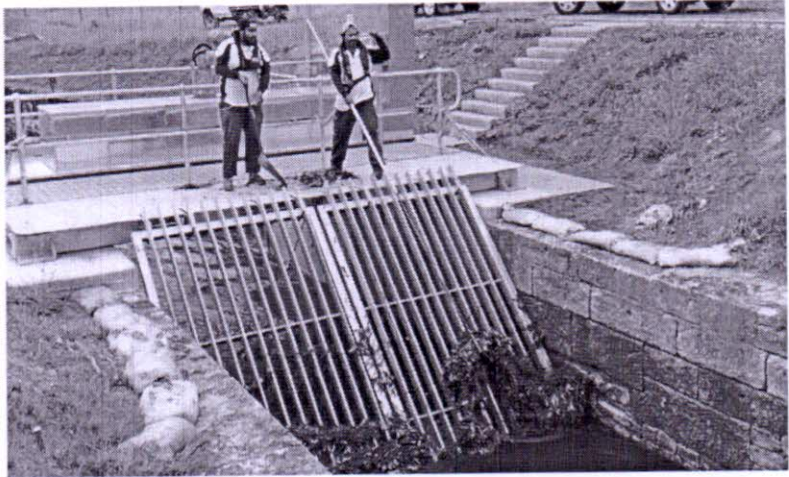
- The objective can be achieved by placing Bar Screens on the out falls of small drains out falling in to main drains or water bodies.
- Similarly, wire nets can be fixed at the out falls of major drains in to the river, sea or water body.
- Screening, by bar screen or wire net are simple and effective methods for removal of floating materials which are mainly sachets, plastic sheet bits, leaves, fibres, rags, etc.
- If these are not removed, it accumulated and choke the drain and can cause contamination to water bodies.
- Screens are to be provided at all outfalls of sub drain to main drain.

PLACEMENT OF SCREENS



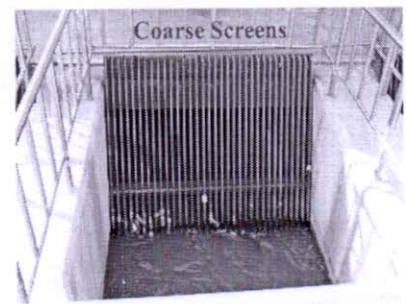
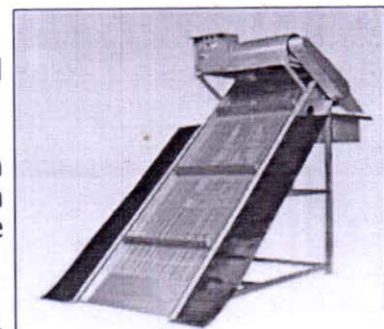
SCREEN

What is Screen: A screening device comprising of flats of rectangular or trapezoidal section placed vertically, inclined or curved and spaced at close and equal intervals across a channel through which water flows, for removal of wood, floating debris, leaves, frigs, rags, etc, found in storm water.



SCREEN

- a) There are Manually Operated and Mechanically Operated Screens.
- b) The Manually Operated Screens are preferred for installation in smaller drains (Secondary/Tertiary Drains) due to ease in operation & maintenance, easily available and can be fabricated in local markets;
- c) Further, depending on the clear spacing between flats/Bars, the screens shall be classified as under:
 - Coarse screens have clear opening above 50 mm
 - Medium screens have clear opening of 25 to 50 mm
 - Fine screens have clear opening of less than 20 mm

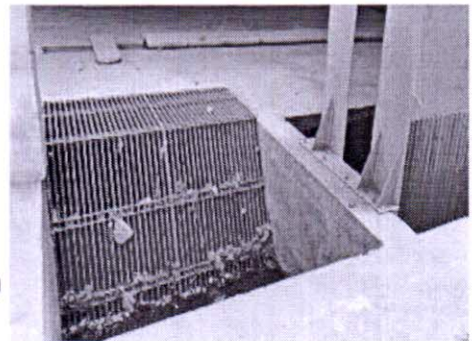


SCREEN

- It is recommended to install **medium screens** in storm water drains for removal of wood, floating debris, leaves, frigs, rags, etc, found in storm water.
- These manually cleaned screens can be fixed in each drain 2-3 meters before junction of the following drain, at an angle of 45 to 60 degrees to the horizontal.
- The suspended/floating material will be trapped at the screen and can be removed manually by the sweeping staff and the trash is to be transferred to the dumping yard by using municipal solid waste collection infrastructure.

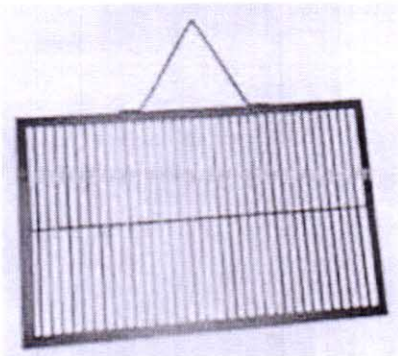
SPECIFICATION

- **Material:** Preferably material of construction of screen shall be MS frame with MS flats with proper anti corrosive coating. Fibre reinforced Plastic sections also can be used if it is readily available in local market.
- **Specification:**
 - The flat shall be 5 to 10 mm in thickness and 25 to 50 mm deep depending on the size of drain.
 - The clear spacing between the flats shall be uniform and it should be 25mm to 50mm depending upon the size of floating material to be checked.



SPECIFICATION

- For drain width up to 750mm. Frame of screen shall also be of angle 50x50x5mm and size of flat shall be 25x5mm. A horizontal member of 50x10 mm shall be provided at approx.600 mm c/c at equal spacing.
- For drain width 1.0 mts to 2.0 mts frame of screen can be of angle of 75X75X8mm and size of flat shall also be 50mmx10mm.
- A horizontal member of 75x10 mm shall be provided at 600 mm c/c (approx.) at equal spacing.
- Provision of wire mesh shall also be made (along with bar screens) to check the thin materials of polythene and paunches.



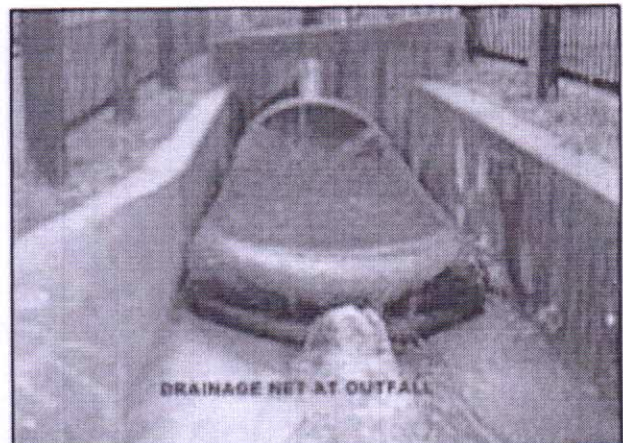
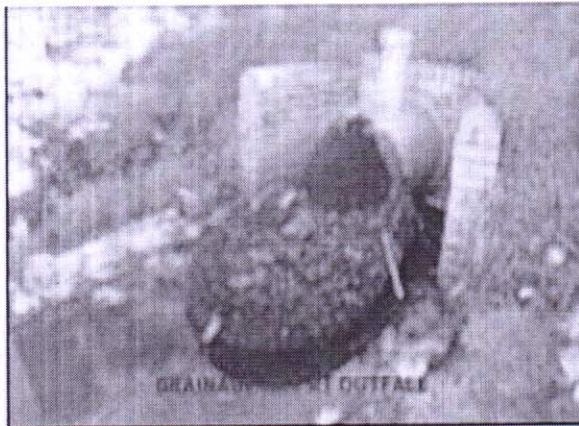
INSTALLATION

- Welding should be done in such a way that it will have a smooth finish on joints and there will be no extra welding material left on bottom or sides of flats.
- Size and location should be selected in such a way that it can be accessed by cleaning staff easily.
- The top of the screen shall be at least 300 mm above the highest flow level in drain or 100mm below top of drain.

INSTALLATION

- The screen shall be fixed with inclination angle between 45 degree and 60 degree from the horizontal.
- The screen shall be embedded in such a manner that the frame, if any, shall offer no obstruction to the flow of storm water, i.e. cross-sectional area of drain should not be reduced after fixing of screen.
- Proper hold fast (minimum length 300mm) has to be provided on both sides and at bottom of drains at spacing not more than 1 mts and at all ends i.e. on top and bottom of drain.

WIRE NET AT THE OUTFALL



Operation & Maintenance

- Special tools (made up of MS rods) for cleaning of screens to be provided to maintenance staff.
- For making access to clean screen, temporary access (scaffolding platform.) shall be provided.
- For collecting and shifting to proper place, wheel barrows to be provided.
- Proper safety PPE, like mask, hand gloves, fluorescent jackets, helmets, safety shoes must be provided to maintenance staff.

Operation & Maintenance

- Each screen should be cleaned daily by the sweeping staff.
- Synchronising of time of cleaning of drain and lifting of waste should be done to avoid clogging and odour problems to the locals.
- Solid waste collected at different locations (*identified collection points*) shall be shifted to dumping yard or landfill site by solid waste management team

Annexure - 2

INFORMATION ON MANAGEMENT OF DRAINS

Name of ULB	Bar Screen Installation		De-silting of drains		Drain Slab	Remarks
	No. of critical points identified	No. of installations completed	Total length of drain (in km)	Total length de-silted (in km)	No. of missing drain slabs repaired / closed to prevent mishap	



Government of Odisha

Housing & Urban Development Department

PT-2
 File No. HUD-SANT- CASE-OP-0010/2018 Letter No.: 8704 Dated: 17.5.2019
 From

Sangramjit Nayak, IAS
 Director, Municipal Administration
 & State Mission Director, Swachh Bharat Mission (U), Odisha

To: The Commissioners of All Municipal Corporations
 The Executive Officers of All ULBs

Sub: Preventing solid waste from entering into water bodies through drains.

Ref: Letter No. 7082 Dated 04.04.2019 of this Department

Madam / Sir,

I would like to draw your attention to the subject cited above and state that as per the directives issued by Hon'ble National Green Tribunal in Order Dated 16.01.2019 and 26.03.2019 in O.A. No. 606/2018, installation of suitable mechanisms such as screen mesh, grill, nets, etc. need to be completed immediately in nallahs, drains (big or small), etc. to arrest solid waste from entering into water bodies such as river systems, lakes, ponds, marshy lands, wetlands, etc. in consultation with the local officers of Water Resources Department. More so, there has to be a suitable mechanism to clean the trapped solid waste in a periodical manner to prevent any untoward incident of backflow of water in drains due to clogging.

Photographs of such installations at different points, covering all drains and nallahs of ULB may please be sent to the undersigned by 30th May 2019 as per attached format.

Enclosure: As stated above.

Yours faithfully,


 Director, Municipal Administration
 & State Mission Director, SBM(U)

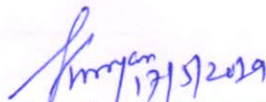
Memo No.

8705

Date:

17.5.2019

Copy with attachment forwarded to the Member Secretary, Odisha Water Supply and Sewerage Board, Bhubaneswar / all Collectors / all PD-DUDAs / Team Leader, SBM(U) PMU for information and necessary action.



Director, Municipal Administration
& State Mission Director, SBM(U)

Format for reporting the installation of suitable mechanisms such as screen mesh, grill, nets, etc. in water bodies such as nallahs, drains (big or small), etc. to arrest solid waste from entering into water bodies

Name of ULB:

Name of Drain:
Name of location where trapping of drain installed:
Date of Installation:
Photograph:

Name of Drain:
Name of location where trapping of drain installed:
Date of Installation:
Photograph:

Name of Drain:
Name of location where trapping of drain installed:
Date of Installation:
Photograph: