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THE

JHARKHAND GAZETTE

EXTRAORDINARY

PUBLISHED BY AUTHORITY

26 FALGUN, 1942 (S)

No. 193

RANCHI, WEDNESDAY, 17TH MARCH, 2021

URBAN DEVELOPMENT & HOUSING DEPARTMENT

NOTIFICATION

16TH MARCH, 2021

No.-7/न०वि०/अधि/स० सो०/102/2013/1092-- In exercise of the powers conferred under clause-89 of the Jharkhand Building Bye-laws, 2016, as amended, the Government of Jharkhand do hereby notify the Jharkhand Building (VIIIth Amendment) Bye-laws, 2021.

Sl.	Chapter	Clause	Sub-clause	Provision	Amended Provision
1	IV	35	Note- (3)	No high rise building (building with a height above 16.4 meters) shall be allowed on a plot size less than 1000 sqm.	**Deleted**
2	IV	42	42.5	Parapet walls and handrails provided on the edges of roof terraces, balcony, verandah, etc shall not be less than 1.0 m and not more than 1.2 m in height from the finished floor level.	**Addendum:-** **42.5.1** Parapet of a suitable height may be constructed to hide installation like water tank and for other such purpose.
3	IV	46	46.4	No projected balcony shall be allowed, on setback less than 2.0m. Projected balcony shall be allowed with a width of 0.9m., where the setback is between 2.0m to 2.5m. For setback more than 2.5m projected balcony shall be	No projected balcony shall be allowed, on setback less than 2.0m. Projected balcony shall be allowed with a width of 0.9m., where the setback is between 2.0m to 2.5m. For setback more than 2.5m projected

<table>
<tr><td></td><td></td><td></td><td></td><td>allowed with a width of 1.2 m. Projected balcony shall only be allowed on the second floor and above floors. Balcony may be allowed on the first floor subject to condition that the side and rear setback of the building is more than 4.5 m. & 4.5m. clear driveway is available for Fire tender movement. 50% of the area on the projected balcony shall be taken into account for calculation of the Floor Area Ratio. No balcony should be provided with fixed grill as it works as fire refuse areas.

600mm. wide projection in setback is permitted as cupboards and it is to be counted in calculating FAR (Floor Area Ratio).</td><td>balcony shall be allowed with a width of 1.2 m.

In addition to single block, for multiple blocks in the campus,projected balcony shall only be allowed on the second floor and above floors. Balcony may be allowed on the first floor subject to condition that the side and rear setback of the building is more than 4.5 m. & 4.5m. respectively clear driveway is available for Fire tender movement.

50% of the area on the projected balcony shall be taken into account for calculation of the Floor Area Ratio. No balcony should be provided with fixed grill as it works as fire refuse areas.

600mm. wide projection in setback is permitted as cupboards and it is to be counted in calculating FAR (Floor Area Ratio).</td></tr>
<tr><td>4</td><td>IV</td><td>48</td><td>48.4</td><td>Individual residential and small commercial buildings, plot size up to 750sqm. may have one basement. However maximum two floor basements/cellars may be permitted to be constructed for plot size above 750sqm. leaving the prescribed set back/open space applicable to the building. Further, in case of apartment/group housing/ commercial/buildings and basements may be allowed to be constructed under the entire plot area leaving minimum of 3m. space from the boundary in front, sides and rear of the premises subject to the following;</td><td>Individual residential and small commercial buildings, plot size up to 750sqm. may have one basement. However maximum two floor basements/cellars may be permitted to be constructed for plot size above 750sqm. leaving the prescribed set back/open space applicable to the building. Further, in case of apartment/group housing/ commercial/buildings and basements may be allowed to be constructed under the entire plot area leaving clear 2m. (minimum) margin for single basement and 3m. (minimum) for double basement space from the boundary in front, sides and rear of the premises subject to the following;</td></tr>
<tr><td>5</td><td>IV</td><td>51</td><td></td><td colspan="2"><u>Addendum:-</u>

51.2 The provisions for rainwater harvesting in various building categories as below:-
<table>
<tr><th>Sl.</th><th>Category / Use</th><th>Provisions to be Made</th><th>Other Conditions</th></tr>
<tr><th>(a)</th><th>(b)</th><th>(c)</th><th>(d)</th></tr>
<tr><td>1</td><td colspan="3">Residential Plotted Housing</td></tr>
<tr><td></td><td>New Proposals</td><td>Construction of RainwaterHarvesting Structure</td><td>Emphasis on both storage andreuse</td></tr>
<tr><td>2</td><td colspan="3">Housing Projects</td></tr>
<tr><td></td><td>New Proposals</td><td>i. Construction of RainwaterHarvesting Structure
ii. Concrete paving to beavoided and permeablematerials to be used for allopen parking spaces</td><td>Indicate the system of Storm Water Drainage, Rainwater Harvesting System and Recharge Well</td></tr>
<tr><td>3</td><td colspan="3">Public and Semi Public Buildings</td></tr>
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	All Proposals	i. Shall have RainwaterHarvesting System andStorage ii. Shall have Recharge pits	Emphasis on both storage andreuse
4	**Commercial / Mixed Use**		
	All Proposals	i. Construction of Rainwater Harvesting System ii. Soft landscape provisionsand open spaces withpercolation pits. iii. Common Treatment planto be part of the integrateddevelopment	Indicate the system of Storm Water Drainage, RainwaterHarvesting System andRecharge Well. Emphasis on both storage andreuse.
5	**Industrial**		
	All Proposals	i. Construction of RainwaterHarvesting System ii. Soft landscape provisionsand open spaces withpercolation pits. iii. Use of abandoned borewells for recharging ofground water iv. Common Treatment plan tobe part of the integrateddevelopment	Indicate the system of StormWater Drainage, RainwaterHarvesting System and Recharge Well. Provision to be made not toinject contaminated water into recharge structures inindustrial areas. Care to be taken to keep suchstructures away from sewerlines, septic tanks, soak pits,landfill and other sources ofcontamination.

51.3 Methods:-

The methods of ground water recharge mainly are:

51.3.1 Urban Areas - Roof Top Rain Water /Storm runoff harvesting through

51.3.1.1 Recharge Pit
51.3.1.2 Recharge Trench
51.3.1.3 Tube well
51.3.1.4 Recharge Well

51.3.2 Rural Areas - Rain Water Harvesting through

51.3.2.1 Gully Plug
51.3.2.2 Contour Bund
51.3.2.3 Gabion Structure
51.3.2.4 Percolation tank
51.3.2.5 Check Dam/ Cement Plug/ Nala Bund
51.3.2.6 Recharge shaft
51.3.2.7 Dug well Recharge
51.3.2.8 Ground Water Dams

51.4 **Techniques:-**

Urban Area-In urban areas, rain water available from roof tops of buildings, paved and unpaved areas goes waste. This water can be recharged to aquifer and can be utilized gainfully at the time of need. The rain water harvesting system needs to be designed in a way that it does not occupy large space for collection and recharge system. A few techniques of roof top rain water harvesting in urban areas are described below.

51.4.1 Roof Top Rain Water Harvesting Through Recharge Pit

51.4.1.1 In alluvial areas where permeable rocks are exposed on the land surface or atvery shallow depth, roof top rain water harvesting can be done through rechargepits.

51.4.1.2 The technique is suitable for buildings having a roof area of 100 sq. m and areconstructed for recharging the shallow aquifers.

51.4.1.3 Recharge Pits may be of any shape and size and are generally constructed 1 to 2mwide and 2 to 3m deep which are back filled with boulders (5-20 cm), gravels (5-10mm) and coarse sand (1.5-2mm) in graded form. Boulders at the bottom, gravels inbetween and coarse sand at the top so that the silt content that will come withrunoff will be deposited on the top of the coarse sand layer and can easily beremoved. For smaller roof area, pit may be filled with broken bricks/ cobbles.

51.4.1.4 A mesh should be provided at the roof so that leaves or any other solid waste /debris is prevented from entering the pit and a de-silting /collection chamber mayalso be provided at the ground to arrest the flow of finer particles to the rechargepit.

51.4.1.5 The top layer of sand should be cleaned periodically to maintain the recharge rate.

51.4.1.6 By-pass arrangement has to be provided before the collection chamber to reject thefirst showers.

51.4.2 Roof Top Rain Water Harvesting Through Recharge Trench

51.4.2.1 Recharge trenches are suitable for buildings having roof area of 200-300 sq.m. and where permeable strata are available at shallow depths.

51.4.2.2 Trench may be 0.5 to 1 m wide, 1 to 1.5m deep and 10 to 20m long dependingupon the availability of water to recharge.

51.4.2.3 These are back filled with boulders (5-20cm), gravel (5-10mm) and coarsesand (1.5-2mm) in graded form – boulders at the bottom, gravel in betweenand coarse sand at the top so that the silt content that will come with runoffwill be coarse sand at the top of the sand layer and can easily be removed.

51.4.2.4 A mesh should be provided at the roof so that leaves or any other solidwaste/debris is prevented from entering the trenches and a de-silting/collectionchamber may also be provided on ground to arrest the flow of finer particles tothe trench.

51.4.2.5 By-pass arrangement be provided before the collection chamber to reject the firstshowers.

51.4.2.6 The top layer of sand should be cleaned periodically to maintain the recharge rate.

51.4.3 Roof Top Rain Water Harvesting Through Existing Tubewells

51.4.3.1 In areas where the shallow aquifers have dried up and existing tube wells aretapping deeper aquifer, roof to rain water harvesting through existing tube wellcan be adopted to recharge the deeper aquifers.

51.4.3.2 PVC pipes of 10cm dia are connected to roof drains to collect rainwater. Thefirst roof runoff is let off through the bottom of drainpipe. After closing thebottom pipe, the rainwater of subsequent rain showers is taken through a T toan online PVC filter. The filter may be provided before water enters the tube wells.The filter is 1–1.2m in length and is made up of PVC pipe. It's diameter shouldvary depending on the area of roof, 15cm if roof area is less than 150sq m and20cm if the roof area is more. The filter is provided with a reducer of 6.25cm onboth the sides. Filter is divided into three chambers by PVC screens so that filtermaterial is not mixed up. The first chamber is filled up with gravel (6-10mm),middle chamber with pebbles (12-20mm) and last chamber with bigger pebbles(20-40mm).

51.4.3.3 If the roof area is more, a filter pit may be provided. Rainwater from roofs istaken to collection/de-silting chambers located on ground. These collectionchambers are interconnected as well as connected to the filter pit through pipeshaving a slope of 1:15. The filter pit may vary in shape and size dependingupon available runoff and are back-filled with graded material, boulder at thebottom, gravel in the middle and sand at the top with varying thickness (0.30-0.50m) and may be separated by screen. The pit is divided into two chambers,filter material in one chamber and other chamber is kept empty toaccommodate excess filtered water and to monitor the quality of filtered water.A connecting pipe with recharge well is provided at the bottom of the pit forrecharging of filtered water through well.

51.4.4 Roof Top Rain Water Harvesting Through Trench With Recharge Well

51.4.4.1 In areas where the surface soil is impervious and large quantities of roof wateror surface runoff is available within a very short period of heavy rainfall, theuse of trench/ pits is made to store the water in a filter media and subsequentlyrecharge to ground water through specially constructed recharge wells.

51.4.4.2 This technique is ideally suited for area where permeable horizon is within3m below ground level.

51.4.4.3 Recharge well of 100-300 diameter is constructed to a depth of at least 3 to 5mbelow the water level. Based on the lithology of the area well assembly isdesigned with slotted pipe against the shallow and deeper aquifer.

51.4.4.4 A lateral trench of 1.5 to 3m width and 10 to 30m length, depending upon theavailability of water is constructed with the recharge well in the centre.

				51.4.4.5 The number of recharge wells in the trench can be decided on the basis ofwater availability and local vertical permeability of the rocks. 51.4.4.6 The trench is backfilled with boulders, gravels and coarse sand to act as a filtermedia for the recharge wells. 51.4.4.7 If the aquifer is available at greater depth say more than 20m, a shallow shaft of2 to 5m diameter and 3-5m deep may be constructed depending uponavailability of runoff. Inside the shaft a recharge well of 100-300mmdia isconstructed for recharging the available water to the deeper aquifers. At thebottom of the shaft a filter media is provided to avoid choking of rechargewell.

By the order of the Governor of Jharkhand

Vinay Kumar Choubey,
Secretary to Government
Urban Development & Housing Department.

झारखण्ड राजकीय मुद्रणालय, राँची द्वारा प्रकाशित एवं मुद्रित,
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