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IS 13727 (1993): Guide for requirements of cluster planning for housing [CED 51: Planning, Housing and pre-fabricated construction]
Indian Standard

REQUIREMENTS OF CLUSTER PLANNING FOR HOUSING — GUIDE

UDC 721.011.22: 69.032.2
AMENDMENT NO. 1 AUGUST 1994
TO
IS 13727: 1993 REQUIREMENTS OF CLUSTER PLANNING FOR HOUSING — GUIDE

(Forward) — Add the following after para 4:

'Cluster planning is one of the better options available which provide appropriate physical spaces that are conducive to community life and development. Wherever such planning is adopted, this should be regulated by the standards recommended here.'

(Page 3, clause 4.4) — Modify the last sentence as follows:

'Maximum cluster courtyard width and breadth shall be 13 m.'

(Page 3, clause 4.6) — Modify the second sentence as follows:

'While bridging the pedestrian pathway minimum clearance should be one storey height.'
FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Housing Sectional Committee had been approved by the Civil Engineering Division Council.

Cluster planning is recognised to be consistent with traditional Indian life style. This has also been an accepted traditional practice all over the world. In the recent years, however cluster planning has been largely neglected. The traditional changes of the modern age which made people more individualistic and self-centred, the large city anominity, the loosening of family and community ties, the advent of the automobile and the desire to bring it almost in the house, tended to make cluster planning irrelevant.

In the recent years, there has been an upsurge of projects to resettle slum dwellers and provide housing for the urban poor. Several studies have been carried out of spontaneously developed settlements. We have now rediscovered the virtues of low rise high density development in the context of affordability and incremental growth. There have been number of innovative projects being developed. The cluster concept has been accepted now as economic necessity and desirable socially to promote desired life style.

Cluster planning has proved to be a powerful urban design tool, yet number of conventional byelaw provisions such as set back and coverage hinder efficient planning based on cluster concept. It has, therefore become necessary to devise guidelines that will permit imaginative cluster planning.

The composition of the committee responsible for the formulation of this standard is given in Annex A.
Indian Standard

REQUIREMENTS OF CLUSTER PLANNING
FOR HOUSING — GUIDE

1 SCOPE

1.1 This standard provides guidelines for the planning and building requirements of housing developed as clusters.

1.2 Provision of the guidelines are applicable to all housing projects taken up by public, private or co-operative agencies.

2 REFERENCES

2.1 The following Indian Standards are necessary adjuncts to this standard:

- IS No. Title
  - SP 7 : 1983 National building code of India (first revision)
  - Guide for requirements of low income housing Part I Urban area

3 TERMINOLOGY

3.0 For the purpose of this standard the following definitions shall apply:

3.1 Cluster

Plots or dwelling units or housing grouped around an open space. Ideally housing cluster should not be very large. In ground and one storeyed structures not more than 20 houses should be grouped in a cluster. Clusters with more dwelling units will create problems in identity, encroachments and of maintenance (see Fig. 1).

3.2 Group Housing

Group or multi-storeyed housing for more than one dwelling unit, where land is owned jointly (as in case of co-operative societies or the public agencies, such as local authorities or housing boards, etc) and the construction is undertaken by one agency/authority (see Fig. 2).

3.3 Cluster Plot

Plot in a cluster as defined at 3.1 will be called cluster plot.

3.4 Group Open Space

Open space within a cluster is neither public open space nor private open space. Each

**Fig. 1 Cluster**

**Fig. 2 Cluster Group Housing**
dwellings unit around the cluster open space will have a share and right of use in it. The responsibility for maintenance of the same will be collectively shared by all the dwelling units around. This space will be called as group open space.

3.5 Cluster Court Town House

A dwelling in a cluster plot having 100 percent or nearly 100 percent ground coverage with vertical expansion, generally limited to one floor only and meant for self-use, will be called Cluster Court Town House (see Fig. 3).

3.6 Density

The residential density is expressed in terms of number of dwelling units per hectare.

3.7 Net Density

Where such densities are expressed exclusive of community facilities and open spaces provision and major roads (including incidental open spaces), there will be net residential densities. Where these densities are expressed taking into consideration the required open space provision and community facilities and major roads, these would be gross residential densities on neighbourhood level, sector level or town level, as the case may be. The provision of open spaces and community facilities will depend on the size of the residential community.

Incidental open spaces are mainly open spaces required to be left around and in between two buildings to provide light and ventilation.

3.8 Independent Cluster

Clusters as defined at 3.1, will be considered as independent clusters when surrounded from all sides by vehicular access roads and/or pedestrian paths (see Fig. 4).

3.9 Back to Back Cluster

Clusters when joined back to back and/or on sides will be considered as 'back to back clusters' (see Fig. 5).

3.10 Interlocking Cluster

Clusters when joined at back and on sides with at least one side of a cluster common and having some dwelling units opening onto or having access from the adjacent clusters will be considered as interlocking clusters. Dwelling units in such clusters should have at least two sides open to external open space. Houses in an interlocking cluster can have access, ventilation and light from the adjacent and cluster and should also cater for future growth (see Fig. 6).
3.11 ‘Cul-de-Sac’ Cluster

Plots/dwelling units when located along a pedestrianised or vehicular ‘cul-de-sac’ road will be considered as ‘cul-de-sac’ cluster (see Fig. 7).

![Fig. 7 Cul-de-Sac Cluster](image)

3.12 Closed Clusters

Clusters with only one common entry into cluster open space (see Fig. 8).

![Fig. 8 Closed Cluster](image)

3.13 Open Clusters

Clusters where cluster open spaces are linked to form a continuous open space can be considered as open cluster (see Fig. 9).

![Fig. 9 Open Cluster](image)

3.14 External and Internal Faces of Cluster

Building edges facing the cluster open spaces will be called inner faces of cluster and building edges facing the adjacent cluster open space (as in case of interlocking cluster) of the surrounding pedestrian paths or vehicular access roads will be called as external faces of cluster.

4 PLANNING

4.1 Plot Size

The minimum plot size permissible shall be 15 m² with 100 percent ground coverage and an FSI of two. 100 percent ground coverage and FSI of 2 will be applicable up to plot size of 25 m². For plot sizes beyond 25 m² provision of IS 8888 (Part 1) : 1993 will be applicable.

4.2 Plot/Plinth Area for Slum Resettlement on Same Site

In case of slum resettlement on the same site, minimum area may be reduced to 12.5 m² with potential for adding another 12.5 m² on first floor with an internal staircase.

4.3 Group Housing

Group housing can be permitted within cluster housing concept. However, dwelling units with plinth areas up to 20 m² should have scope for adding a habitable room. Group housing in a cluster should not be more than 15 m in height.

4.4 Size of Cluster Open Space

Minimum dimensions of open spaces shall be not less than 6 m or 3/4th of the height of buildings along the cluster open space, whichever is higher. The area of such cluster court shall not be less than 36 m². Group housing around a cluster open space should not be normally more than 15 m in height. Maximum cluster width and breadth can be 13 m.

4.5 Setbacks

No setbacks are needed from the edges of cluster as pedestrian/vehicular access roads surrounding the cluster.

4.6 Right to Build in Sky

Pedestrian paths and vehicular access roads to clusters separating two adjacent clusters can be bridged to provide additional dwelling units. While bridging the pedestrian path minimum clearance should be 2 storey height, length of such bridging should be not more than two dwelling units. While bridging the vehicular access roads minimum clearance should be 6 m.

4.7 Vehicular Access

A right of way of at least 6 m width should be provided up to the entrance to the cluster to facilitate emergency vehicle movement up to cluster.

4.8 Pedestrian Paths

Minimum width of pedestrian paths shall be 3 m.
4.9 Width of Access Between Two Clusters
Built area of dwelling unit within cluster shall have no setbacks from the path or road, space. Hence, the height of the building along the pathway or roads shall be not less than 60 percent of the height of the adjacent building subject to minimum of 3 m in case of pathway and 6 m in case of vehicular access.

4.10 Density
Cluster planning methodologies result in higher densities with low rise structures. With per dwelling unit covered area of 15 m² densities of 500 dwelling units per hect. (net) shall be permissible. Densities higher than this should not be allowed.

4.11 Group Toilet
Cluster housing for economically weaker section families can have group toilets at the rate of one WC, one bath and a washing place for three families. These shall not be community toilets, as keys to these toilets shall be only with these three families, making them solely responsible for the maintenance and upkeep of these toilets.

5 OTHER REQUIREMENTS

5.1 Requirements of Building Design
With the exception of clauses mentioned above, requirements of building will be governed by the provision of National Building Code 1980 and IS 8888 (Part 1) : 1993.

5.2 Requirements of fire safety, structural design, building services and plumbing services shall be as specified in SP 7 : 1983.
ANNEX A
( Foreword )

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School of Planning and Architecture, New Delhi
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Delhi Development Authority, New Delhi
Central Building Research Institute, Roorkee
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Building Materials and Technology Promotion Council, New Delhi
Public Works Department, Government of Rajasthan, Jaipur
CIDCO of Maharashtra Ltd, New Bombay
Housing and Urban Development Corporation, New Delhi
Tamil Nadu Slum Clearance Board, Madras

The Mud Village Society, New Delhi
Housing Department, Government of Meghalaya, Shillong
Department of Science and Technology (DST), New Delhi
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