An understanding of Plot area and Representative block

Executive Summary

This document is intended to provide a good understanding on the consideration of the plot area and the representative blocks.

This understanding will help in easing the calculations mainly pertaining to site level such as landscaping, Rain water harvesting, sewage treatment plants, waste management etc.

Definitions

• Representative block

As per section 3.2 of the ECSBC-Residential code, If a building project has more than one building block, each building block is required to comply with the code unless specified otherwise.

A representative block as the name suggests is a block from a group of identical blocks/towers/buildings, which can be taken as a typical block for showing compliance for the entire group, which means if the representative block is compliant, then every block/towers/building which is identical in terms of physical and thermal characteristics including but not limited to features such as orientation, floors, built up area, foot print area etc. shall also become compliant and the user need not showcase compliance for individual blocks. There can be one or many representative blocks in a project based on design parameters.

"Plot area" on the project level tab?

The plot area refers to the total land area, including the space occupied by buildings and any auxiliary features such as carports, landscaping, driveways, and other built or unbuilt spaces within the boundary of the project site containing one or more groups of representative blocks.

• Plot area" on block level tab?

The plot area refers to the total land area, including the space occupied and any auxiliary features such as carports, landscaping, driveways, and other built or unbuilt spaces covered by a group of blocks which can be categorized under one representative block. This is a virtual boundary to segregate plot areas of each group of blocks forming a single representation for compliance evaluation. The sum of plot areas of all representative blocks is equal to the plot area of the project.



https://econiwas.com/replicable-design-

tool/mastersiteplan.php?value=Multifamily%20building&state= 11&city=41&id=22

Further Explanation with example

- An example project has a site area of 10,000 sq.m. It is a housing project with Multi-Family dwelling units comprising of 1BHK, 2BHK and 3 BHK typologies.
 - 1BHK 3 Blocks, typical blocks
 - 2 BHK 6 Blocks, typical blocks
 - 3 BHK 2 Blocks, typical blocks

Representative block: A typical block in each of the above category is selected.

- 1BHK Representative Block A
- 2 BHK Representative Block B
- 3 BHK Representative Block C





Footprint area of representative block is 500 sqm

Total footprint area is 500x3 = 1500 sqm.

Representative Block-A



Plot Area-1= 2500 sqm.

Remaining exterior area= (Plot Area-1) – Total Buildings footprint area = (2500 – 1500) sqm.

Remaining exterior area=1000 sqm.

Representative Block-A



Points to remember

- 1. Use the "Representative Block apportioning and avg U value calculators" to ease the process of apportioning site level sections like Renewable energy, Landscaping, Rain water harvesting etc. to Representative block level.
- 2. A representative **Block** is a Building/Tower/Apartment/Villa that represents identical physical properties such as orientation, footprint area, dwelling units no., types and area etc. within a cluster of buildings.
- 3. As per the section 3.2 Code Compliance, the compliance shall be evaluated at each representative block level.
- 4. Sum of plot areas (virtual boundaries) of each representative block cluster must be equal to the total plot area of the site.
- 5. For section 6.2.5 Recycle & Reuse of Wastewater, the plot area of the site shall be considered for evaluation. For remaining plot area calculation, the plot area at representative block level shall be considered
- 6. For Rain Water Harvesting calculations in the tool, the catchment area shall be calculated as roof area of representative block multiplied by no. of identical blocks. In case RWH system is designed for multiple representative blocks together, the RWH capacity to be segregated for each representative block for the calculation in the tool. Sewage treatment calculations, Landscaping calculations will also be done in a similar way as briefed for Rainwater harvesting.
- 7. The report shall be generated only for compliant blocks only.