

Focus on CSIR SPACE PLANNER

CSIR SPACE PLANNER software

The CSIR has released a basic calculator to determine the number of social facilities required for a pre-defined population and the basic associated land requirements for these. The tool, includes custom sets of standards compiled for different settlement contexts which will be expanded over a period of time.

What is the SPACE PLANNER?

The CSIR has developed the Space Planner, a free, web-based tool for calculating the social facility demand and associated land use requirements for a given development. It takes into consideration factors such as land availability, housing densities and family sizes. It can be used to calculate requirements for new developments or used post development to determine the variance of the de facto supply to the facility supply standards. It should be used only as an indication of possible land requirements to be supported by other specific planning activities.

To make use of this free tool logon on to <http://spaceplanner.csir.co.za> and create your own login name and password.

Purpose

The Space Planner tool is intended to be used to calculate:

1. A social facility demand for a city, suburb or designated development area. This is calculated in terms of population numbers, density and land area for those facilities that are included in a named and designated standards table entered/selected.

2. The land required to house a set number of people at a given density and the associated land requirement for social facilities.
3. The number of people/dwellings (and their associated social needs) that can be accommodated in a predetermined land area, given assumptions regarding family size and development density.
4. The developer contribution with respect to the land area equivalent of social facilities - if policies regarding this are in place.

Further data and model changes to the Space Planner are needed before a rough estimate of the land required for commercial and employment purposes can be calculated.

Calculation types

There are three basic calculation approaches that can be used.

TYPE 1: For a residential-only area with a given land area, density and family size - calculate what additional land will be necessary to create a fully serviced settlement. This refers only to land for social facilities and excludes land for commercial and employment generation.

TYPE 2: In the case of land being available that must accommodate both housing and associated facilities, one can calculate the area needed for housing and that for social facilities. You may test the impact of a range of densities and facility standards on the social facility land requirement.

TYPE 3: For a predetermined target population calculate the land requirement for both housing and social facilities.

The results are highly dependent on the social facility standards applied. The onus rests with the user to verify with the relevant local authority that the standards with respect to population thresholds, capacity and land use requirement are valid and up to date.

To promote the ongoing research on the most used or appropriate standards, the CSIR will be able to view the standards you use, but these will not be published or linked to individual projects. This will contribute to the national research effort regarding standardisation of social facility provision. It is the researchers' hypothesis that differentiation across different development contexts is required for certain facility types while for others 'one size may fit all'.

This tool is not a spatial tool in that it does not evaluate the location of these facilities in relation to the density of, or travel distance to, their target population. To evaluate the relationship between facility location, size, target market and travel distance, a more sophisticated approach is required. For more details on this follow the link www.csir.co.za/Built_environment/Planning_support_systems/docs/poster55_lowres.pdf

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