

CALCULATING DENSITIES

GROSS SITE AREA

For the purposes of determining housing density, 'gross site area' is the total land area as part of the development. Infrastructure and services serving a wider area (such as parks and open space) are considered part of the gross site area. This includes:

- Major distributor roads.
- Primary schools, churches, shopping areas etc.
- Open spaces serving the wider areas.
- Significant landscape buffering strips.

NET SITE AREA

Net site area is the land that is available for development. It is also referred to as the area of developable land. The net site area is more than the land for dwellings and private space and includes other areas that contribute to the use and enjoyment directly linked to the developed dwellings. This includes:

- Access roads within the site.
- Private garden space.
- Car parking space.
- Incidental open space.
- Children's play areas.

To be clear, infrastructure and services which are directly associated with the use and enjoyment of the developed dwellings are included in the net site area. Infrastructure and services serving a wider area (such as parks and open space) will not be counted towards the net site area, and are therefore considered as part of the gross site area.

GROSS TO NET SITE RATIOS

In planning practice it is common to determine the net site area as a percentage of the gross site area, known as the gross to net ratio. This will not be the same for every site but depends on the site size. Various studies have been carried out on this issue and the ratios below are taken from research¹. The gross to net ratio tends to decrease with larger sites, as more space is reserved for other uses as primary schools, shopping areas, open space and landscape buffer strips to serve the larger development that is proposed, whereas smaller sites are most likely to contribute to such services through developer contributions. In other words, proportionally more of a smaller site is likely to be directly developed as housing than is a larger site.

The net site area should always be determined by using available data on layout and design and site specific characteristics. If no or limited data is available, the following ratios can be used as a guideline:

SITE AREA	RATIO
< 0.4 hectares	100% gross to net ratio
0.4 - 2 hectares	75 - 90% gross to net ratio
> 2 hectares	50 - 75% gross to net ratio

For Cornwall's Site Allocations DPD estimated capacity for housing was based on 60% of the site area being developed at a rate of 35 dwellings per hectare (where 40% of land was assumed for infrastructure, including open space). For

employment the assumption was 4,000sqm per hectare.

In a study by Telford and Wrekin Council², which is an area including a new town but also a large rural area, the following guidelines are suggested.

A gross to net ratio of 95 - 100% for sites less than 1 hectare;

A gross to net ratio of 75 - 95% for sites between 1 and 2 hectares; and

A gross to net ratio of 50 - 75% for sites over 2 hectares.

¹ ATLAS, Approaches to establishing basic site capacity and potential density of future development (2013)

² Telford & Wrekin Council Local Plan 2011 – 2031 Technical Paper. Density and net site area study, July 2015.