

MUD-Lab Toolkit The Principles of Urban Blocks

This document provides an introduction to the urban block concept, alongside an assessment of what makes up an urban block, how they are used and how you can design them successfully.

Disclaimer: This handbook does not replace the practical session

A

Introduction

This Toolkit provides a high-level summary of the size of urban blocks which you can reference when designing places. For further detailed information you can refer to the Urban Design Handbook, as well as the complementary MUD-Lab Toolkits, particularly in the Design section.

It is important to remember that this Toolkit, alongside the documents referenced above, provide guidance on the size of blocks. This guidance should be considered as a starting point for your designs but should be applied flexibly to fit the context and character of the site which you are designing. It is the role of the urban designer to provide guidance on the layout, size and character of the built environment, which sets parameters within which architects then design the buildings in detail.

Blocks are flexible and there is no fixed way in which blocks must be designed, however this Toolkit outlines the important principles and provides a basis to start from when designing a masterplan.

B

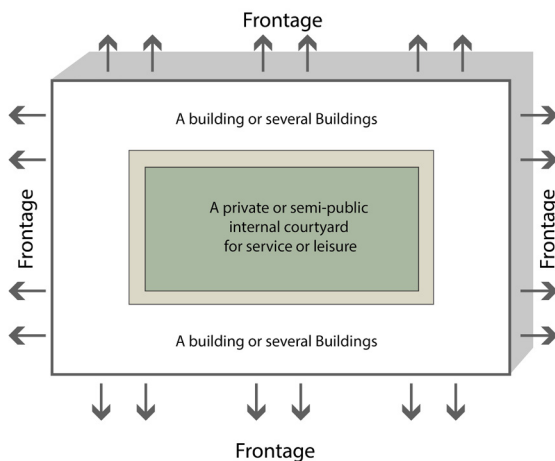
Purpose

In order to design successful places, you need to have a clear idea of the intended use or uses for the site / area. This is informed by the analysis of your site and its context (see Toolkit Group C), as well as the brief provided by the client. Once you have identified the appropriate uses for the site (or are at a stage where you are testing different options) you can start thinking about how to design a layout which will deliver these uses.

This Toolkit should be considered alongside the Size of Buildings and Size of Streets and Spaces Toolkits.

It is good practice to begin the design process by creating a layout of perimeter blocks. In the basic perimeter block, buildings front outwards, providing activity and natural surveillance onto streets, and the inside of the block is reserved for private gardens, parking and servicing.

Perimeter Block Principles

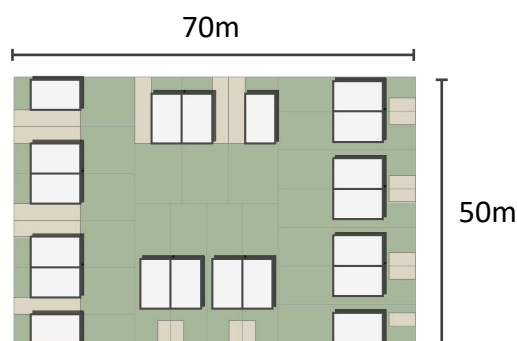


Below are the dimensions for four types of block, illustrated at a high-level, which provide a useful reference when you are beginning your immature option design. It is also useful to have these dimensions in mind when thinking about your concept - even at this stage you should be measuring your site to understand how many blocks of development it will accommodate, and therefore whether you have space to provide routes through the middle of your site (inward-looking) or whether your main routes will be existing streets along the site edges (outward-looking).

It is important to consider your site in 3D at an early stage in the design process. When you are designing your block layout you should be thinking about the heights of buildings and how this relates to the site context and edges.

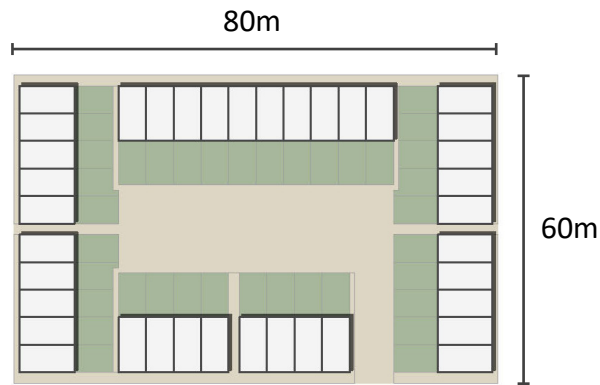
All of the following are examples - blocks can be designed in different shapes and sizes. This is a starting point for your design work only.

Low-Rise Semi-Detached Residential Block



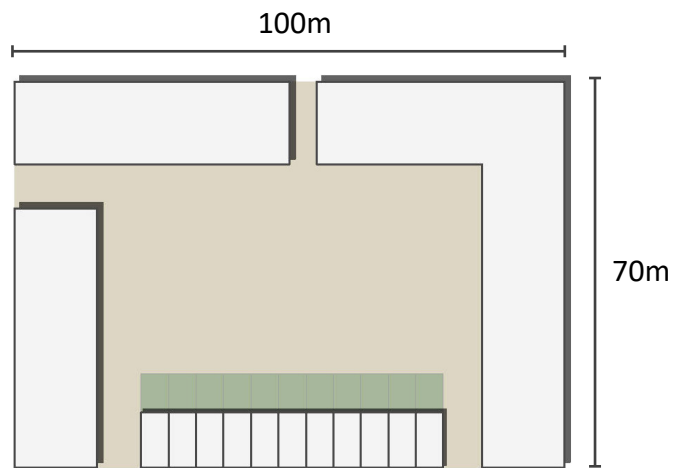
- Suburban character
- Not typically used in cities / urban centres
- Individual front doors onto streets
- Private gardens inside the block
- Parking to the front or side of houses
- Servicing from streets to the front of houses

Low-Mid-Density Townhouse Residential Block



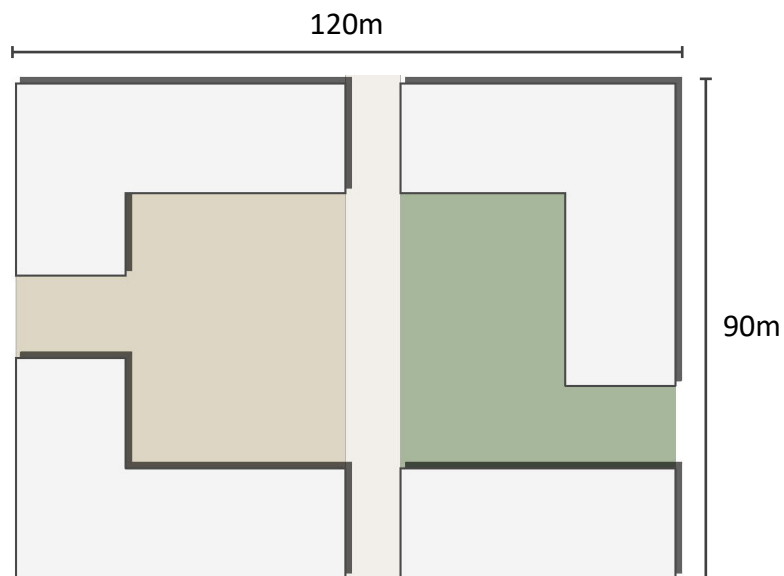
- Bridges the gap between lower density suburban areas and high-density urban areas
- Private gardens and parking within the centre of the block
- Servicing within the centre of the block

Mid-High Density Residential Block



- Urban scale
- Useful interface with existing houses
- Apartments shared front door / lobby facing outwards onto the street
- Private or semi-private green space / public realm inside the block
- Parking inside the block

High-Density Apartment Block



- Typical of urban areas
- Lower-rise apartments also found in suburban developments
- Block can be broken up by route through the centre
- Apartments shared front door / lobby facing outwards onto the street
- Private or semi-private green space / public realm inside the block
- Parking inside the block

Parking & Cycle Storage

The size of cars and parking spaces is covered in the Toolkit on The Size of Spaces. The 90 degree parking arrangement is most appropriate within the centre of blocks. Consideration should be given to pedestrian circulation space and access to private gardens from the parking court.

Cycle storage can also be provided within the centre of the block, particularly where the block is made up of apartments.

Servicing & Bins

Storage for bins should be provided outside of buildings, typically within the interior of a block. For apartments this should be a central storage location, for retail and commercial buildings this should be a private space directly adjacent to the building. Bin storage areas should be accessible by a refuse vehicle, with space required for turning.

Gardens & Privacy

In low to mid density areas, distances between the back of two residential buildings should be a minimum of 21m. This distance can be reduced, particularly in urban areas, where building design retains appropriate privacy. Private gardens in suburban areas are typically 10m in length. Again, this can be reduced in urban areas, typically requiring an alternative amenity space such as terrace or balcony.

Block Analysis

How to Analyse a Block

So much can be learned from studying your surroundings. Many cities are made up of a clear urban block pattern which may not be immediately recognised from street level, but is clear from an aerial view. These patterns form the basis of the urban fabric and create legibility for city users.



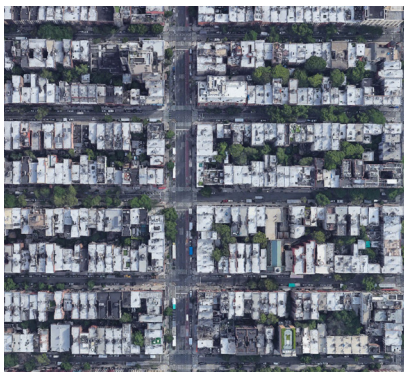
Barcelona



Amsterdam



Vienna



New York City



Athens



Stockholm

Perimeter blocks are used in urban design as they provide a number of benefits for placemaking. The perimeter block structure creates defined public and private spaces (although the private space inside the block can sometimes be semi-public.) The structure focuses development activity onto the public-facing edges, which is particularly useful for commercial buildings, in maximising the customer-business interface.

In design terms, perimeter blocks are useful as they are flexible. The concept can be easily applied and adapted to the local character through the materials and individual building scales which make up the block. The private interior of the block is also adaptable, depending on the most appropriate use for the buildings - this could be car parking, servicing or private amenity space.

Block Analysis

When walking around any city, take a look at the blocks which make up the urban fabric. Consider how they work by sketching out the block and annotating:

- Its size (measure from Google Earth or estimate with strides)
- Uses / function
- Building heights (these may vary)
- Can you see the inside of the block? If so how is it used?
- How is the block serviced?
- What does the interface with the streets look like?
- What is the context?

There are additional elements which you can consider such as corner detailing and materials. These are covered in separate Toolkits.

Block Analysis Example - Hulme

Here we will look at the makeup of a block in Hulme, an area which neighbours the University of Manchester. It is important to remember that many of the blocks you will come across in your local area may not follow all of the perimeter block principles perfectly, however this gives you the opportunity to understand which parts of these blocks do and don't work, and why.



c.87m x 65m

Mix of 2-storey terraced houses and 3 - 4 storey apartments with corner ground floor retail unit and 4 - 5 storey student accommodation

2 x vehicular access routes into the block interior, accessing two separate car parks. Additional pedestrian route into block interior. Block interior also includes private rear gardens and cycle storage

Set back of corner building creates a small area of public realm

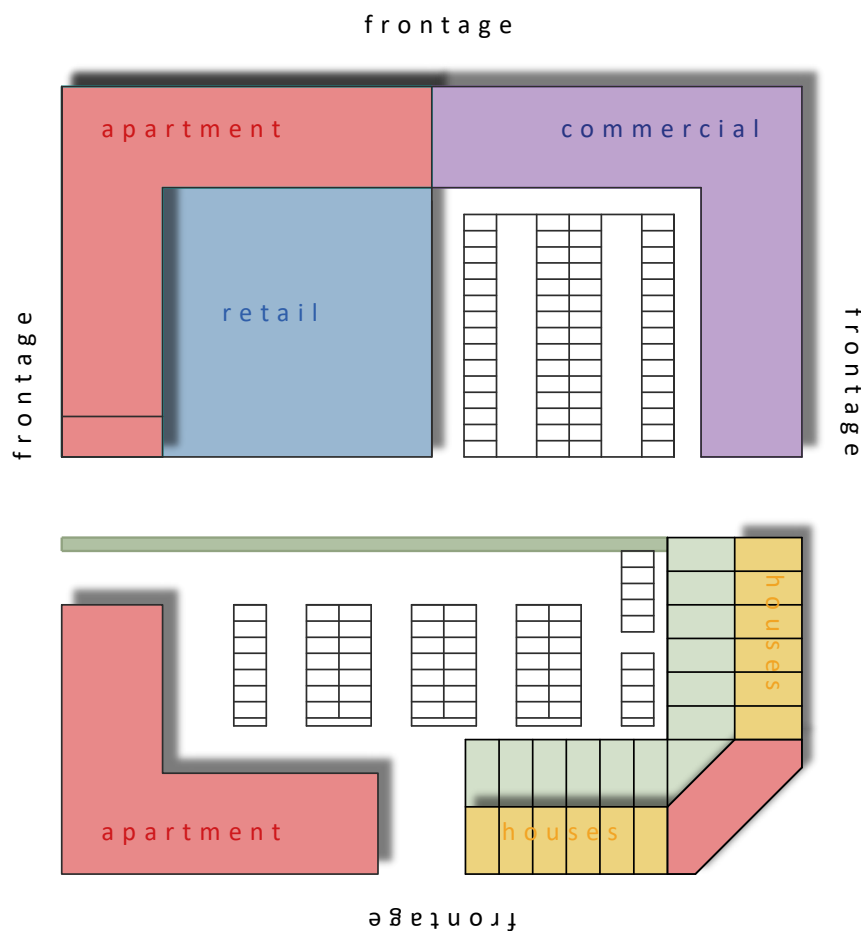
Private front gardens and frontage parking create setback from the street

Planting creates a private buffer between apartments and pavement

Servicing for apartments is located in the block interior, however some terraced houses and corner retail unit appear to be serviced from the street

When designing a large supermarket, it is common to see a square 'box' surrounded by car parking. It is however preferable to incorporate even a large supermarket footprint into the design of a wider block. In urban areas it has recently become more common to see the 'box' model supermarket redeveloped into a mixed use block*.

The below example shows how apartments can be delivered above a supermarket building. In this example the block is completed by office, apartment and townhouse uses. Private gardens and car parking is provided within the interior of the block.



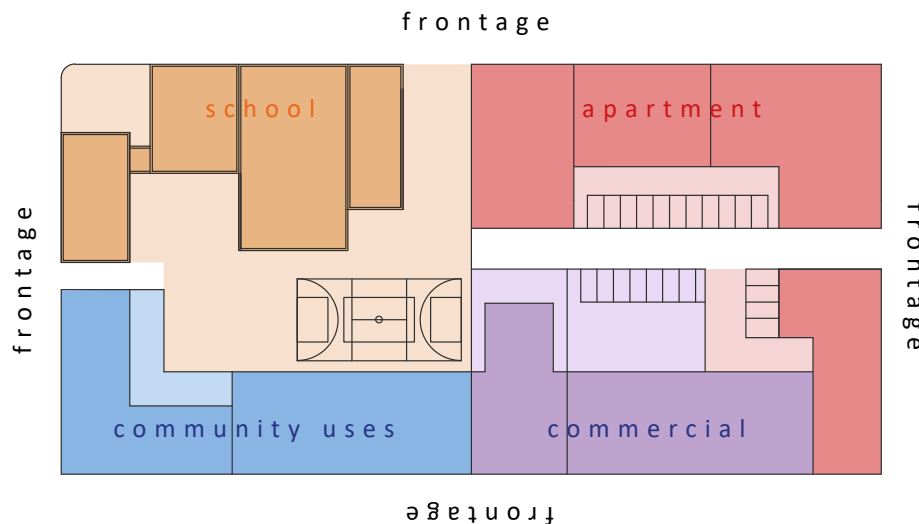
Small retail unit: c.100sqm
 Express supermarket: c.250sqm
 Small supermarket: c.1,000sqm
 Large supermarket: c.3,000sqm

Additional space within the block is required for parking and servicing.

*Real Estate consultancy Savills have considered the success of retail redevelopments in their article Re: Imagining Retail <https://www.savills.com/reimaginingretail/do-supermarket-sites-make-good-residential-sites/>

F Mixed-Use & Education Blocks

As well as retail, other non-residential use buildings can be incorporated into the perimeter block. The example below shows a combination of retail, office, community uses and a school. This school example provides a small area of play space within the interior of the block. For larger secondary schools the same principles can be applied, delivering the school building on a corner, with playing fields inside a larger block. In suburban areas private residential back gardens can back onto playing fields in a similar way to the communal green spaces within an apartment block.



It is useful to note that commercial and small retail uses often occupy the ground floor of a building, with residential apartments above. The similar depths of these buildings and subsequent stacking of uses allows for the delivery of sustainable, mixed-use blocks.

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