

## 3.6 Street Hierarchy

Consider the following three aspects of the street carefully:

- Function - what role will the streets play in the development?
- Character - what will the nature of the street be?
- Design - think about the details of each particular street

The function of the street will determine its position in the street hierarchy. There are several ways to assess a street's function, how much traffic and what type of traffic will the street be expected to take? How many dwellings will the road be serving, a few or a large number? What other types of land use will the street serve? Is it a main route, through route or tertiary route? Will it carry large numbers of heavy goods vehicles? Will the route be used for public transport such as buses?

Who will have priority, pedestrians or vehicles? Is the route a pedestrian and cycle only route?

Two roads with similar functions may have completely different spatial characters depending on their context and locations.

A uniform 'anywhere' character, dictated by an over-reliance on rigid standards and ignoring local context, should never be imposed. The best local designs and layouts should be used to inform street design.



**Two roads perform the same function but have different characters**

### 3.6.1 Assessing The Hierarchy

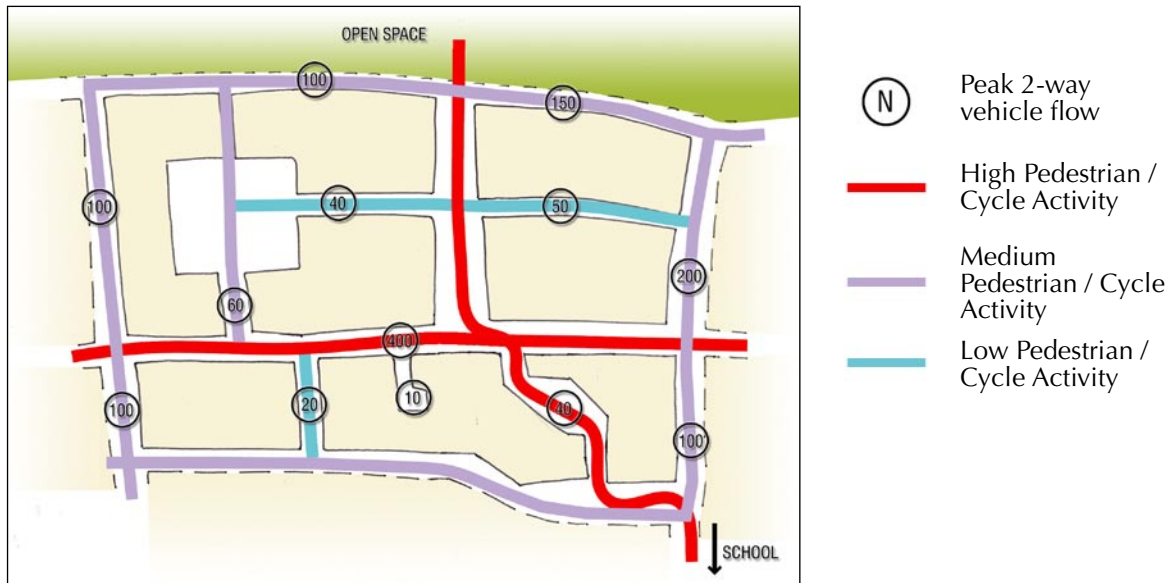
Consider the network of streets at the same time as layout and massing of buildings in the development process. The hierarchy should reflect the function and character of each street and provide a well connected and legible network.

A reasonably permeable network of streets makes walking and cycling easier and provides a real alternative to the motorcar. Strong connections should be made to adjacent areas and other potential development sites.

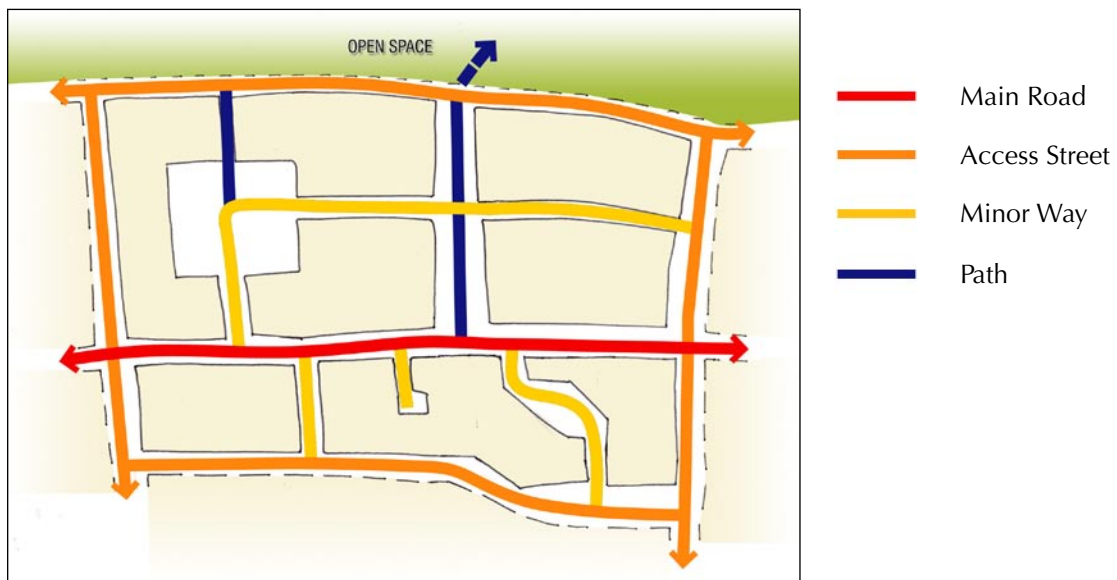
This evaluation should be carried out for large developments and individual streets. It is important that the hierarchy be assessed before the layout reaches a detailed stage, as it may be necessary to adjust building lines and accommodate levels of movement anticipated in the street.

Levels of vehicular and pedestrian/cycle activity should be assessed for each street. In mainly residential developments, this may be related to the number of dwellings accessed. In mixed developments or where there is a choice of routes available, the assessment should be based on anticipated peak hour vehicle flows.

The assessment of the levels of pedestrian and cycle flows may be more subjective but should take account of the availability of more direct off-road routes and the location of particular attractions such as schools and other local facilities.



Assessing the Levels of Activity



Assessing the Street Hierarchy

### 3.6.2 Main Road – Function

The main road will generally serve more than 300 dwellings or equivalent mixed uses.

The typical peak hour vehicle flow will usually be in excess of 200 vehicles.

Usually accommodates the bus route.

Usually the preferred route for through traffic and forms part of the more strategic road network.

Direct vehicular access to dwellings is not normally provided, with the exception of shared private drives with turning within the site.



A town centre main road

### 3.6.3 Access Street - Function

The main road will generally serve 100 to 300 dwellings or equivalent in mixed uses.

The typical peak hour vehicle flow will be 50 - 200 vehicles.

Direct vehicular and pedestrian access to dwellings is provided.

Usually links minor ways to main roads.

This type of road normally has two points of access. Non-essential through traffic is discouraged but only when more desirable alternative through routes exist.

In some cases a bus route could be accommodated.



Access to buildings and other streets



## 3.6.4 Minor Way - Function

The minor way will generally serve fewer than 100 dwellings.

The typical peak hour vehicle flow will be under 50 vehicles.

These routes can either be a through route or a cul-de-sac, where a cul-de-sac is proposed to serve more than about 25 houses or will be longer than about 100m, consideration should be given to providing a secondary means of access for emergency vehicles. In some cases it may also be desirable to provide a secondary access from adjacent streets



Minor way

Direct vehicular or pedestrian access to dwellings is provided, serving essential traffic only, should not encourage through traffic.

## 3.6.5 Pathway – Function

Direct routes for pedestrians and cyclists only, capable of being used by emergency vehicles by the inclusion of removable bollards in some cases. Can provide direct access to a group of dwellings.

Linking residential areas.



Access to houses



Path can also provide emergency access

### 3.6.6 Assessing The Character

The character or nature of the street is dependant on the spatial type of the street. The spatial type is dependant on the context and location of the site. Is the site predominantly urban or rural? Is the site heavily influenced by surrounding landscape and topography?

Often streets will display characteristics of two or more of the following examples. Highway design should respond accordingly and avoid applying uniform designs.

**Avenue/ Boulevard** - These roads can take on different characteristics such as suburban tree planted verges or urban main routes with tree lined pavements.



Avenue

**Urban Street** - Enclosed by buildings the shape of the street is defined by the building line.



Urban Street

**Suburban Street** - Not as enclosed as an urban street as buildings set back.



Suburban Street

**Square** - Defined by formally arranged buildings, having a character of their own. In order to establish a sense of place routes through squares should be indirect.

**Main square**



**Residential square**



**Homezone** - A semi pedestrianised street where pedestrians have priority over vehicles . It is a playspace/meeting space designed so that householders have a sense of ownership of the whole public realm.

**Homezone puts people first**





**Mews** - Closely set buildings set around a shared-surface semi public street. Parking is provided for in adjacent spaces/garages.



**Mews**

**Lane** - Used to link pedestrians and vehicles to streets. Usually has a rural character and often only residential frontage on one side and rural/ park on the other side.



**Lanes can link the edges of a village to the surrounding rural area**



**Residential lane**

**Parking Court** - Generally a private area providing access and parking to a small number of dwellings from a residential access street.



**Parking court relates to dwellings**



**Private Driveway** - A private area providing access and parking to a small number of dwellings from a residential access street.

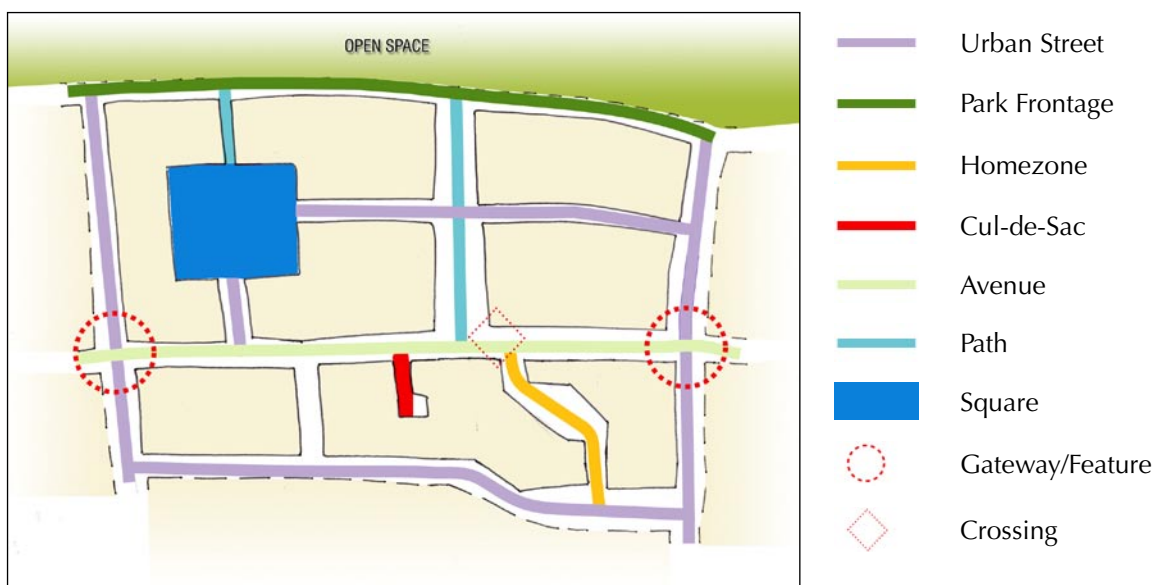


Shared private driveway

The table below suggests various spatial types that can be used in relation to different road functions.

| Hierarchical Type | Typical per hour vehicle flow | Approx. equivalent number of dwellings | Spatial Type     |              |                 |        |                         |      |      |               |                   |
|-------------------|-------------------------------|--|------------------|--------------|-----------------|--------|-------------------------|------|------|---------------|-------------------|
|                   |                               |  | Avenue/Boulevard | Urban Street | Suburban Street | Square | Homezone/Private Street | Mews | Lane | Parking Court | Private Drive-way |
| Main Road         | 200+                          | 300+                                   | Y                | Y            | Y               | Y      | N                       | N    | N    | N             | N                 |
| Access Road       | 50-200                        | 100-300                                | Y                | Y            | Y               | Y      | N                       | N    | N    | N             | N                 |
| Minor Way         | <50                           | <100                                   | N                | Y            | Y               | Y      | Y                       | Y    | Y    | Y             | Y                 |
| Pathway           | Pedestrians & cycles          | -                                      | Y                | Y            | Y               | N      | N                       | N    | Y    | N             | N                 |

Y = Yes, N = No



Assessing the Street Character

### 3.6.7 Tracking

Tracking is a way of checking the required width of the carriageway for vehicular movement. The arrangement of buildings establishes an enclosure. The footways are then applied; these should be in line with the buildings, then a tracked path created to test if the road works in terms of different sized vehicles.

Often traditional towns seem like they have been tracked as the streets are narrowed and the driver's forward vision is limited at bends. This is an effective way of limiting speeds by using building layout to reduce speeds.



**Trackway within building enclosure**

## 3.7 Street Parameters

The following section outlines the design parameters to be applied to each street type within the functional hierarchy. Typical parameters are given with a recommended range to enable flexibility to produce designs that fit in with the context of a particular site. Maximum or minimum requirements are shown in bold type