2 What Are Streets For?

The purposes of this Chapter of Manual for Streets are to explain the distinction between 'roads' and 'streets', to summarise the key functions of streets and to set out a new approach to their design.

'Roads' are essentially highways that have a main function of accommodating the movement of traffic from place to place. 'Streets' are typically lined with buildings and public spaces, and whilst movement is still a key function, there are several others, of which the place function is the most important.

A new approach to street hierarchy is proposed, which considers the relative importance of both movement and place, rather than simply setting design standards based on traffic flow.

2.1 STREETS AND ROADS

2.1.1 Streets exist for the interaction and movement of people. In common parlance, and increasingly in professional practice, a clear distinction can be drawn between streets and roads.

The Dictionary of Urbanism notes that:

> 'The word 'road' derives from the Old English word for a journey on horseback: a road was something that one rode along'

A road is, in essence, a highway with its main function being to accommodate the movement of traffic.

2.1.2 A street, on the other hand, is typically lined with buildings or public spaces which generate other activities along its length. Movement is still a key function, but there are several others of similar importance.

2.1.3 So, for the purposes of MfS, a street can be summed up as[1]

> *'A highway that has important functions beyond just the movement of traffic.'*

2.1.4 Whilst most highways in rural areas would be classed as roads, those in built-up areas can have the characteristics of either roads or streets.

2.1.5 In the decades following the Second World War there was a desire to achieve a clear distinction between the two types of highway. *Traffic in Towns* advised that there should essentially be two types of highway – distributor roads, designed for movement, where pedestrians were excluded or at least marginalised, and access roads designed to serve buildings, with pedestrians allowed.

2.1.6 This approach limited the provision of multi-functional streets to the most lightly-trafficked routes, an approach which had many adverse consequences for pedestrians, cyclists and the public realm. It is now widely recognised that there are many advantages in extending the use of multi-functional streets more widely within urban areas. Making attractive streets that engender a sense of place (see below) amongst local people is vital for the creation of sustainable communities.

2.1.7 Whilst many routes in residential areas are nominally designed as streets, the traffic function can still be given too high a priority. This acts to the detriment of other

[1]This definition should not be confused with the meaning given to a street under the Highways Act 1980 or the New Roads and Street Works Act 1991

desirable characteristics, particularly the ability of the highway to form a distinctive place in its own right.

2.1.8 Achieving streets that are good quality places achieves a number of linked policy aims, creating a virtuous circle:

- Attractive and well connected street networks encourage more people to walk to local destinations, improving their health whilst reducing traffic, energy use and pollution;
- More people on the streets improve improves personal security and road safety – research shows that the presence of pedestrians on streets causes drivers to travel more slowly;
- People meeting one another on a casual basis strengthens communities and encourages a sense of pride in local environments; and
- Which gives people a stake in maintaining the quality of their local streets and public spaces.

2.1.9 Streets thus have a crucial part to play in the delivery of Sustainable Communities, which are a key aim of national policy and which are defined succinctly as:

- "Places where people want to live and work, now and in the future."

2.2 PRINCIPAL FUNCTIONS OF STREETS

2.2.1 Streets have five principal functions[2], as follows:

- Place;
- Movement;
- Access;
- Parking; and
- Drainage and Utilities.

Place

2.2.2 The place function is essentially what distinguishes a street from a road. Creating a sense of place is fundamental to the achievement of richer and more fulfilling urban spaces, and comes largely from achieving a strong relationship between street itself and the buildings and public spaces that frame it.

2.2.3 A sense of place encompasses a number of aspects of street design, most notably:

- Local distinctiveness;
- Visual quality; and
- Human interaction.

2.2.4 These are described in more detail in Chapters 5 and 6 of MfS.

2.2.5 Surface materials, planting and street furniture have a large part to play in achieving a sense of place, and these elements are discussed in Chapters 10 and 11. Excessive and insensitive use of traffic signs and markings and other standardised

[2]As identified in *Paving the Way* (CABE/DTLR 2002)

street clutter has a very negative impact on peacemaking. Ways of minimising sign clutter are summarised in Chapter 11.

2.2.6 The place function is also linked to the types of land use along the street and the activities which stem from these uses. Providing access to buildings and public spaces along the street is linked to the place function and is discussed further below.

2.2.7 An important principle, first established in *Places, Streets and Movement*, is that when planning new developments, peacemaking considerations should come before the design of street alignments, cross-sections and details. Streets should be fitted around significant buildings, public spaces and important views, rather than the other way around.

Movement

2.2.8 Providing for movement along a street is vital, but it should not be considered independently of its other functions. The need to take vehicular movement into account is well understood by transport planners but the passage of people on foot has often been neglected in the past, despite the importance of this aspect of street design.

2.2.9 The movement function of a street can be assessed by examining the volume and length of journeys normally made along it. On this basis, a residential cul-de-sac would have a smaller movement function than a major arterial route serving a city centre, but both can be streets.

2.2.10 Certain categories of traffic may be given priority in the street by, for example, providing bus or cycle lanes.

2.2.11 Providing for movement is described in more detail in Chapter 7 of MfS.

Access

2.2.12 Direct access to buildings and public spaces is one of the things that distinguishes a street from a road. In most cases access will be for vehicles and for people on foot, but sometimes may be limited to the latter.

2.2.13 Providing frontages that are directly accessible from the street is highly desirable in most circumstances, as this helps ensure that streets are lively and active places.

2.2.14 The Access function is discussed in more detail in Chapter 8 of MfS.

Parking

2.2.15 Parking is another key function of many streets, although it will not be appropriate in all circumstances. A well-designed arrangement of on-street parking provides convenient access to frontages while adding to the vitality of a street. Conversely, poorly designed parking can create safety problems and be visually damaging.

2.2.16 Parking solutions are discussed in more detail in Chapter 9 of MfS.

Drainage, Utilities and Street Lighting

2.2.17 Streets are the main conduits for drainage and utility systems in built-up areas. Although they are unseen for the most part, these systems can have a major impact on the design and maintenance requirements of streets. Drainage systems and Utilities are

discussed in Chapter 12. The related requirement for street lighting is discussed in Chapter 11.

2.3 PLACE AND MOVEMENT HIERARCHY

2.3.1 Of the five principal functions, Place and Movement are the most important in determining the character of a street.

2.3.2 In the past, road hierarchies have been based almost exclusively on vehicular movement; for example:

- Primary Distributor;
- District Distributor;
- Local Distributor; and
- Access Street.

2.3.3 The problem with this approach is that certain types of design would be associated with particular levels in the hierarchy - distributor roads tended to exclude direct access and marginalise pedestrians. Moreover, greater design speeds were assigned to routes in the upper tiers. This tended to create disjointed patterns of development, with high speed roads with poor pedestrian access cutting residential areas off from each other and from other parts of a settlement. Moreover, the hierarchy did not allow for busy arterial streets which feature in most towns and cities.

2.3.4 Streets should no longer be designed by assuming Place to be subservient to Movement. Both functions should be considered in combination, with their relative importance depending on the street's position within the network and fabric of the urban area.

2.3.5 This approach makes it easier to design streets for more higher levels of traffic than has been possible in the past. It also helps to create patterns of development that are more favourable to journeys on foot and cycle. [3]

Movement Status

2.3.6 Movement status can be expressed in terms of traffic volume and the importance of the street within a network – either for general traffic or within a mode-specific (e.g., bus or cycle) network. Local authorities should decide for themselves the relative importance of particular routes within an urban area.

2.3.7 Another way of assessing the movement status of a street is to consider the geographical scale of the network in which it sits. Using this approach Movement status has a potential range encompassing national networks (including motorways) through to city, district, neighbourhood and local networks, where the movement status would be minimal. At this stage in the development of the Manual, movement status is limited to streets at or near the bottom of the range.

Place Status

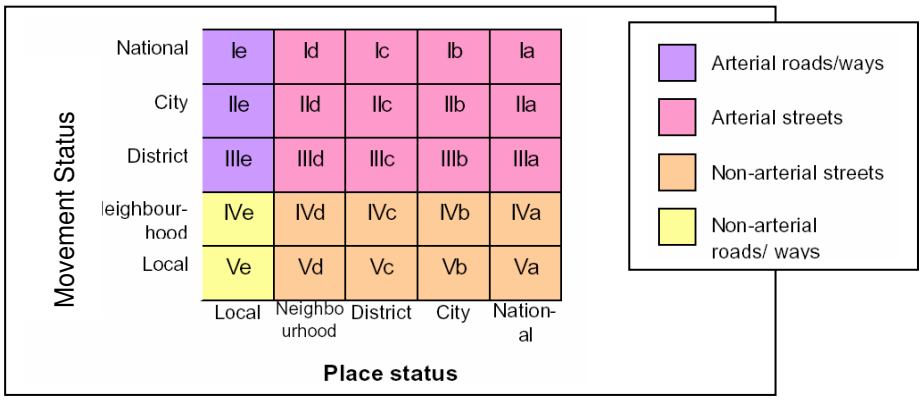
[3] The concept of using both movement and place to inform street design was developed by the EU project ARTISTS, http://www.tft.lth.se/artists/

2.3.8 Place status denotes the relative significance of a street, junction or section of street. The most important places will usually be near the centre of any settlement, but important places will also exist along arterial routes, in district centres, local centres and within neighbourhoods. Places of national importance such as Parliament Square are at the top of the scale. Roads such as motorways, having minimal place function, would be at the bottom.

Place and Movement Hierarchy

2.3.9 Defining the relative importance of particular streets in terms of movement and place function will inform subsequent design choices so that an appropriate balance can be struck for each location.

2.3.10 This can be expressed as a matrix of street classifications as shown in the table below:



2.3.11 Using this matrix, it is possible to classify most types of road and street, for example:

- Motorway – National movement function, minimal place function.
- Arterial Street – City movement function, district place function.
- Home zone – Minimal movement function, local place function.

2.3.12 Some well known streets and spaces can also be fitted into this matrix as follows:

- Trafalgar Square - City movement function, national place function
- Gravelly Hill Interchange ('Spaghetti Junction') – National movement function, local place function
- The Ironbridge, Shropshire – Local movement function, national (world heritage) place function

2.3.13 In designating a place function as local, it is important to recognise that for residents, it may be the most important public and social space available to them. This may be particularly true for those whose ability to travel independently is limited, such as children. Accordingly, where place and movement functions are of equal level within the above matrix, then the place function should be taken to predominate.

2.3.14 Once the relative significance of the movement and place functions have been considered, it is possible to set objectives for particular parts of a network. This will allow the designer to choose the design criteria to apply when:

- creating new links; and
- assessing the performance of existing links.

Reconciling Design Conflicts – Integrated Design

2.3.15 Streets are multifunctional places that have to satisfy a wide range of objectives, some of which can conflict with others. This inevitably necessitates a degree of compromise in the design, such as where an objective of accommodating a particular level of traffic flow has to be balanced against the needs of pedestrians crossing the road. Another example would be satisfying a level of parking demand while limiting the visual impact of vehicles on an important view or street scene.

2.3.16 The place of the link in the movement and place hierarchy will help to inform these choices; but many detailed issues will arise that cannot be expressed in this simple framework.

2.3.17 Furthermore, there are many disparate professions and institutions with a role to play in the design and management of streets, and some will have priorities that conflict with those of others.

2.3.18 In the past, these agencies have tended to work in isolation, leading to poorly integrated and cluttered designs which often serve the needs of motorists at the expense of other users. This situation was identified in the research Better Streets, Better Places (ODPM, 2003) It is now widely recognised that this situation is no longer tenable and better dialogue and cooperation between all parties is essential. There is a need to:

- Set overall objectives for a particular location;
- Identify potential conflicts between these objectives; and
- Make the best choice of design solution.

2.3.19 These principles apply at all stages in the design process, including when deciding how the street is to be maintained. In a new-build situation the developer's design team will need to engage with several departments within the local planning and highway authorities in order to identify all of the relevant issues. The public sector, in turn, should coordinate its activities in order to avoid its planning and highways departments, for example, from imposing conflicting conditions on the developer. The process of bringing different disciplines together to create successful streets is outlined in Chapter 4.

2.3.20 Some local authorities operate a Development Team approach whereby all of the council's departments with an interest in street design work together during the design and approval process. This has clear advantages and is to be encouraged for both small and large developments.

2.3.21 For existing streets, local authorities (or parts of a unitary authority) should coordinate the activities of their departments so that no single aspect dominates design and maintenance considerations.

2.3.22 One way of achieving this is by developing of a Public Realm Strategy which sets out the authorities' overall aims and objectives, for streets and public spaces, and

establishes a minimum level of design quality that must be achieved. This strategy may need to include a requirement for higher standards of design and maintenance to be applied to particular parts of the network, based on their positions within the movement/place hierarchy.

2.3.23 In conclusion, streets exist to serve people and must fulfil a complex variety of functions to support people's need for places to live and the ability to move around them. This requires a careful and multi-disciplinary approach that balances potential conflicts between different objectives.