7. Estate Road and Footpath Layouts

7.1 General

Residential roads are required to fulfil a number of functions. In addition to movement by pedestrians, cyclists and vehicles, they provide access to property, routes for statutory services, space for occasional parked vehicles and are often used as a play space by children. They also form a major part of the visual environment within housing areas.

The Planning Authority, in approving layouts, will need to take into consideration the interests of the following parties in how roads are laid out:

- **Residents** require convenient access to their property for themselves, visitors and service vehicles, a safe and attractive environment, and security for their property and vehicles;

- **The Local Highway Authority** will be concerned that the above requirements are met effectively and safely and that areas proposed for adoption will be safe and economical to maintain;

- **Statutory Undertakers** require that the installation and maintenance of their services be economical and convenient, and generally within the public highway;

- **House builders** want layouts that permit their site to be developed efficiently, economically and in a manner that enhances the marketability of their houses;

- **The Police** want to ensure a safe and secure environment;

- **Fire and Rescue Service** require reliable access at all times to deal with incidents, particularly those involving rescues.

The design of the road layout should reflect the anticipated vehicle usage and the impact this may have on residential amenity and highway safety. In general, the above objectives are likely to be met if design principles 1 to 5 are followed. On occasions there may be conflict between objectives, but these can only be resolved with reference to the particular circumstances of each site.

1. Sections of road over which vehicle speeds are unrestrained should be limited to a length appropriate to the intended design speed of vehicles by the use of short culs-de-sac or loops, by the positioning of junctions or by the incorporation of specific speed restraint measures:

2. The number of dwellings accessed from each individual section of road should be appropriate to the type of road;

3. Major generators of traffic should be accessed from distributor roads rather than from access roads;

4. The use of residential roads by non-access traffic should be discouraged. The means of achieving this will depend on the circumstances of the site and the likelihood of any such traffic being attracted. Where non access traffic will be attracted this must be accommodated in the design of the road.

5. As far as consistent with other objectives such as excluding non-access traffic, layouts should provide as many routes through a development as practical to spread traffic flows and to keep flows on individual access roads low.

The use of a network of routes through a development will also assist in providing the most direct practical links between the distributor network and individual properties and, in larger developments, between different parts of the development.

The appropriate structure for an access road layout will depend on site characteristics such as size, shape, topography and other features. Developers are encouraged to take advantage of landscape and townscape features when planning the layout of the estate. The appropriate layout will therefore be site specific, reflecting what is desirable and practical while following closely the principles set down in this document.

‘Tree Like’ structures based on culs-de-sac and curvilinear road alignments as shown in Appendix 1 work well with small sites, but on larger developments they can be confusing and cause difficulties for movement around them. There will also be a need to provide an alternative access for emergency vehicles.

A loop form of development as indicated in the Appendix accessed by the use of a short transition road can overcome the problem of multiple accesses, facilitate access for public transport and be easier to navigate. Care needs to be taken in the design of the loop to ensure traffic speeds are controlled.

Appendix 1 shows how a ‘loop’ arrangement and a ‘tree-like’ layout can be combined to give a desirable type of road layout.

To assist Developers, Public Utilities and other bodies, the Highway Authority has defined three categories of verge;

- **Roadside verges -**These lie between the carriageway and the footway (or carriageway and highway boundary where no footway or provided) and are intended primarily for amenity purposes to soften the appearance of the road and to permit tree planting. They will be adopted as Public Highway but Public utilities equipment will not be permitted without approval and special protection measures will be required.

Figure 4 – A roadside verge

- **Service Verges -** These are specifically intended for use by Public Utilities to carry their mains, cables and equipment. They will be adopted as Public Highways but the responsibility for their maintenance will rest with the frontager under agreement. Shallow rooted shrubs will be permitted.

Figure 5 – A service verge

- **Amenity verges -** These lie between the footway and the highway boundary and are again intended to soften the appearance of the road and give the frontager an opportunity for some planting. Public utility equipment will not be permitted. They will be adopted as Public Highways but the responsibility for their maintenance will rest with the frontager under agreement. Soft landscaping will be permitted.

All elements of layout design, including the alignment, cross-section and surface treatment of roads and footways, landscaping and the relationship between buildings and roads, should be co-ordinated to give a clear message to drivers and other users as to the function of individual roads and how they are expected to proceed. This is particularly important with regard to distinguishing traffic routes from residential roads and identifying shared pedestrian/vehicle access ways. Adoption of this principle will enhance safety and help to provide some variety of layout within larger schemes.

Lengths of estate road without frontage development should be kept to a minimum. They tend to be an uneconomic use of space, and be visually unattractive elements of residential developments.

Housing layouts must take full account of the access needs of the emergency services, as established through consultation. Access for emergency services will be of particular concern in determining the need for alternative access to culs-de-sac, the provision of access to property not directly accessible by vehicle, and in the design of speed restraint measures.

Not all parking will take place within individual curtilages. Research has shown that casual visitors, a substantial proportion of regular visitors and, at

times, residents, will park their vehicles on-street. Areas intended for parking must therefore be convenient for the properties they are intended to serve if they are to work properly. Delivery and service vehicles will invariably be parked on-street The provision of on street parking should be in addition to the off street parking provision required in accordance with Appendix 23.

Layouts must therefore allow for a realistic level of on-street parking and ensure that such parking takes place in a manner that is safe and with the least intrusion into the residential environment.

7.2 High density/Apartment Blocks

As a result in changes in family structure and the demand for more single person accommodation, more applications are being received for high-density developments and apartment blocks. Many of these developments will occur on 'brownfield' sites or as infill development and will reflect their surroundings. Many developments will be served via the existing highway without new road construction. However, the Council considers that many of the principles laid down in this guide will be applicable to such developments, to ensure good design and enhance the marketability of the units.

Whilst the development will be privately owned and probably maintained by a Housing Association or Management Company, adherence to the recommendations and standards laid down in this guide, should help to keep maintenance costs down.

In vetting these proposals the Highway Authority will have particular regard for the following;

- **Access -** The geometrical design and visibility of the entrance must ensure an easy and safe use for both residents and users of the public highway, and the internal access roads should enable vehicles to pass and repass without damage to landscaping or structures;

Figure 6 – Access to apartment blocks

- **Pedestrians -** The pedestrian access and movement within the development must be safe and secure, with direct links that are well lit and devoid of dark corners;
- **Cycling -** Proper and adequate cycle access and parking must be provided;
- **Parking -** Car parking must be provided to meet the requirements of the residents and their visitors, depending on their circumstance and access to the city centre and local amenities, public transport and the pedestrian and cycle networks. Such parking should not dominate the development and must be landscaped and secure;
- **Refuse -** Refuse collection points must be easily accessible for residents and refuse vehicles but must not dominate the limited space available;
- **Landscaping -** Every opportunity should be taken to incorporate ground cover and low maintenance shrubs and trees to enhance the development and provide security and all year round interest.

7.3 Consultation

There are a number of bodies with an interest in housing layout who can provide valuable guidance and assistance in the design process. The

importance of early consultation with such bodies is stressed. In addition to consultation with the City of York Council on the overall design brief for the site, the following organisations can provide useful guidance at an early stage in the preparation of road and footpath layouts:-

- Department of Environment and Development Services (City of York Council);
- Local Bus Operators;
- The Police (Architectural Liaison Officer and Traffic Management Officer)'Secured by Design' programme'.
- Statutory Undertakers;
- Fire and Rescue Service.