

# Part: C

## Access and Connectivity

### Contents

- C1. Introduction
- C2. Connectivity and Streets
- C3. Access

This part of the Development Requirements SPD provides further detailed guidance on the interpretation of the following Core Strategy policies, as appropriate:

- CS.9 Design and Distinctiveness
- CS.15 Distribution of Development
- CS.20 Existing Housing Stock and Buildings

This Section of the SPD provides advice on how applicants can ensure that proposals achieve high quality design in new development.

It will be used by Stratford-on-Avon District Council to help reach decisions on whether to approve or refuse planning applications. Making sure that applications comply with the guidance contained within SPD will make it easier for the Council to grant planning permission. The Council's planning policies are set out in the Core Strategy, available at [www.stratford.gov.uk/corestrategy](http://www.stratford.gov.uk/corestrategy)

Key words or terms which appear throughout the document are included in the Glossary.

## C1. Introduction

Good design is indivisible from good planning and the principles in this section will relate to applications for the smallest house extension right through to mixed-use schemes for hundreds of homes. The design principles set out in this guidance should be applied to open market and affordable housing. It should be read in conjunction with other parts of the SPD, in particular:

[Part A: How to Achieve Good Design](#)

[Part D: Buildings and Layout](#)

[Part E: Architectural Style, Construction and Materials](#)

[Part F: Residential Amenity](#)

[Part H: Shopfronts](#)

[Part G: Agricultural Buildings](#)

[Part N: Landscaping and Trees](#)

[Part M: Biodiversity and Green Infrastructure](#)

Parts C, D, E and F of the Development Requirements SPD set out a number of design principles that should be followed when designing new development. Cross reference is made from each design principle to the nine key design criteria set out in Core Strategy Policy CS.9 demonstrating how the design principle contributes to the achievement of good design.

## C2. Connectivity and Streets

Policy CS.9 Key Design Principles: Connected: Proposals will be well-integrated with the existing built form, enhancing the network of streets, footpaths and green infrastructure and encouraging walking and cycling.

The starting point for good design is how well the development integrates and connects into the existing built form and how well users can navigate around and through the development (see Fig C1 below) .

### Permeability and Legibility

New development should allow for good connections both within the site and the surrounding area. The term permeability and legibility relate to the ease with which residents and visitors can orientate themselves and find their way around an area.

Legibility can be achieved by ensuring:

- A clear hierarchy of routes;
- A strong and logical building layout (such as the perimeter block) and massing;
- An appropriate and consistent choice of design and materials for buildings and their boundaries with the street and for designing the streets or routes; and
- The use of views and focused vistas of local landmarks (buildings and landscape features) in and around the site.

Pedestrian and cycle connectivity may require more direct routes than for vehicles. Where possible, people should be given the opportunity to use direct and attractive routes on foot or by cycle as an alternative to using the car for journeys less than 2km. This helps to improve opportunities for greater activity. Development which has been designed with good permeability and legibility will also assist people living with dementia. See Part A: How to achieve good design for further guidance. Further advice and information is also available in the Find out more section below.



Fig. C.1 - Poor connectivity and good connectivity.

When signage is necessary to help provide directions to specific destinations, it should be of a high quality, coordinated with all other street furniture and kept to a minimum to avoid clutter in the public realm.

By avoiding cul-de-sacs, you will provide choice of movement as well as dispersing traffic.

### Street Hierarchy

The design of new development should follow a user hierarchy (see Fig C2) that not only encourages more sustainable modes of travel, but recognises that streets are the key component of the public realm, creating a sense of place and are not simply roads where vehicles park and travel at speed.

As Manual for Streets (MfS) notes, the hierarchy is not intended to be applied rigidly or that it is always more important to provide for pedestrians, but simply that pedestrians should be considered first, followed by consideration for others in the order shown.

Its overarching emphasis is that increased consideration should be given to the 'place' function of streets. This approach to addressing the classification of streets needs to be considered across all built-up areas, including villages, so that a better balance between different functions and street users is achieved.

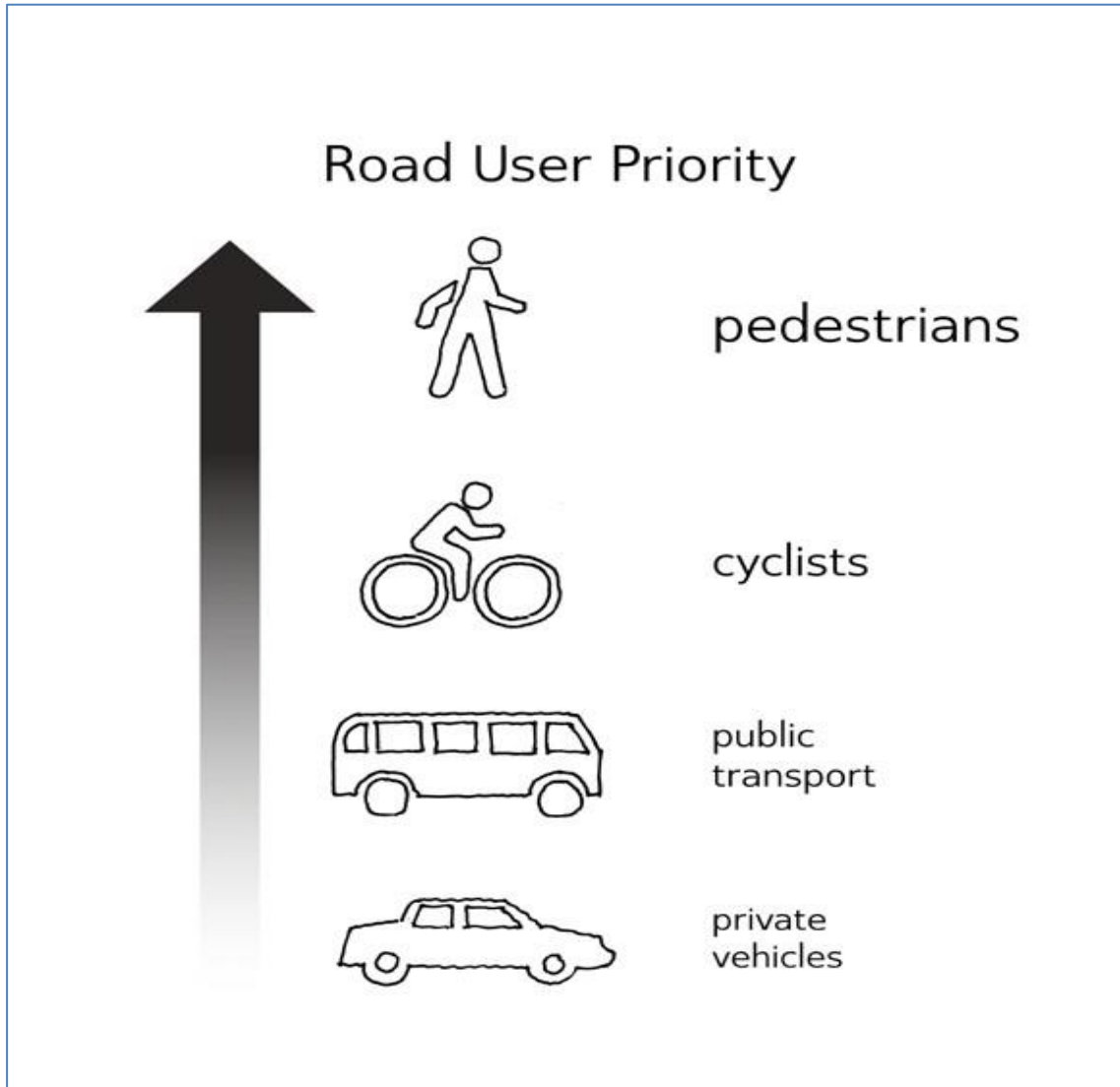


Fig. C2 – Hierarchy of road users.

The MfS sets out a range of principles that should be taken fully into account in the process of designing and assessing development proposals. These are as follows:

- Layout and connectivity;
- Quality places;
- Street users' needs;
- Street geometry;
- Parking;
- Traffic signs and markings;
- Street furniture and street lighting;
- Materials, adoption and maintenance.

In order to create a legible development, it is necessary to clearly identify the site's route hierarchy, including the major/primary, secondary and informal pedestrian routes. This needs to be clear from the dimensions of the street and the corresponding scale and design of buildings; boundary features, trees and planting which fronts it.

Applicants should consult with Warwickshire County Council Development Management Team to identify the suitable parameters for route hierarchy in development proposals.

### Primary Routes

When designing larger sites some form of 'Main Street' may typically form the spine of the development. In these scenarios, it should accord with the principles set out in the Manual for Streets. For example, primary routes have wider streets (that can accommodate bus routes), taller buildings (often setback from the street), space for larger street trees, landmark buildings, segregated cycle routes and footways (often on both sides), higher quality boundary features and planting and limited on street parking where vehicular flow is important.

### Secondary Routes

Many residential streets fall into this category. They should also be designed to 'Manual for Streets' principles. Secondary routes have modest street widths, smaller buildings, mostly smaller street trees and designed space for larger street trees, local landmark buildings, cycle routes (often only on one side) and footways may possibly be shared routes rather than being segregated, on street car parking.

### Minor Routes

Minor routes are the lowest in the hierarchy of streets and typically serve only a very small number of vehicle movements.

Dedicated pedestrian or cycle routes should distinguish themselves from vehicular routes by their width (typically 3 m for a shared pedestrian/cycle route) and contrasting surface materials.

Smaller developments are likely to have streets that do not offer the opportunity to create a suitable hierarchy. These developments should provide the most appropriate level of routing at the highest possible standard.

### Active Streets

Buildings should front the street with active rooms, balconies and bay windows to maximise liveliness and natural surveillance. On corner plots dual fronted buildings will be needed. The orientation of the street pattern will also be influenced by the pedestrian desire lines and the need to connect the site to its immediate surroundings. Further guidance on designing active frontages is available in [Part D1. Blocks and Frontages](#).

### Surface Materials and Traffic

Surface materials provide several functions, providing an appropriate surface for all road users, whilst contributing towards traffic safety, surface water run off management and general appearance of a locality.

Development should seek opportunities to reinforce the local distinctiveness of an area, thereby improving the appearance of the public realm, through the appropriate use of surface materials wherever possible; subject to the agreement with the Warwickshire County Council Highways Department. Development should comply with the Warwickshire County Council standards for surfacing materials.

<https://apps.warwickshire.gov.uk/api/documents/WCCC-770-321>

It is essential that the road surface is able to take the weight and torsion impacts (turning of wheels) of refuse vehicles and other large and heavy vehicles for all parts of the site that they will have access to, including un-adopted sections.

In the case of traffic safety requirements such as railings, bollards, lighting columns or visibility splays, the design of these should as far as possible reflect local character.

Safety is of paramount importance, but where it is difficult to meet standards due to innovative designs or unique local circumstances, negotiations should take place at an early stage to identify acceptable alternatives. Vehicle dominated junction layouts should be avoided (see Fig. C3 below).

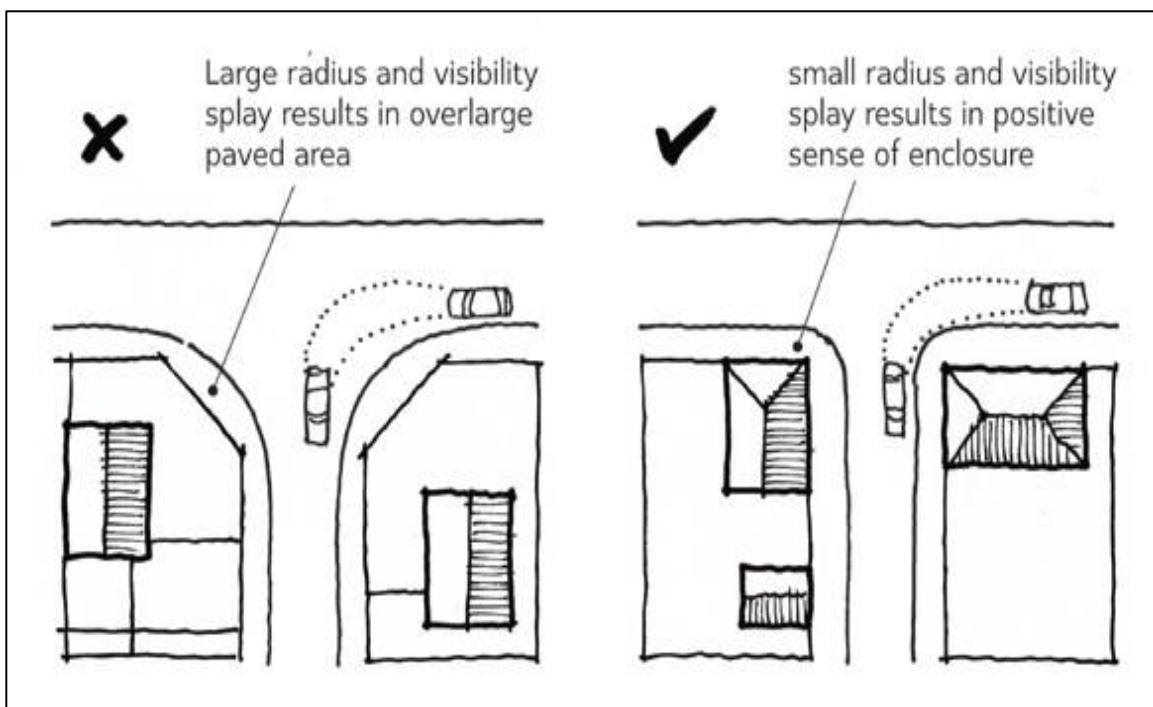


Fig. C.3 - Poor and good examples of junction layouts.

### Home Zones and Shared Space

A Home Zone is a living street (or group of streets) as implemented in the United Kingdom, which is designed primarily to meet the needs of pedestrians, cyclists, children and residents and where the speeds and dominance of the cars is reduced.

Home zones often involve the use of shared space, where the street is not strongly divided into exclusive pedestrian and traffic areas. There are however concerns over the ability of blind and partially sighted people to use shared space streets. Providing a clear route for pedestrians that is kept free of traffic, by using textured materials or street furniture for example, is one way of meeting the needs of the visually impaired.

A key aim of Home Zones is for traffic speeds to be kept low - with a typical target speed being around 20 km/h (10-15 mph) - through the overall design of the street and features such as sharp changes of direction for traffic and narrowing where only one motor vehicle can pass at a time. Traditional traffic calming features such as road humps might also be used, but should be integrated into the design rather than being added as an engineered afterthought.

The entrance or 'gateway' to a Home Zone should be a clear signal to all users that there is a change in the nature of the streetspace. This might be through the use of changed materials, changed road levels, street furniture or planting. The demarcation between the public space of the street and the private space of the front garden is important to define.

Warwickshire County Council (WCC), as the Highway Authority, is likely to bring out design guidance which is anticipated to include Home Zones. If roads (including Home Zones) are to be adopted by the Highway Authority they will need to meet adoptable standards. Informal discussions with WCC indicate that they will not adopt a homezone layout for anything over 10 units, and it should not be a through route.

WCC also informally advise that the overall adoptable corridor width of the homezone should be 8.5m preferably with a 2m, dedicated service strip, and the remaining 6.5m being carriageway, verges and street furniture.

Homezone layouts are likely to be subject to a Road Safety Audit Stage 2, and WCC may require full quality audits to also be carried.

The Council encourages home zones where traffic movement is designed to travel at very low speed within residential areas, creating more child friendly streets. Home Zones can be particularly beneficial for families with young children, by providing a safer environment for children to play outside their homes with their friends, and offering opportunities for regular exercise.<sup>1</sup>

### **Street furniture**

Street furniture (e.g. seating, bollards, lighting, waste bins, recycling bins, taxi stands, bus stops, post boxes), and surface materials can have a major impact on the appearance and quality of a street and they should be considered as part of the overall design and included in a Landscape Scheme, where one is required. Areas of public open space will be expected to contain suitably designed and located street furniture and the future maintenance of this (including replacement of facilities over time) should be part of the management plan.

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<sup>1</sup> Play England <http://www.playengland.org.uk/streets/>

### Street Lighting

Lighting of public routes and parking areas is important in respect of personal safety and reducing crime and the fear of crime. Careful consideration should however be given to any proposed street lighting, to ensure that it does not result in light pollution, adversely affecting residential amenity, character of the settlement/landscape and natural habitats and its species, particularly where foraging routes for nocturnal animals exist. Applicants should note that dark skies policies have been included in a number of Neighbourhood Development Plans (NDPs) in the District. Further details about NDPs in Stratford-on-Avon District are available on SDC website, using the following link: [www.stratford.gov.uk](http://www.stratford.gov.uk) Applicants are advised to contact Warwickshire County Council's Street Lighting Department and Ecology Services using the link below in Find out more section.

### Trees

Trees can create a wide range of significant economic, social and environmental benefits to the local communities. Trees can bring a diverse and long lasting range of benefits to urban space, particularly if they are established trees with large canopies. The changing climate and need to adapt to a low carbon economy means that our neighbourhoods and towns need to adapt to expected conditions in the future. Ways to help achieve this through sustainable development are woven into the Council's Core Strategy policies. Further guidance about trees planting in development proposals is available in [Part M: Landscape and Trees](#).

The retention of existing trees and landscape on a development site and the provision of new, well designed landscape is an effective response.<sup>2</sup>

In particular, tree canopy cover can contribute to urban cooling and should be an important part of the landscape or green infrastructure element of your development.

Development proposals should therefore contribute by making space for existing trees and vegetation and consider new tree planting and landscape design early in the design and layout of your site. By doing this you can design-out potential conflicts with the built form whilst designing in opportunities for long-term provision of these sustainable development essentials.

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<sup>2</sup> National Planning Practice Guidance, (March 2015)



### Find out more

Department of Transport 'Manual for Streets' (2007)

<https://www.gov.uk/government/publications/manual-for-streets>

Quality in the Public Realm in 'By Design'

<http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk/files/by-design-urban-design-in-the-planning-system.pdf>

Warwickshire County Council Ecology Services

<https://www.warwickshire.gov.uk/planningecology>

Warwickshire County Council Street Lighting Services

<http://www.warwickshire.gov.uk/streetlightingstandards>

RTPI, (2007) Dementia and Town Planning: Creating better environments for people living with dementia

[https://www.rtpi.org.uk/media/2213533/dementia\\_and\\_town\\_planning\\_final.compressed.pdf](https://www.rtpi.org.uk/media/2213533/dementia_and_town_planning_final.compressed.pdf)

## C3. Access

Streets make up the greater part of the public realm and well-designed streets can contribute greatly to the quality of the built environment. Importantly, access arrangements, parking (vehicular and cycle), services (recycling and waste storage and collection), street furniture and surface materials should respect the local context taking into account local distinctiveness, including any historic or natural features.

All development should have full regard to the guidance contained within the Department of Transport 'Manual for Streets' (2007).

### Access into and around the Site

In residential developments, where possible, vehicular, pedestrian and cycle access into the site should not be from a single point, but should allow for the possibility of entering and exiting the site from several different locations. This is to prevent the inefficiencies and lack of permeability experienced with typical cul-de-sac developments, to improve legibility of through routes, to minimise distances travelled and to encourage walking and cycling.

The design of the access will depend very much on the nature and size of the development and the size and traffic speed of the route that it links into.

At the main access to a site:

- There is the opportunity for an architectural statement/landmark/gateway feature/public art installation/landscape design depending on context;
- Attractive views should be maximised and unattractive elements minimised;
- Care should be taken to minimise and mitigate vehicular noise/disruption to bedrooms/living rooms of adjacent properties.

Access around the site should follow a logical hierarchy of route. It should be easy to find your way around the site and should be an attractive and safe environment. Further information about route hierarchy and legibility is found in Part [C2. Connectivity and Streets](#).

The layout design should be convenient, safe and functional for all forms of traffic expected to use the site and provide for convenient and safe access to public transportation (See Fig. C4 below).

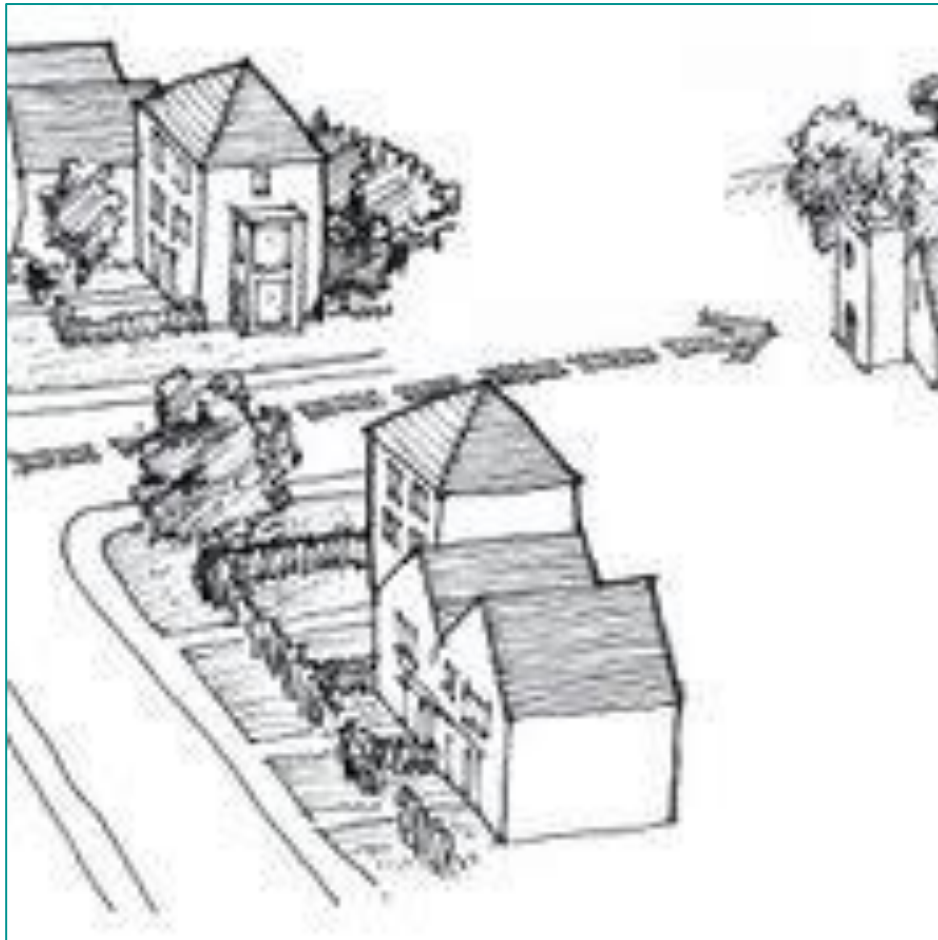


Fig. C4 - Main access into a residential site.

It should include the following considerations:

- Create a gateway with buildings to mark the entrance and turn the corner with a building;
- Orient the entrance to frame an existing view of a landscape or landmark or terminate the view with a landmark tree or building;
- Orient buildings to the front onto the existing street;
- Place unattractive features such as bins to the side or rear;
- Use planting and set back to mitigate the impact of traffic.

The layout should allow for safe and appropriate construction vehicle access during the construction period minimizing the impact on existing neighbouring properties and early occupants of the site, particularly in residential developments. A Construction Management Plan is likely to be required for larger schemes and schemes with existing residents nearby.

### Plot Access

Careful consideration should be given to ensuring all means of access to individual plots and buildings is fit for purposes and useable for all users. Inclusive access to a plot should reflect:-

- the location of the building on the plot;
- the plot's gradient; and
- the relationship of adjoining buildings.

Public buildings will need to meet the statutory requirements for plot access set out in the Disability Discrimination Act 1995 (as amended 2005) or successor legislation.

### Services and Emergency Access

All development proposals should be designed to provide satisfactory access arrangements for services and emergency vehicles:

- Layout and road widths should accommodate the servicing needs of the development, such as buses along the primary route, the parking and turning requirements for good vehicles and bin collection truck, taking account of any on street parking requirements;
- Through-routes and crescents are preferred to cul-de-sacs;
- Reversing distances should be minimised;
- Current Building Regulations for emergency access will need to be met;
- While refuse lorries and fire engines will require a minimum outer turning radius of 10 m, footways and buildings at junctions particularly on minor side roads, do not need to follow the same wide swept path, as this will create a vehicle-oriented layout. However, it is important to ensure adequate forward visibility is maintained and sufficient manoeuvring space is maintained. Further information on access arrangements may be found in Part P: Refuse and Recycling Storage of this document.

### Tracking of Vehicles

Table 1 below provides swept paths and type of vehicles which may require tracking. However, applicants are advised to consult with Warwickshire County Council's Highway Team to determine whether any other vehicle has been identified as suitable for tracking by Warwickshire County Council.

Applicants are advised to hold pre-application discussion with Warwickshire Fire and Rescue Services about proposed access arrangements, particularly for flatted developments. This is to ensure that appropriate access has been made for emergency services vehicles.

**Table 1: Vehicle Dimensions for Swept Paths**

<b>Vehicle Type</b>	<b>Vehicle Dimensions</b>
Mercedes Econ mid steer (refuse vehicle with 4 axles)	11.73m length x 2.49 width
Scania Kub Chassis (bus)	12.2m length x 2.51m width
Fire & Rescue (Scania)	8.0m length x 3.0m width – (tracking in line with Building Regulations)
Multi-Purpose Vehicle (MPV)  To be tracked with private drives to ensure residents can manoeuvre from their driveway within the private drive without the need to reverse for significant lengths. It will also be necessary where tandem parking is provided within private drives for the aforementioned reason.	4.856m length x 1.86 width

Junction layouts which feature footpaths and building following a wide swept path, lead to vehicle dominated junctions. This should be avoided.