9 Parking

9.1 INTRODUCTION

9.1.1 The parking of vehicles is a key function of most streets, particularly in residential areas. The greatest demand is for the parking of cars, although there is also a need to consider cycles, motorcycles and service/commercial vehicles.

9.1.2 Whether and how parking is achieved in a particular street has a key influence on many aspects of its quality, including visual quality, street activity, interaction between residents, and safety. Parking demand and supply should therefore be explicitly considered when street types are being developed for a particular location. A failure to properly consider this issue is likely to lead to inappropriate parking behaviour, resulting in poor and unsafe conditions for pedestrians and residents' dissatisfaction (see Eastleigh case study).

9.1.3 Parking can be provided both on- and off-street – the latter being on-plot, within buildings or in off-street parking areas. This chapter contains advice on both on- and off-street parking, although the full range of possibilities for the latter is beyond the scope of this document.

9.1.4 In keeping with the overall philosophy of *Manual for Streets*, cycle parking is considered first, in order to emphasise the importance of promoting sustainable modes of transport.

9.2 RESIDENTIAL CYCLE PARKING

9.2.1 As noted in Chapter 3, Government policy strongly encourages increased levels of cycling in order to meet both transport and health policy objectives.

9.2.2 Providing convenient and secure cycle parking at peoples' homes is critical to achieving these policy aims. Cycle use will be discouraged if people find it unduly difficult to bring their cycles to a point where the journey can begin. In residential developments, access to cycle storage should be at least as convenient as access to car parking. Where cycle access is more convenient, this will further encourage its use.

AMOUNT OF RESIDENTIAL CYCLE PARKING - RESIDENTS

9.2.3 There are currently around 27m cycles in ownership in the UK (source: the Bicycle Association), equivalent to around 450 per 1,000 population, and very roughly the same as the number of cars owned. Overall, 43% of households in England owned at least one cycle in 1999/2001.

9.2.4 The space required for the accommodation of cycles is relatively small. It therefore is inappropriate to attempt to save space (and cost) by providing the minimum number of spaces. There are good reasons for ensuring that enough cycle parking is provided to allow everyone the opportunity to park a cycle. Given the desire to develop a cycling culture, current levels of cycle ownership are not adequate in themselves to determine the provision that should be made in new residential developments.

9.2.5 As with car ownership, there will always be some people who at some stage of their lives will choose not to own a bicycle. Because of this, shared cycle parking can be more efficient than providing within each individual dwelling for the maximum possible number of cycles.

9.2.6 If cycle parking is provided in a shared facility, then it will be appropriate to provide for the overall number of residents' cycles that are anticipated, based on average ownership levels. Unless other data is available, an overall cycle ownership per resident of at least 50% is recommended, to allow for growth from 2001 levels. In areas

and for types of development where cycle use is expected to be higher than normal – for example student accommodation.

9.2.7 This should be related to the number of dwellings based on anticipated household size for the development – so that on a development of small flats, where it is anticipated there will be an average of 1.3 persons per dwelling, provision should be made for 65% cycle ownership, by dwellings.

9.2.8 However, it will be more usual for cycle parking to be within or allocated to individual dwellings, and in this case it will be necessary to consider the potential for one cycle to be owned by each resident, otherwise cycle ownership could be constrained. In this case it will be necessary to decide the likely number of people that will live in each dwelling.

9.2.9 Good quality, convenient and generous cycle parking facilities in new developments will in itself help to generate a positive attitude towards cycling, and demonstrate commitment on the part of housing providers.

AMOUNT OF RESIDENTIAL CYCLE PARKING - VISITORS

9.2.10 No research has been identified on which to base appropriate levels of visitor cycle parking. Provision is clearly important, and in residential areas can be related to the amount of cycle parking available to residents and the expected modal share of visitor trips. Many visitors will be able to use spare space within the residential cycle parking facilities, whether shared or individual. Some provision may also be appropriate for visitors who are not visiting a particular property, especially in mixed use areas.

RESIDENTIAL CYCLE PARKING - SOLUTIONS

9.2.11 In houses, cycles are often kept in garages, and this can provide very convenient storage if the garage is located at or near to the front of the property. Garages are not normally designed for cycle storage however.

9.2.12 As garages become less popular for the storage of cars, and as the proportion of housing schemes with individual garages declines, so greater consideration must be given to the provision of cycle storage. Cycles are generally much less suitable for storage outdoors than cars, in terms of both their security and their requirements for protection from the weather.

9.2.13 If no separate cycle parking is provided for residents, then this will often affect the use of garages for car parking and this should be taken into account in deciding whether garages can be assumed to count fully towards car parking provision (see below).

9.2.14 If separate cycle parking is provided within the building itself then it should be conveniently located, close to the main point of access. If cycle parking is within a separate building – for example as an adjunct to a detached garage or other outbuilding, it should be adequately secure.

9.2.15 In flats, cycle parking has often been inadequately provided for in the past, so that cycles have had to be stored in hallways or carried up flights of stairs. This is not acceptable in new developments, since cycle ownership and use is to be encouraged.

9.2.16 For ground floor flats, or where adequately-sized lifts are provided then storage within dwellings is an option, but this will need to be expressly considered in the design

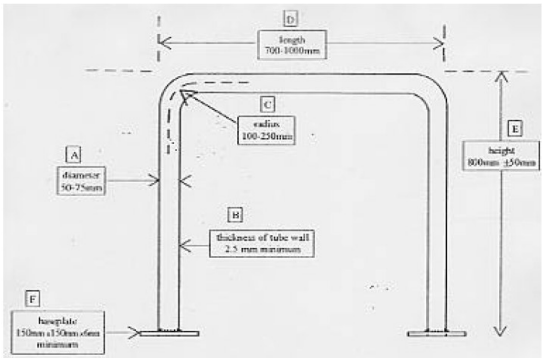
of the accommodation. If this option is used, designers should allow for the likely number of residents per dwelling and provide for one cycle each.

9.2.17 Cycle parking can also be in properly designed communal areas – eg hallways and under stairs. This can be on the ground floor or on upper floors where adequately-sized lifts are provided. Such shared cycle parking need only provide for the overall total number of cycles anticipated for the building, i.e. assuming average levels of cycle ownership per dwelling.

9.2.18 Communal cycle parking can be provided in secure external facilities, such as in underground car parking structures or as adjuncts to buildings.

9.2.19 Visitor cycle parking should be provided in well overlooked areas, which can include within the street itself. Simple and unobtrusive solutions such as Sheffield stands are preferred for use by the public, and should be kept clear of pedestrian desire lines.

Dimensions/layouts.



Sheffield stands – a simple and relatively inconspicuous form of cycle parking.

9.2.20 Sheffield stands should preferably be placed in series at approximate 1m centres, so that 2 cycles are stored per metre run. Where space is limited, an absolute minimum spacing of 750mm should be adopted.

9.2.21 Smaller spacings and overall space requirements are achievable if cycles are stored on end, either in pairs using freestanding racks or against a wall.

9.3 CAR PARKING

INTRODUCTION AND POLICY BACKGROUND

9.3.1 Car parking at destinations – employment or shopping for example - is a major determinant of travel mode, and hence Government policy, as expressed in PPG13, is to keep parking within specified maximum limits, and not to have more parking than a developer wishes to provide so that other modes of travel are encouraged.

9.3.2 Car parking requirements at the residential end of trip are determined by car ownership, together with any demand generated by non-residential uses in the area.

9.3.3 Planning policy in draft PPS3 makes it clear that within residential areas designers should consider carefully how to accommodate the number of vehicles that are likely to be owned by residents in each particular situation:

> *"Local planning authorities should develop parking policies for their plan area with local stakeholders and local communities having regard to expected car ownership for planned housing in different locations, the efficient use of land and the importance of promoting good design."*

9.3.4 The key issues to be considered in terms of planning policy are therefore car ownership, the efficient use of land and good design.

9.3.5 The context of a residential development must be carefully considered when assessing an appropriate level of parking provision to serve the scheme. This should be examined in the Transport Assessment and accessibility assessment.

9.3.6 Although the ability of residents to reach important destinations by other modes is one factor affecting car ownership, research has shown that other factors – for example dwelling size, type and tenure – are also important.

9.3.7 Local authority residential parking standards should therefore set the overall amount of parking to be provided, whether on- or off-street, reflecting:

- the location of the site in relation to public transport and local facilities that can be reached on foot and by cycle;
- the type, size and tenure of dwellings, and
- the amount of allocated parking per dwelling.

REDUCED CAR PARKING PROVISION

9.3.8 Simply limiting the amount of parking below likely demand (i.e. below the level of demand that is likely given the development mix, local accessibility and alternative means of transport) is unlikely to limit car ownership, and may simply lead to bad parking behaviour to the detriment of street safety and quality.

9.3.9 Reduced car parking provision can, however, be appropriate where there are adequate on-street parking controls, if day to day destinations such as jobs and services can be accessed without the use of a car and there is a deliberate policy aim of enabling car-reduced housing and lifestyles. Such schemes could be in controlled parking zones and town and city centres. In such places some people will choose to live without a car, and accommodation with low levels of car parking will be attractive to them.

9.3.10 One way of encouraging car-free lifestyles is to provide a car club. Car clubs are based on shared vehicle operation and use. They provide neighbourhood-based

short-term car hire to members for periods as short as one hour. Cars can be made available in designated on-street spaces close to members' homes and / or can function as workplace schemes. More information on car clubs is available at www.carplus.org.uk.

9.3.11 Where all of the spaces are allocated to properties, and public parking is constrained (for example in apartment developments in city centres) the ratio of parking provision to dwellings is not a helpful statistic. For example, if 50 allocated spaces are provided for a development of 100 flats then half of the flats will have 100% parking and the other half will have none. The key issues for consideration will be how likely it is that those residents without parking spaces will still own a car; and whether this will cause any adverse impacts on amenity or safety.

9.3.12 In town centres and other accessible locations where on-street parking is controlled, it will often be appropriate to not provide visitor car parking spaces. This will encourage visitors to use other modes of travel.

ALLOCATED AND UNALLOCATED PARKING

9.3.13 In planning for expected levels of car ownership in different locations, car parking can be allocated to dwellings or can be unallocated (and therefore a common resource for a neighbourhood). In many cases a combination of both types of parking will be appropriate. There are several advantages to providing unallocated, communal parking and there should be a presumption in favour of including it within a residential layout.

- Communal car parking only needs to provide for average levels of demand;
- It allows for changes in car ownership between individual dwellings over time; for example while a young person in one household may be acquiring a car another in a nearby household may be leaving home;
- It provides for both residents' and visitors' needs;
- It can cater for parking demand from non-residential uses in mixed use areas, which will tend to peak during the daytime when residential demands are lowest; and
- There are some disadvantages to individual off-street provision, such as frequent crossovers affecting pedestrians using the footway and limiting the shared use of kerb space for on-street parking.

9.3.14 Where most car parking is unallocated, visitor demand can normally be met within the normal provision for residents, since the extra cars of visitors will be counterbalanced by residents who are away from their homes with their cars.

ON STREET PARKING

9.3.15 "On street" parking means parking either on the carriageway, or in bays adjacent to the carriageway. The latter will normally be a better solution, allowing for more certain operating conditions for vehicle movement, and also allowing for safer provision for pedestrians to cross the street.

9.3.16 It is desirable to meet at least some of the parking demand in residential and mixed use areas with on-street parking. This enables flexibility of use, and shared use for visitors. Very often there will also be off-street parking, although this is not essential if it is possible and acceptable in all aspects to cater for all of the anticipated demand on-street. This will be the case, for example, where a small infill development is planned in

an accessible location and where the adjacent streets are able to accommodate the increase in parking without affecting amenity and road safety; or where public parking is constrained and a car-free/reduced car ownership development is proposed.

9.3.17 Larger schemes can also accommodate all parking on-street, or at least in bays adjacent to the carriageway (see Crown Street, Glasgow, case study). This brings the huge advantage of enabling the provision of car-free open spaces within residential development blocks.

9.3.18 On-street parking within the adopted highway cannot be allocated to individual dwellings as it is part of the public realm. On-street spaces can be reserved for particular types of user, however – disabled people for example.

9.3.19 Consideration should be given to the positive and negative effects of on-street parking:

- Positive:

  9.4 A common resource, catering for residents', visitors' and service vehicles in an efficient manner;

  9.5 Able to cater for peak demands from different land uses at different times of day – e.g. employment and residential demand;

  9.6 Adds vitality and activity to the street;

  9.7 Well overlooked and relatively secure;

  9.8 Popular and likely to be well-used;

  9.9 Provides a buffer between pedestrians and traffic on busier streets; and

  9.10 Allows the creation of areas within perimeter blocks that are free of cars.

- Negative:

  9.11 Can be visually dominant within a street scene;

  9.12 Footway parking will occur unless the street is properly designed to accommodate parked vehicles and to encourage good parking behaviour. (Methods of discouraging footway parking are discussed below.);

  9.13 Vehicles parked indiscriminately can block access to dwellings; and

  9.14 On-street parking can introduce a road safety problem, particularly if traffic speeds are well above 20 mph and there are no gaps left for pedestrians to cross with adequate visibility.

9.14.1 In most cases the best solution will be to design for a level of on-street parking that is appropriate to a particular situation, given the following factors:

- The overall level of car ownership in the immediate area;
- The amount of off-street parking provided;
- The amount of allocated parking provided;
- The speed and volume of traffic using the street; and
- The width and geometry of the street and its intersections.

9.14.2 Clearly indicating on-street car parking spaces through changes of surfacing material and/or road markings will help to improve good parking behaviour.

9.14.3 It will help to break up the visual impact of on-street parking and provide safer places to cross if the spaces are provided in small groups of up to around 5 spaces. These groups can be separated by kerb build-outs, street furniture or planting.

VISITOR PARKING

9.14.4 Visitor parking should be considered as one component of the demand for unallocated parking, including on-street parking. In the past on-street spaces have been considered as exclusively 'visitor parking' although evidence indicates that these have generally been used by residents. This may be because they own more vehicles than they have allocated parking spaces, or because they find the on-street spaces more convenient, or easier to supervise.

Research[1] indicates that no separate provision needs to be made for visitor parking when more than half of the total parking stock for an area is unallocated. This is because it is likely that, when visitors' cars arrive, that some residents will themselves be absent, leading to some parking being available.

PARKING FOR DISABLED PEOPLE

9.14.5 Appropriate provision needs to be made for the parking requirements for disabled people. Spaces for disabled people will need to be separately identified using the standard road marking and meet minimum space requirements (see para 9.3.50 below). It is preferable to provide these spaces in unallocated areas, including on-street, as it is not normally possible to identify which properties will be occupied by or visited by disabled people.

9.14.6 In absence of any specific requirements, 5% of residential parking spaces should be suitable for disabled people in general residential areas. Higher amounts of disabled parking will usually be necessary where more residents are elderly. However, local authorities can allocate spaces on the basis of need, and this need not impact on the design and layout of streets.

PARKING FOR SERVICE VEHICLES

9.14.7 In most situations it will not be necessary to provide separate parking provision for service vehicles, such as delivery vans, which are normally stationary for a relatively short time within a street, or within the circulation areas and aisles of a parking area. If service parking bays are considered necessary then a means of enforcing the restriction will need to be found.

LOCATION OF PARKING SPACES

9.14.8 Parking spaces that are close to people's final destinations will generally be the most popular, and there are increased risks of theft and vandalism when cars are parked out of sight.

9.14.9 Some concerns have been expressed by highway and planning authorities that garages are often not used for car parking, resulting in additional demand for on-street parking.

[1] Jenks and Noble 1996

9.14.10 Available research does show that in some developments less than half of garages are used for parking cars, and that many garages are used primarily as storage or have been converted to living accommodation. (Various sites – 44% of garages used for parking – WSP 2003; Waterside Park, Kent – 36% of garages used for parking – Scott Wilson, 2005)

9.14.11 It is suggested that following approach should be used to determine how to count garage spaces:

- Car ports should always count towards parking provision.
- Whether garages count fully should be decided on scheme by scheme basis, taking into account factors such as:

  9.15 The availability of alternative parking, including on-street parking – where this is carefully controlled through the layout or by parking restrictions, residents are more likely to use their garages;

  9.16 The size of the garages – larger garages can be used for both storage and for car parking; and

  9.17 Whether separate cycle parking is provided, as garages are often used for this purpose.

9.17.1 Rear parking courts can also be underutilised due to security concerns and also because it is often more convenient for residents to park on street. **(Oxfordshire survey data available June 2006). Again, parking courts are most likely to be used after on-street parking is occupied.

FOOTWAY PARKING

9.17.2 Footway parking causes inconvenience and hazards to pedestrians. It can create particular difficulties for visually impaired, disabled and elderly people or those with prams or pushchairs. It may also cause damage to the kerb, the pavement, or the services underneath. Repairing such damage can be costly and local authorities may face claims for compensation for injuries received resulting from damaged or defective pavements. Footway parking in any case reflects a lack of respect for pedestrians and an attitude of mind in which vehicles are regarded of greater importance.

Footway parking at Beaulieu Park, Chelmsford case study site.

9.17.3 Such footway parking is unnecessary and serves no purpose. It reflects an attitude that keeping the street clear for traffic is more important than keeping footways clear for pedestrian movement.

9.17.4 In London footway parking is generally prohibited and local authorities elsewhere can prohibit it through a traffic regulation order. Any such TRO would need to be enforced. Local authorities should aim to encourage drivers to regard the footway as reserved for pedestrians, and public information and education programmes can be used to influence attitudes in line with this objective. Enforcement without such an awareness-raising exercise may be costly or ineffective.

9.17.5 It is possible to deter footway parking through physical measures, such as by installing bollards, raised planters or other street furniture, and clearly indicating where people should park, as discussed above.

9.17.6 Further guidance on deterring footway parking is contained in Traffic Advisory Leaflet 04/93.

9.17.7 Home zones are normally designed as shared surfaces, without being divided into a footway and carriageway. Technically, therefore, footway parking does not arise, although inconsiderate parking can be an issue. Parking spaces within Home Zones should generally be clearly indicated so that people know where they should park.

Untidy parking within shared surface area, Eastleigh case study area

PARKING SOLUTIONS - EFFICIENCY

9.17.8 A key objective is to ensure that space is used efficiently so that total space taken up by parking is no more than necessary. This allows the greatest possibility for increasing housing density and/or providing amenity space.

9.17.9 The more flexible the use of parking spaces, the greater will be the efficiency. Households acquire and dispose of cars over time as occupants move through life stages. Also visitor parking cannot easily be shared with residents' parking unless in communal areas.

9.17.10 Different types of parking meet the efficiency objective in the order shown in **Table 9.1** below:

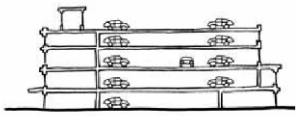
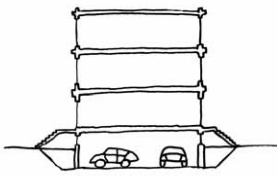
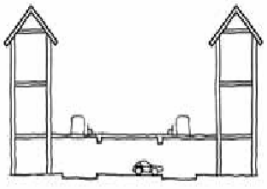
	Type of parking	Comments
Most flexible/efficient	On-street (communal)	
	Off-street communal	Requires additional access space
	Off-street allocated spaces but grouped	Although inflexible, this arrangement allows future change in management to provide flexibility
	Off-street allocated garages	Inflexible, and largely precludes shared use
	Off-street within individual dwelling cartilage	Inflexible in perpetuity
Least flexible/efficient	Garages within individual dwelling curtilage	Inflexible in perpetuity and more space consuming due to need for driveways

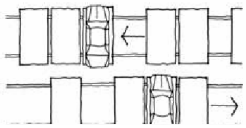
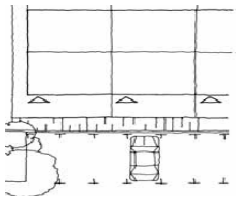
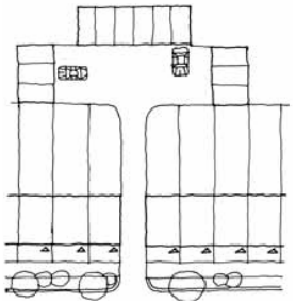
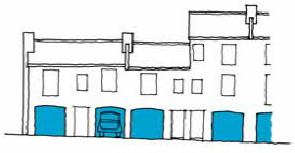
PARKING SOLUTIONS - TYPES

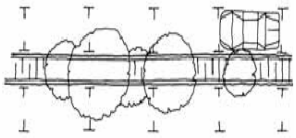
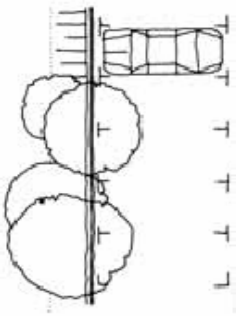
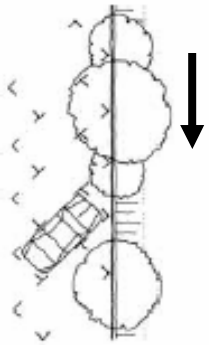
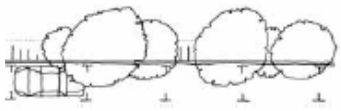
9.17.11 There is a large range of parking solutions for residential areas, and they can generally be categorised as shown in **Table 9.2**. This table is based largely upon the analysis of car parking types given in the document *Car Parking: what works where*, published by English Partnerships in May 2006 in collaboration with Design for Homes.

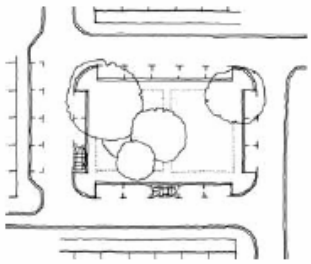
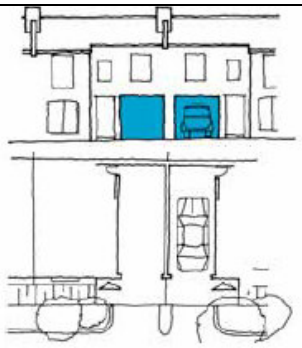
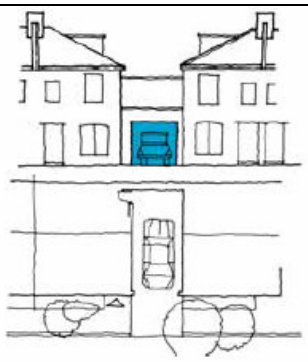
9.17.12 Designers and local authorities should consider which combination of parking types is appropriate in each local circumstance. Further information on the application of these generic parking solutions to different locations is given in the English Partnerships Guide.

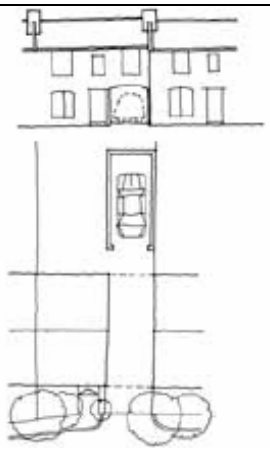
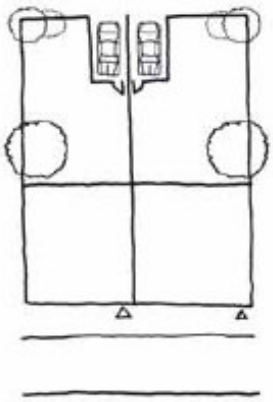
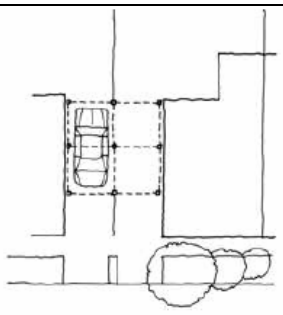
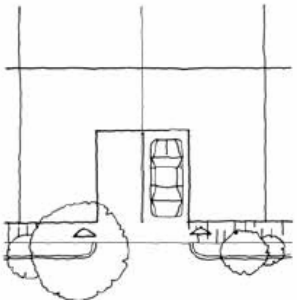
Table 9.2 Parking Solutions for Residential Areas

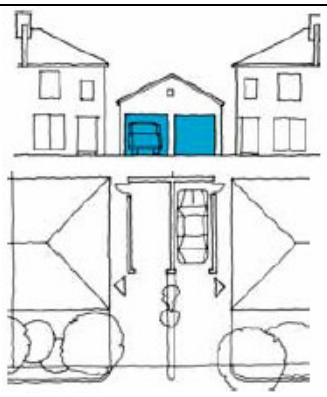
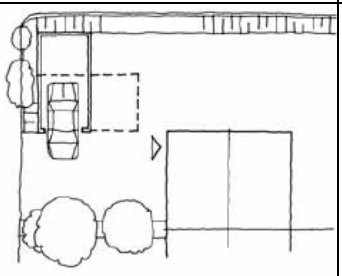
Type		Form	Sketch	Description	Allocated or Unallocated	Comments
Off Plot	1	Multi-Storey		Mainly applicable in central or urban locations. Can be in reserved part of public car park. For detailed guidance on the design of multi-storey and underground car parks see Institution of Structural Engineers Design Guidelines to Multi-Storey and Underground Car Parks (full reference to follow)	Spaces can be allocated to dwellings (permanently or on limited term permit) or unallocated.	Security issues (both vehicle and pedestrian) need careful consideration. Can be "wrapped" with buildings to reduce visual intrusion (as shown)
	2	Underground		As for type 1. Ventilation issues to be considered.	As for type 1	Security issues more easily dealt with if parking is private and secure.
	3	Undercroft		Mainly applicable in central or urban locations. Parking at street level or half level down for natural ventilation. Accommodation over.	As for type 1	As for type 2 Can create problems for level access to buildings, and can lead to blank and unattractive ground level façade
	4	Podium		Distinction from underground/undercroft by the addition of private or shared outdoor space above parking area. Naturally ventilated, sometimes open to street.	As for type 1	As for type 2

Type		Form	Sketch	Description	Allocated or Unallocated	Comments
	5	Mechanical		Sliding, stacking or rotating systems on one or more levels within car park.	As for type 1	Used to increase efficiency of types 1-4
	6	Front Court		Surface-level parking bays in private area overlooked by fronts of dwellings. Not part of public highway (See type 10).	As for type 1	Normally well overlooked and likely to be well used.
	7	Rear Court		Grouped garages or hardstandings around shared court, accessed between properties.	As for type 1	Rear court parking can give rise to security concerns and can be unpopular with residents. Recommended that court serves no more than 6 dwellings. Should be avoided unless frontage development and overlooking possible, but if used, to serve only a small number of dwellings
	8	Mews Court		Terraced garages or car ports with accommodation over (Flat Over Garage units). Garages serve both off plot and on plot dwellings.	Allocated	Often used in perimeter blocks or mews streets to add visual interest and improve security. Blank ground floor facades can be unattractive

Type		Form	Sketch	Description	Allocated or Unallocated	Comments
On Street	9	Central Reservation		Kerbside parking along central reserve strip. Can be parallel (as shown) or perpendicular (see type 10) to central reservation.	Typically unallocated (must be, if on public highway).	Perpendicular parking applicable where traffic speeds at or below 20mph (traffic flow limit – evidence??). Vehicles enter and leave parallel spaces in the same direction.
	10	Perpendicular		Kerbside parking at right angles to street.	Typically unallocated (must be, if on public highway).	Applicable where traffic speeds at or below 20mph (traffic flow limit - evidence??) Can also be used in shared surfaces/home zones.
	11	Angled		Kerbside parking at less than right angle to street – typically 30 to 60 degrees.	Typically unallocated (must be, if on public highway).	Can also be used in shared surfaces and home zones. Vehicles enter and leave the parking space in the same direction. Suitable for one-way streets, in which case spaces should preferably be angled to face direction of flow (as shown)
	12	Parallel		Kerbside parking parallel to the street. Bays may be marked or unmarked.	Typically unallocated (must be, if on public highway).	Can also be used in shared surfaces/home zones. Vehicles enter and leave the parking space in the same direction. Marked bays generally more efficient.

Type		Form	Sketch	Description	Allocated or Unallocated	Comments
	13	Housing Square		Parking arranged around landscaped central space where streets meet.	Typically unallocated (must be, if on public highway).	Can also be used in less formal arrangements within shared surfaces public squares and in home zones. Pedestrian desire lines to and across the central space should be properly provided for
On Plot	14	Chauffeur unit		Dwelling with detached garage with accommodation above to encourage flexible living, such as workshops.	Allocated	Urban design use is as a gateway or focal point, or as a sentry box in a mews street. Similar to type 8, but parking is for accommodation above.
	15	Integral garage		Garage within footprint of house gives direct access to dwelling, accommodation continues above or around.	Allocated	Risk of inactive streets, so best used with double fronted bay windows for surveillance. Garage doors best placed close up to highway.
	16	Attached garage		Garage is located to side of house, giving direct access to dwelling, often with 'bonus' rooms over. May be paired with neighbour.	Allocated	Garage best placed close up to highway.

Type		Form	Sketch	Description	Allocated or Unallocated	Comments
	17	Cut out or drive through		Arch formed at street level allowing driveable access under first floor accommodation to hardstanding or garage at rear of plot. Cut out may be shared with neighbour if hardstandings or garages paired.	Allocated	Additional tandem parking space formed by access way, if not shared with neighbour.
	18	Rear court		Single or larger hardstanding accessed from and located at rear of property. Differs from type 7 in having direct access to dwelling.	Allocated	
	19	Car port		Open sided frame structure, generally located to side of house, may be paired with neighbour.	Allocated	Car ports can be substituted for garages in other types. Car ports more likely to be used for parking than garages. Ports sometimes incorporate outdoor private terraces above.
	20	Hardstanding		Uncovered parking area to side or front of house. May be paved or finished in material allowing grass to penetrate.	Allocated	

Type		Form	Sketch	Description	Allocated or Unallocated	Comments
	21	Detached garage		Garage located to side of house giving indirect access to dwelling. Option of accommodation over. May be paired with neighbour.	Allocated	
	22	Detached Garage to front		Separate garage or pair of garages at front of plot, may be parallel or at right angles to house	Allocated.	

9.17.13 Parking solutions, even within a small area, do not just have to be of just one type. In example 1 below there is a combination of allocated on-plot parking with well-designed unallocated on-street parking, giving a flexible solution that meets demands from residents and visitors.

Example 1 – Detached garages, driveways, on-street parallel spaces (***Note – based on David Lock Associates sketch 2.5*)

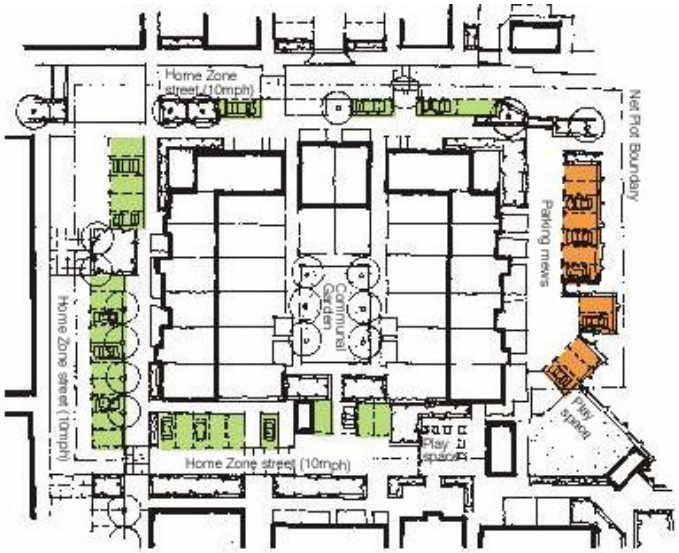
9.17.14 This demonstrates how off-street provision reduces the amount of on-street (shared) parking available

Example 1

9.17.15 Example 2 uses driveway parking, garages, small rear parking courts, and on street parallel spaces (DLA sketch 2.1). Such parking courts should be avoided where they lack frontage development, however. Such courts also require space for access and parking bays that could be more beneficially used for private or communal amenity space.

Example 2

9.17.16 Within shared surface areas and Home Zones, parking alignment can vary along a street to create turns and to limit forward views, as a means of limiting speeds. However, this breaks up the linear integrity of the street and can lead to unsightly and untidy streetscape unless handled carefully – see Example 3.



Example 3

Townscape spoilt by irregular parking arrangements (Eastleigh case study)

DIMENSIONS OF CAR PARKING SPACES AND MANOEUVRING AREAS

9.17.17 Car parking spaces should normally have the following dimensions:

- When parallel with the street and accessed from the side

  9.18 6m long by 2m wide (or 2.4m wide where there is no footway or paved margin alongside)

- At other angles to the street, when accessed from the end

  9.19 4.8m long by 2.4m wide

- The manoeuvring space needed to access spaces conveniently from the end-direction on depends on the angle of approach – typically:

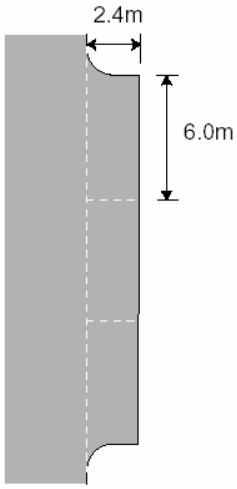
  9.20 90 degrees – 6.0m width

  9.21 60 degrees – 4.2m width

  9.22 45 degrees – 3.6m width

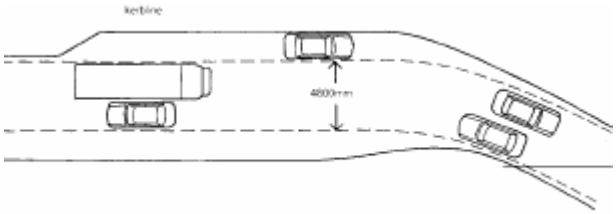
9.22.1 Manoeuvring space requirements can be reduced below these levels if spaces are slightly larger than normal. Tracking software can be used to assess the effect of oversized spaces on manoeuvring areas.

9.22.2 If space requirements are limited it will also be acceptable in lightly trafficked, low speed situations to provide reduced manoeuvring space, which will require vehicles to make some additional shuffling movements to enter and leave spaces.

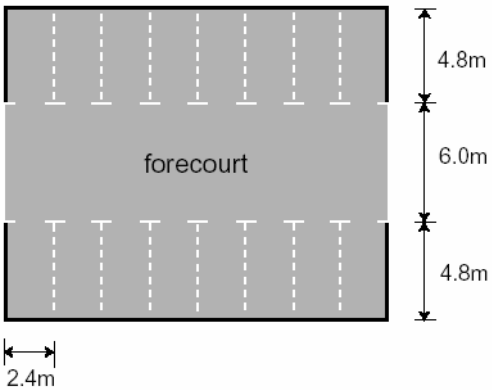


Parking bays parallel to carriageway.

- 2.4m width of longitudinal bays can be reduced in lightly trafficked situations to a minimum of 1.8m. A 2.4m width will allow pedestrians to stand clear of parked cars while waiting to cross, however.
- Longitudinal parking can be achieved less formally by a simple widening of the carriageway on one or both sides of the street.



Gradual widening of the carriageway to create on-street spaces, with running carriageway checked using tracking.



Grouped right angle parking bay.

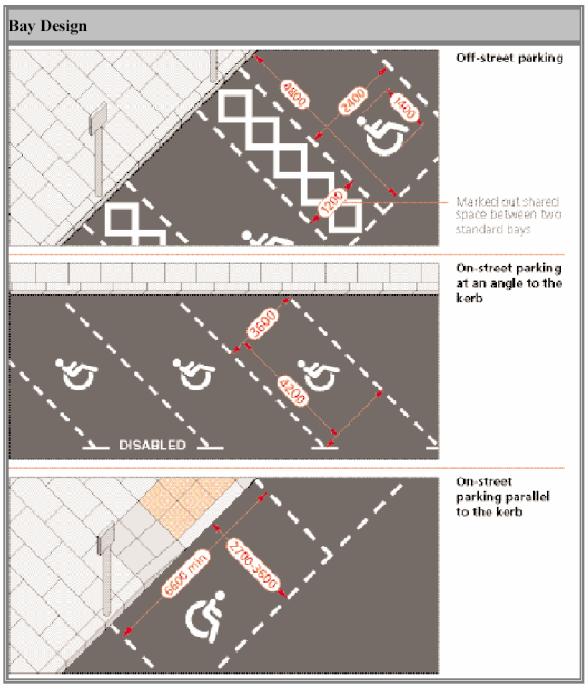
DISABLED SPACES - TYPICAL DIMENSIONS (FROM INCLUSIVE MOBILITY)

9.22.3 **On-street parking parallel to the kerb:** within the marked parking space, a clear rectangular space should be provided which is a minimum of **6600mm** long by **2700mm** wide (preferably **3600mm**). The extra width allows for an access zone on kerb or street side.

9.22.4 On-street parking at an angle to the kerb: the parking space should be a minimum of 4200mm long by 3600mm wide.

9.22.5 Off-street parking: bays should be a minimum of 4800mm long by 2400mm wide with additional space:

- Where bays are parallel to the access aisle and access is available from the side an extra length of at least **1800mm**, or,
- Where bays are perpendicular to the access aisle, an additional width of at least **1200mm** along each side. Where bays are adjacent the same **1200mm** space can serve both sides. There should also be a **1200mm** wide safety zone at the vehicle access end of each bay to provide boot access or for use of a rear hoist.



9.23 MOTOR CYCLE PARKING

9.23.1 Motor cycles (including other powered two wheel vehicles (P2W)) are much more efficient than cars in terms of parking requirements. The ratio of motorcycles to cars in the UK is approximately 1:25.

9.23.2 In most situations motor cycles will simply use car parking spaces, but in some situations it will be appropriate to provide separate motor cycle spaces – eg

- Where there is a high density of development and car parking will be intensively used; and

- Where demand for motorcycle parking is likely to be significant - for example P2W vehicles are exempt from the London Congestion Charge and this has lead to increased use of these vehicles.

9.23.3 Motorcycles can be extremely valuable vehicles that are prone to theft. They can be readily lifted into another vehicle, and hence may be subject to organised theft. Security should be a consideration for those providing parking facilities for motorcycles. The availability of secure parking spaces is particularly important in areas such as public transport interchanges, workplaces and shopping and entertainment complexes, but security may also be an issue in residential environments. Anchor points can at ground level, built into the pavement construction, or can be in the form of a horizontal bar at a height of around 400-600mm, suitably protected to ensure it does not represent a trip hazard.

9.23.4 Further guidance on motorcycle parking is given in Traffic Advisory Leaflet 02/02.