

INTRODUCTION

BUILDING FOR LIFE RELEVANT QUESTIONS:
11, 12, 13, 16

Lifetime Homes RELEVANT DESIGN CRITERIA:
1. Car Parking Width;
2. Access from Car Parking.

6.1 This chapter sets out the City Council's preferred approach for the provision of car and cycle parking within residential developments. The council's approach to car parking has been developed through an understanding of car ownership patterns in Exeter (based on the 2001 census) and national research and guidance.

6.2 The following guidelines will be applied to all development unless the City Council is satisfied that a source has been specifically designed to be an exceptional sustainable development which avoids the provision of car parking adjacent or close to dwellings within the main layout (such as Vauban, Freiburg). The provision of Car Club spaces within developments is encouraged.

POLICY BACKGROUND

6.3 The guidance set out in this chapter provides guidance on the interpretation of the following saved policies from the Local Plan:

- T1 Sustainable Transport Hierarchy
- T3 Encouraging Use of Sustainable Modes
- T10 Car Parking
- DG1 Urban Design
- DG2 Energy Conservation
- DG6 Vehicular Circulation and Car Parking in Residential Development
- DG7 Crime Prevention and Safety

It is anticipated that many of these policies will be replaced in the forthcoming Development Management Development Plan Document. At an appropriate stage in the development of the DPD this SPD will be updated to reflect new policy.

6.4 As has been previously discussed the Council's approach to the layout of new developments is to facilitate a sustainable transport hierarchy that prioritises pedestrians, cyclists and public transport over private vehicle use. However, the Council also recognises the need to provide adequate car parking within new developments as set out in policy T10, to a maximum of 1.5 spaces per dwelling.



Figure 6.1 Car free environment in Vauban, Freiburg, Germany.

6.5 Research indicates that the way parking is provided within a development is as important as the number of spaces provided. Poor provision of parking has a significant impact on the quality of streets and spaces. "Residential Car Parking Research" (DCLG 2007) reviews national car ownership patterns and the issues relating to allocated and unallocated parking. It suggests that Local Planning Authorities may wish to develop specific guidance regarding the provision of car parking. Based on this national research the City Council has reviewed car ownership patterns in Exeter (from information in the 2001 census). The evidence suggests a direct link between dwelling size and car ownership which has been developed into the detailed guidance below.

6 PARKING

6.6 The City Council supports the principles set out in “Parking – What works where” (English Partnerships 2006):

- A balance of allocated and unallocated parking spaces should be provided to ensure that the parking provision meets the need generated by the development.
- On-street and on-plot car parking should be considered first, with courtyards used only as a last resort.
- Design should deter indiscriminate and anti-social parking.
- All households should be provided with secure and convenient storage facilities for cycles.
- Where a need has been identified, the design of a dwelling should include storage for an electric powered disability vehicle, including power supply.

6.7 It is important that the design of the townscape incorporates parking without it dominating the streetscene. How parking is accommodated into a housing layout is critical to the quality of a scheme both in terms of townscape and residential amenity. Advice within documents such as “Car Parking - What works where”, Manual for streets and By Design suggest design approaches which successfully accommodate parking. To ensure that a balance is struck between these competing aspirations parking has to be considered at the outset of the process and be seen as an integral component of the design.



PARKING OPTIONS MUST BE PROVIDED WHICH COMPLEMENT GOOD TOWNSCAPE AND THE SETTING OF BUILDINGS, AND DO NOT INTRUDE INTO PRIVATE OPEN SPACE.

THE PRINCIPLE OF FRONTAGE ACCESS

6.8 In the move away from car focussed housing layouts based around low-density, cul-de-sac to higher density layouts which create permeable, well-enclosed streets there has been a focus on the use of rear parking courts. This approach was advocated in the preamble to policy DG6 (para 13.48). However, experience and research demonstrate that this approach has significant flaws. Parking provision at the rear of properties can lead to inactive frontages, discouraging a sustainable movement hierarchy, and creating safety and security problems both on street and within the parking courtyards or unobserved garages. Furthermore, rear parking courts use large areas of land and often result in small gardens, reduced privacy, less activity in the street and anti-social parking (by those cars without allocated rear spaces). For as long as there remains a demand for private vehicles, there will remain an in-built contradiction by providing parking at the rear. “Car parking. What works where” states;

“Do not park in the back of the block until on street and frontage parking permutations have been exhausted. Use of the mews or rear court should support on street provision, not replace it.”

6.9 The City Council therefore advises that, to meet the requirements of Local Plan policies T1, DG1, DG6 and DG7, parking should be provided on street or on plot; accessed from the front of the curtilage (frontage access).

Therefore:

PARKING SHOULD BE PROVIDED ON STREET OR ON PLOT ACCESSED FROM THE FRONT OF THE CURTILAGE. REAR COURTYARDS OR REAR GARAGING SHOULD ONLY BE USED AS A LAST RESORT IN SUPPORT OF FRONTAGE

PARKING RATIOS AND ALLOCATION OF SPACES

6.10 Development proposals should comply with local plan policy (T10) of a maximum of 1.5 spaces per dwelling. The intention of this limit is to promote sustainable travel choices and to help achieve high densities and high quality townscape. However, evidence suggests that if parking is not provided in a way to meet the need generated by a development there will be an under-provision of parking which results in inappropriate and anti-social parking. It is important to ensure that car parking spaces are conveniently located and accessible to support the active use of the street. Therefore, whilst complying with the 1.5 limit, developers should provide car parking in accordance with the table in Figures 6.2 overleaf..

Meeting the need for parking

6.11 Parking requirements in residential developments are a product of car ownership. DCLG's Residential Car Parking Research' demonstrated that there is significant variation in car ownership between different households. For example in the 2001 census the national car ownership profile for a typical 5 room owner-occupied house was:

- 16% had no car
- 53% had one car
- 26% had two cars
- 4% had three cars, and
- 1% had four or more cars

6.12 These figures are matched in a closer analysis of car ownership profiles in Exeter (again based on the 2001 census) where local figures can be seen to match the national profile, but with slightly lower average car ownership. For example in the 2001 census the car ownership profile for a typical 5 room owner-occupied house in Exeter was:

- 17% had no car
- 58% had one car
- 22% had two cars
- 3% had three cars, and
- 1% had four or more cars

6.13 Average car ownership across the city is 1.02 cars per dwelling, but this hides significant variation between different dwelling types and sizes. Average car ownership per house is 1.23 cars, whilst for flats it is 0.88 cars per dwelling. Larger houses and flats have higher levels of car ownership than smaller dwellings, but still with significant variation between individual properties. Affordable (Rented and Shared Ownership) dwellings also have lower average car ownership than privately owned dwellings.

6.14 There is also variation in car ownership across different wards within Exeter, but this can be seen to relate to dwelling type and size rather than location or distance from the City Centre. Car ownership levels in Topsham or Whipton Barton are similar to those in St Leonards or St James. Several areas have significantly lower levels of car ownership (notably St Davids and Newtown). This reflects not the location of these areas, but the much higher percentage of flats and rented properties than other parts of the city.

6.15 The problem evident from the car ownership statistics and the way in which parking has been provided in developments in Exeter is that there is a significant under provision of parking as a result of the way parking is provided. 100% allocated parking (even at the maximum 1.5 cars per dwelling) does not meet the need when 26% of households have 2 or more cars. For example, based on average car ownership, residents in a development of 100 houses are likely to own 112 cars (17 x 0 cars + 58 x 1 car + 22 x 2 cars + 3 x 3 cars + 1 x 4 cars = 112). If the development provides 150 parking spaces then the demand would appear to have been met. However, there are 25 unused parking spaces (17 x 1.5 spaces - as 17% of residents do not own cars), and 26 houses own 2 or more cars, for which they do not have a parking space. There are therefore 18 cars (22 x 0.5 cars + 3 x 1.5 cars + 1 x 2.5 cars) trying to find somewhere to park without an allocated space – creating a problem with ad-hoc parking. This problem is seriously exacerbated by the low use of garages for parking resulting in even more cars parking on street without any parking provision.

6 PARKING

6.16 The City Council therefore advise that parking provision should provide sufficient unallocated parking to provide for the additional need demonstrated by the ownership car ownership patterns for Exeter (based on data from the 2001 census). This approach both addresses the inefficient allocation of parking spaces to households that do not require one, and works to accommodate those that have a genuine need for more than one car. In general this means that a higher level of unallocated parking should be provided than is currently the norm.

6.17 In order to accommodate the variation in car ownership between dwellings developers should provide parking spaces according to the following table, up to the maximum average of 1.5 spaces per dwelling set by local plan policy (T10). The tables in Figure 6.2 set out the number of unallocated spaces per dwelling required in relation to the number of allocated spaces provided. For example for each 3 bed privately owned house with 1 allocated parking space an additional 0.4 unallocated spaces are required to accommodate additional demand and visitor parking.

(These requirements have been calculated from the 2001 census car ownership figures by multiplying the minimum number of cars allocated by the % car ownership and adding 0.1 unallocated spaces per dwelling for visitor parking. For example for a 3 bed house with unallocated parking a parking ratio of 1.23 results from $(17\% \times 0) + (58\% \times 1) + (22\% \times 2) + (3\% \times 3) + (4\% \times 4) + 0.1 = 1.23$. And for a 3 bed house with 1 allocated parking space per dwelling a parking ratio of 1.4 results from $(17\% \times 1) + (58\% \times 1) + (22\% \times 2) + (3\% \times 3) + (4\% \times 4) + 0.1 = 1.40$.)

PARKING SPACES SHOULD BE PROVIDED IN ACCORDANCE WITH THE TABLE IN FIGURE 6.2 WHILST ALSO ENSURING A MAXIMUM AVERAGE OF 1.5 SPACES PER DWELLING.

DEVELOPERS SHOULD PROVIDE A TABLE SETTING OUT THE PARKING PROVISION FOR THE DIFFERENT DWELLING TYPES PROPOSED.

Sections of the tables below which are greyed out indicate levels of parking that are unacceptable for this dwelling type and size (because they result in excessive parking provision in relation to ownership). A single garage counts as one allocated space.

Figure 6.2 Requirement for unallocated spaces per dwelling:

Houses			
Allocated space per dwelling	0	1	2
1 bedroom	1.0		
2 bedrooms	1.1		
3 bedrooms	1.23	+ 0.4	+ 0.1
4 bedrooms	1.32	+ 0.5	+ 0.1
5 bedrooms	1.54	+ 0.7	+ 0.15

Flats			
Allocated space per dwelling	0	1	2
1 bedroom	0.8		
2 bedrooms	0.9		
3 bedrooms	1.05	+ 0.25	
4 bedrooms	1.2	+ 0.35	
5 bedrooms	1.5	+ 0.7	

Where the number of parking spaces calculated is not a whole number spaces should be rounded up to the nearest whole space.

6.18 The example below (Figure 6.3) illustrates how the table in Figure 6.2 would be used to calculate parking provision for an example development of 100 houses and flats:

Dwelling Type	Number of bedrooms	Number of units	Allocated spaces per dwelling	Allocated Parking Spaces	Unallocated spaces per dwelling	Unallocated Parking Spaces	Total Parking per dwelling type
	House						
A	2	15	0	0	1.1	17	17
B	3	33	0	0	1.23	41	41
C	4	30	1	30	0.5	15	45
	Flat						
D	2	11	0	0	0.9	10	10
E	3	11	1	11	0.25	3	14
	Total	100		41		86	127

6 PARKING

Total number of dwellings:	100
Total number of unallocated parking spaces:	86
Total number of allocated parking spaces:	41
Total number of parking spaces:	127
Average Parking Ratio (Spaces/Dwellings):	1.27

Figure 6.3

6.19 The location of parking spaces must be close to the main front access of the dwellings they serve. Where allocated spaces are provided (either on street or on plot) the additional unallocated spaces required to accommodate additional parking need should be located within easy walking distance of the dwellings they serve. As a guide this distance should be no more than 200m.

WHERE UNALLOCATED PARKING SPACES ARE PROVIDED IN ADDITION TO ALLOCATED SPACES THESE SHOULD BE PROVIDED WITHIN EASY WALKING DISTANCE OF THE FRONT DOORS OF THE DWELLINGS THEY SERVE.

6.20 As set out above, the DCLG research and local analysis demonstrate that allocating parking spaces on a plot-by-plot basis for average car ownership ignores significant variations in car ownership and wastes space by allocating parking spaces to people who don't use them. In addition additional spaces are not provided for people with above average car ownership, causing problems with unplanned-for parking. The provision of unallocated parking, on the other hand, is a flexible system which reduces the overall number of spaces required and better meets the overall parking need. Therefore, for terraced dwellings the presumption is that unallocated parking will be provided, on street, close to the front doors. If developers wish to provide allocated spaces for terraced dwellings they should demonstrate that the requirements of criteria D of Policy DG1; to promote Exeter's urban character and support urban services, can be met. The development should be of sufficient density to support local distinctiveness and prevent suburban sprawl, and create a high quality and pedestrian friendly townscape. In requiring unallocated parking, resident's parking schemes may be applied to ensure residents have priority for the use of parking spaces where adjoining or nearby development may result in overspill parking.

FOR TERRACED DWELLINGS UNALLOCATED ON STREET PARKING SHOULD BE THE MAIN PARKING OPTION UNLESS IT IS CLEARLY DEMONSTRATED THAT ALLOCATION OF PARKING SPACES IS NOT DETRIMENTAL TO THE PROVISION OF HIGH QUALITY AMENITY, TOWNSCAPE AND PEDESTRIAN FRIENDLY STREETScape.

6.21 Figure 6.4 demonstrates that an arrangement of terraced housing in perimeter blocks can allow on street parking at up to 1.35 spaces per dwelling (1.35:1) with on street parking spaces located outside front doors. It is important that parking is conveniently located to increase activity on the street and help avoid anti-social parking and associated neighbour problems. In a development site consisting of a mix of terraced, semi-detached and detached dwellings it is important to ensure that the average ratio remains no more than 1.5:1. The level and arrangement of parking provision must, furthermore, ensure an attractive, pedestrian friendly streetscape.

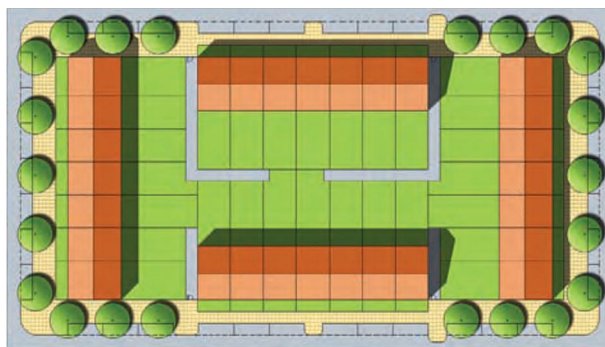


Figure 6.4 A parking ratio of 1.35:1 can be achieved with on street parallel parking.

ON STREET PARKING

6.22 Throughout the UK there are streets built in the late 18th, 19th and early 20th centuries which create good, and in some cases, exceptionally high quality townscape and have adapted well to accommodating private motor vehicles. Some of the better preserved examples are highly desirable properties (Figure 6.5) whilst many are less grand (Figure 6.6) but nevertheless function well. The three key elements these have in common are the way the blocks are arranged, the relationship between the buildings and the street and the width of the streets themselves.

6 PARKING



Figure 6.5 Large 19th century houses rely on on street parking.



Figure 6.6 Convenient on street parking for Victorian terraced houses.

6.23 Junctions restrict the scope for on street parking so it is important that the number of junctions included in a layout allows sufficient space for the amount of on street parking required.

6.24 The width of the street is critical in maximising parking. In traditional arrangements with segregation of vehicles and pedestrians, carriageway widths of 4.8 or 5.5 metres do not meet residents' preferences for frontage parking on both sides of a road and often result in parking half on the footway and half on the road, causing danger and inconvenience to other users (Figure 6.7).

6.25 In many situations, particularly with regard to terraced houses, the street must be wide enough to accommodate parking on both sides.

LAYOUT DESIGNS SHOULD DEMONSTRATE THAT STREET WIDTHS ARE SUFFICIENT TO ACCOMMODATE ON STREET PARKING AS THE MAIN PARKING PROVISION.



Figure 6.7 Anti-social parking on the footway.

THE DESIGN OF ON STREET PARKING

6.26 Particular care must be taken to ensure that cars are accommodated on street in a way which maintains a high quality public realm. Formal Home Zones should be considered the first option because they are purpose- designed to ensure that cars defer to pedestrians and have the potential to accommodate more car parking than traditional parallel parking arrangements. Traditional streets with parallel parking are also a good model for parking provision, but designs must ensure a pedestrian friendly environment, good townscape and high quality public realm. of the streets themselves.

Homezones

6.27 Home zones are legally defined, shared surface arrangements which do not segregate pedestrian and vehicle traffic. They incorporate measures to ensure that moving cars do not dominate the public realm and which allow the integration into the street of play space, informal social space and well-integrated landscape works (Figure 6.8). Traffic is slowed down and paving makes it clear to drivers they are in a pedestrian priority area. They are potentially very attractive solutions to the problem of integrating pedestrian space with vehicles. Figure 6.9 is a good example of a recently completed home zone scheme.

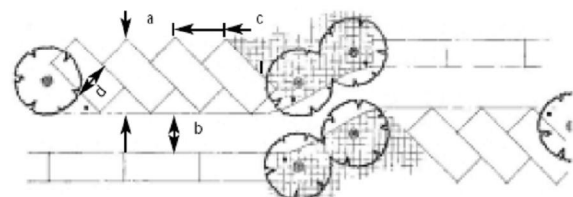


Figure 6.8 Parking arrangements within a homezone development.

6 PARKING

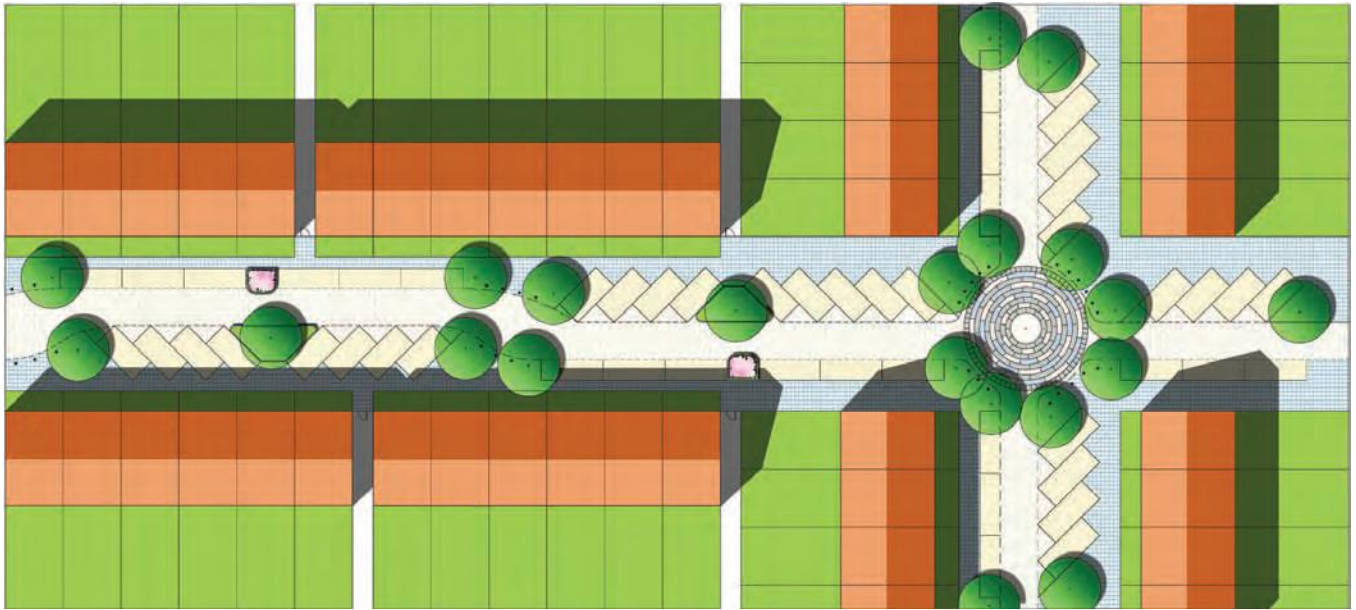


Figure 6.10 A layout based on homezone principles.



Figure 6.9 A recently completed homezone development.

6.28 As a rule, whilst the street itself may be straight, the carriageways are not, so that interesting and safe social environments may be created. By creating streets with individual character, residents may be further encouraged to take pride in the streets in which they live. Figure 6.10 suggests how a layout may incorporate a home zone approach.

6.29 As indicated in Figure 6.10 a mixture of parallel, angled or possibly right angled parking may be possible. A mixture of provision within a shared surface arrangement will slow traffic down and help create a pedestrian friendly environment.

IN GIVING CONSIDERATION TO ON STREET PARKING PROVISION HOME ZONES SHOULD BE THE FIRST CHOICE DESIGN.

Traditional Streets

6.30 Traditional streets incorporating parallel parking may be possible as long a clearly pedestrian friendly, high quality public realm is achieved. Figure 6.11 indicates the narrowest width of carriageway possible.



Figure 6.11 A typical terraced street with on-street parking as the main parking provision supplemented by frontage access on-plot parking.

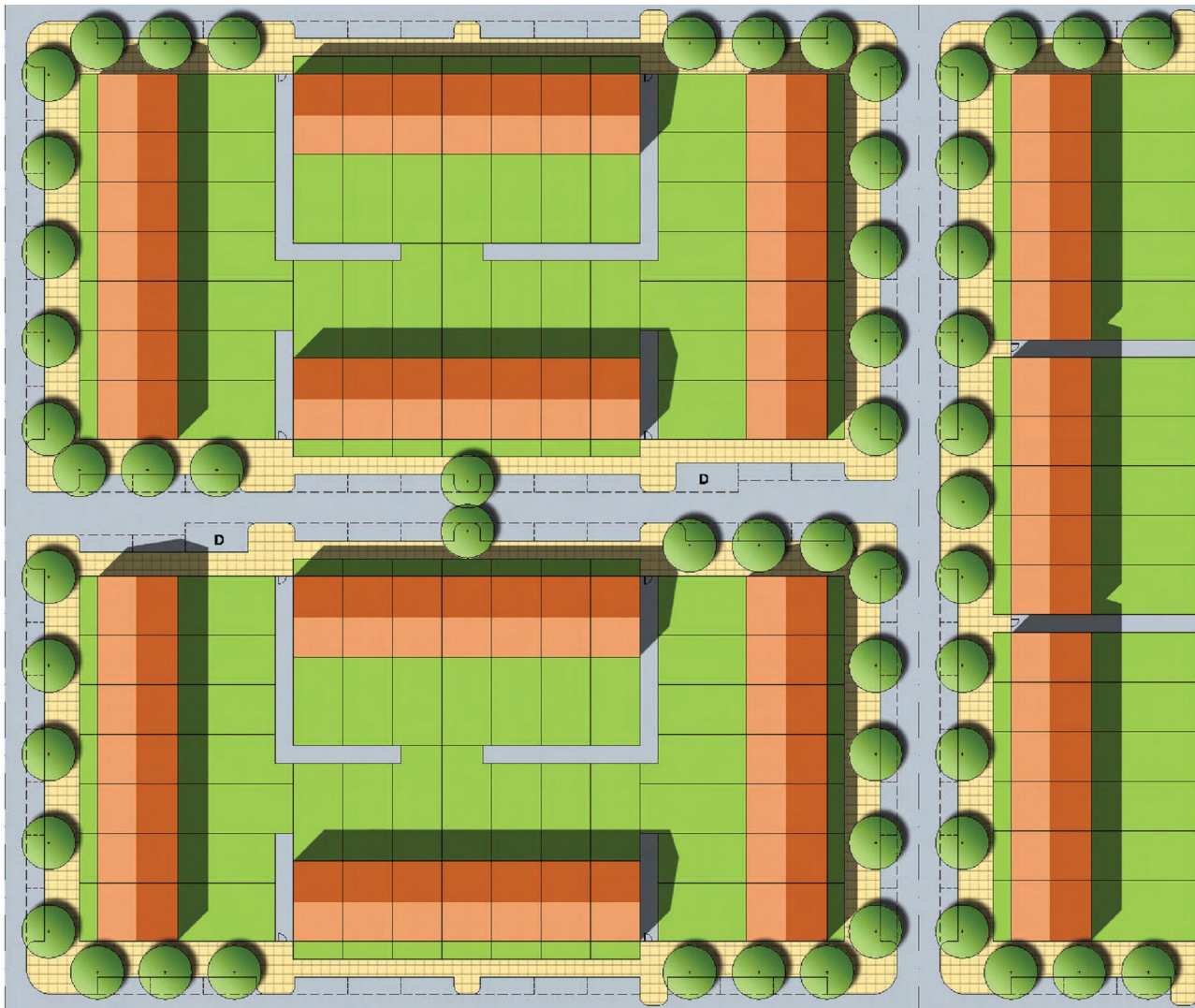


Figure 6.12 Traditional streets with parallel on-street parking as the main parking provision. Secondary streets are narrowed to 3.5m to slow traffic and create safe crossing points.

6.31 Assuming parallel parking spaces 2x6 metres on both sides, the carriageway should be a minimum of 7.5 metres where the central area (3.5 metres) only needs to accommodate vehicle movement in one direction. This arrangement may require allocated space to allow vehicles to pass depending upon its length, or the street designated one-way. Where two-way movement is required the central area should be a minimum of 4.8 metres, resulting in a minimum carriageway width of 8.8 metres. Wider central areas will be required where larger vehicles are frequent or on bus routes. To create safe crossing points and allow tree planting there should be sufficient breaks in the parking bays.

6.32 The arrangement in Figure 6.12 demonstrates how high densities may be provided at the same time as providing parallel parking and improving dwelling space standards. The terraced dwellings in this example have an internal frontage

e width of 5.3 metres, which helps allow parallel parking as well as providing good amenity.

6.33 Right angled parking has the potential to maximise parking provision on street but usually at the cost of good townscape and the quality of pedestrian space (Figure 6.13). Right angled parking may be acceptable as part of a home zone design but without the home zone approach will not normally be acceptable.

ELECTRIC CAR CHARGING POINTS

6.34 Developers should plan for the future installation of electric car charging points for all on-street parking. As a minimum ducting and potential for easy connection to the electricity network should be provided to allow for future installation of charging apparatus.

6 PARKING



Figure 6.13 Right angled parking enclosed by two storey houses produces poor townscape.



Figure 6.14 Townhouses create dead frontage and vehicles dominate the street scene.

DEMARICATION

6.35 Where parking bays are demarcated it is important that road surfaces and markings do not detract from the floorscape. To strengthen the quality of spaces there should be either subtle variation or continuity in the choice of high quality surface materials. It is acceptable to mark out parking spaces by a minimal use of studs or setts rather than a change in materials. Using different materials for the parking spaces, if not carefully done, merely emphasises the presence of vehicles and can detract from the quality of the place being made.

ON PLOT PARKING

6.36 On plot parking is parking that is located within the boundary of the property which it serves. This section deals with garages, car ports and parking spaces accessed from the street frontage. Parking in rear gardens is covered in the section dealing with rear access

6.37 On a development site, the number of dwellings with on plot parking that may be permissible will be dependent upon compliance with the maximum parking ratio of 1.5:1 combined with the need to achieve sufficient density.

6.38 On plot parking should be arranged so that it does not dominate the street scene. Town houses of the type indicated in Figure 6.14 are not acceptable because their frontages lack fenestration, and, instead, are dominated by garage doors. Houses with integral garages of the type indicated in Figure 6.15 may be acceptable where a specific mews or lane character is being designed.



Figure 6.15 Well-designed garage doors integrated into the design of the buildings.

6.39 Semi-detached or detached houses may be provided with on-plot parking if appropriate and provided the maximum parking ratio of 1.5:1 is not exceeded. Garages are to be counted as an allocated space and must meet the requirements set out elsewhere in this chapter. Where an individual dwelling may require more than 2 parking spaces these additional spaces will generally need to be provided as part of unallocated on-street parking.

6.40 Where two spaces per plot are provided they are required to be one behind the other. Double garages and double drives, because of the plot width they require, have a significant impact on density and will not normally be permitted.

6 PARKING

6.41 Where two parking spaces are provided on a plot the design should be arranged such that cars are not parked forward of the building line. Garages set back a minimum of six metres from the main front wall of any dwelling will allow a car to be parked in front of the garage doors without it protruding forward of the building line.

6.42 Where on plot parking is restricted to one space, the garage, car port or parking space should be located in a position which does not permit a second car to be parked (in front of the garage doors or space). Where garages are immediately adjoining the footway the garage doors must be designed not to overhang the footway either when being operated or when in the

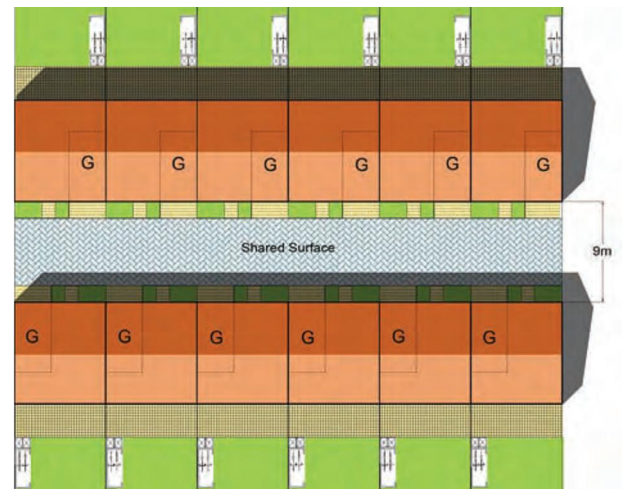
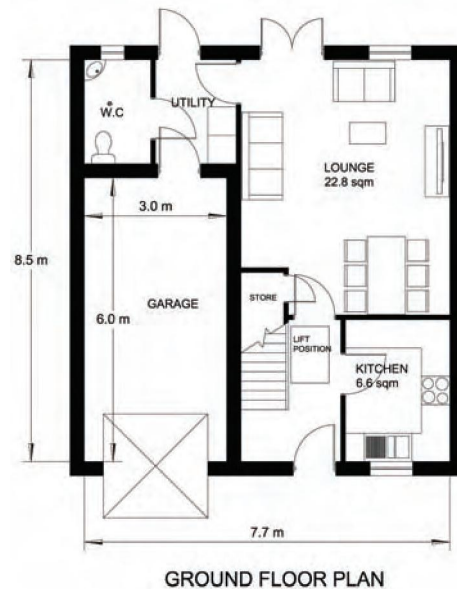


Figure 6.16 An example of mews design.

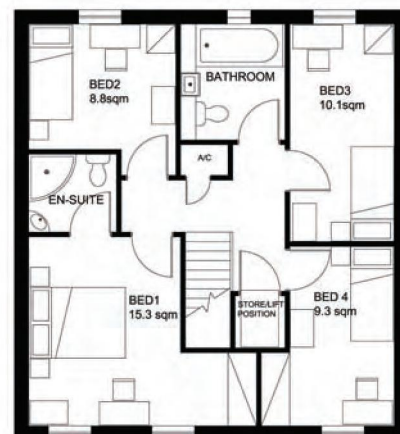
FOR DWELLINGS DESIGNED TO INCLUDE ON-PLOT PARKING TWO SPACES WILL BE THE NORMAL MAXIMUM PERMITTED PER ON-PLOT UNIT. GARAGES OR CAR PORTS SHOULD NOT PROJECT FORWARD OF THE BUILDING LINE.

6.43 Where a mews design may be acceptable in principle, integral garages may be provided within a terrace as suggested in Figure 6.16, so long as active frontages can still be provided. Providing parking in this way minimises the highway space that is required; allowing housing density to be maintained.

6.44 The best design solutions can be those which integrate garages or car ports into the built form and hence the street scene (Fig 6.17) by providing accommodation over. In this example enclosure is good and there is activity provided to the street by a good balance between fenestration and vehicle access.



GROUND FLOOR PLAN



FIRST FLOOR PLAN

Figure 6.17 An internal layout of a mews house type.

Garages

6.45 Research has demonstrated that only a small percentage of garages are used for parking cars because they may be inconveniently located, they are too small and they are used for domestic storage because insufficient storage space is provided within houses. This can exacerbate problems of anti-social parking and congested streets.

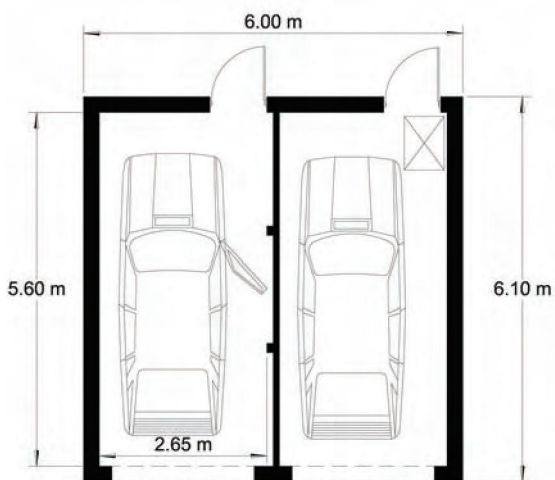


Figure 6.18 Small garages are inconvenient to use. The garages (measured 2.65x5.6 internally) above only allow vehicle doors open from one side. And it is difficult to move bins through the garage with car parked in it.

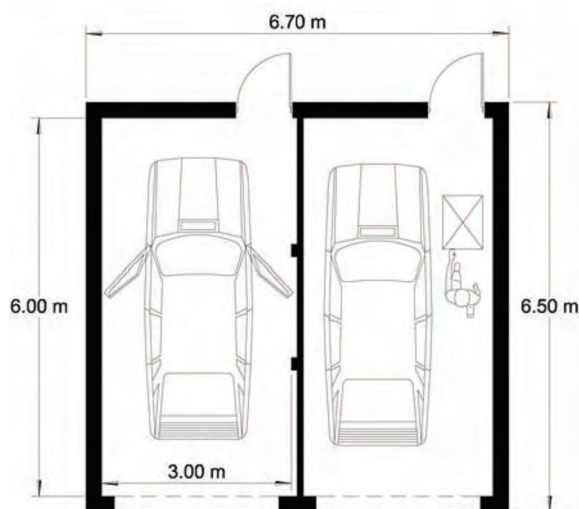


Figure 6.19 Increasing the internal dimensions to 3m x 6m allows more convenient use.

6.46 Electricity supply to garages is also important. Electric cars and disability vehicles need to be re-charged and mains sockets and lighting will encourage use of garages.

GARAGES SHOULD HAVE MINIMUM INTERNAL DIMENSIONS OF 3X6 METRES AND BE WITHIN THE CURTILAGE OF THE DWELLING IT SERVES. FACILITIES SHOULD BE PROVIDED FOR CHARGING ELECTRIC CARS, DISABILITY VEHICLES AND OTHER SIMILAR VEHICLES AND MAINS POWER AND LIGHTING PROVIDED.

REAR PARKING

6.47 Where rear parking is provided as a last resort, the principles of place making must still be applied. Three broad options – mews courts, within rear gardens and open courtyards - are available.

Mews courts

6.48 Traditional mews can be attractive environments adapted to modern living. Where rear parking is unavoidable a mews form can be used to accommodate the vehicles. Car ports and/or garages can be provided under dwellings facing onto a landscaped space. Critical to the success of this arrangement is the quality of the amenity for residents, both internal and external, the quality of architecture and external works and the provision of convenient links to the adjoining streets. Figure 6.20 shows a poor environment, with poor quality architecture, amenity and materials.



Figure 6.20 Lack of care with architectural and landscape design made this mews court an unattractive place.

6 PARKING

Rear gardens

6.49 The option of providing parking within rear gardens will not normally be acceptable. Whilst this arrangement may give residents the option of using the space for garden, rather than parking, there are significant disadvantages related to the comings and goings and maintenance of motor vehicles which may disturb the quiet enjoyment of private gardens. Where such provision may occasionally be acceptable it should be provided in addition to specified garden space.

Parking courts

6.50 Spaces within parking courts are not frequently used and are often perceived as dangerous and insecure. A good quality layout which accords with the guidance above should obviate the need for courts.

REAR PARKING COURTS MUST ONLY BE PROVIDED AS A LAST RESORT.

6.51 Where parking courts are unavoidable the design of the layout, the connections to adjoining streets and places and the quality of materials used for surfaces and enclosure must result in attractive and safe places. Courtyards should normally accommodate a maximum of 10 spaces and sufficient space provided for tree and shrub planting to help create an attractive environment. Figure 6.21 demonstrates a poor quality solution where there is only one access point, there is no view out and the quality of materials is poor. Figures 6.22, on the other hand, demonstrates arrangements which work better because views out are attractive and materials are of high quality.



Figure 6.21 This parking court creates an unwelcoming and insecure place.



Figure 6.22 In contrast to 6.20, parking here is in an attractive landscape setting and is well overlooked.

SEMI-BASEMENT AND UNDERGROUND PARKING

IN ALL BELOW GROUND LEVEL SOLUTIONS, ACTIVE FRONTAGES MUST BE MAINTAINED.

6.52 The means of access to below ground level parking must minimise the impact upon the townscape. Ramps of minimal width accommodating only one car in one direction at any given time, using controls as necessary. Security needs to be given careful consideration and the parking designed for the needs of all people.

6.53 Semi-basement parking has advantages over underground parking insofar as natural ventilation may be possible and that by raising the building levels by half a storey above the surrounding site, privacy to ground floor accommodation is enhanced whilst maintaining an active frontage. The elevated nature of ground floor accommodation is particularly useful where units face onto busy roads. However, raising ground floor levels can result in bland or blank front elevations so it is important that attention is paid to the details of design. In most circumstances producing an acceptable townscape will require clear entrances onto the street and frontages set back from the highway to allow planted areas.

6.54 Underground parking allows flexibility in the design of buildings and disposition of uses and activity at ground level. Active frontages may be maintained and good quality amenity space may be possible above underground car parking (Figure 6.23). Specific provisions such as trees pits, planting troughs and irrigation may need to be incorporated, adding to the cost of excavation, tanking and mechanical ventilation.



Figure 6.23 Good quality open space provided above underground parking.

6.55 Podium and undercroft parking is parking at ground floor level with either open space or buildings above. These solutions will rarely be acceptable because of the difficulties in achieving active frontages but in some circumstances a solution may be found, particularly where accommodation may face the street by wrapping around the parking or where there is only a limited amount of blank wall facing the street.

CYCLE PARKING

PURPOSE DESIGNED CYCLE PARKING IS REQUIRED. PARKING SHOULD BE COVERED, DISCOURAGE ANTI-SOCIAL BEHAVIOUR, BE SAFE AND CONVENIENT.

6.56 Policy T3 requires 1 space for 1-2 bed units and 2 spaces for larger units, this section of the SPD provides guidance on how cycle parking should be provided. Cycle parking should be incorporated into the design of buildings or otherwise located and designed such that it does not detract from the townscape or the amenity of spaces between buildings.

6.57 Where a need has been identified, purpose built cycle storage should include space for the storage and re-charging of electric disability scooters and buggies or for the adaption of the storage space for this facility in the future. Shared cycle parking facilities should be located and designed to discourage anti-social behaviour.

Cycle parking for houses

6.58 Where no other provision is specified, garages or car ports should be large enough to accommodate bicycles. The dimensions and location of doors should be such that bicycles can be taken in and out without removing the car and/or bins if these are also stored in the garage. Figure 6.24 identifies minimum dimensions to accommodate bicycle storage.

WHERE CYCLE PARKING AND BIN STORAGE IS LOCATED WITHIN GARAGES DEVELOPERS MUST DEMONSTRATE THAT GARAGES ARE OF SUFFICIENT SIZE TO ADEQUATELY ACCOMMODATE CYCLES.

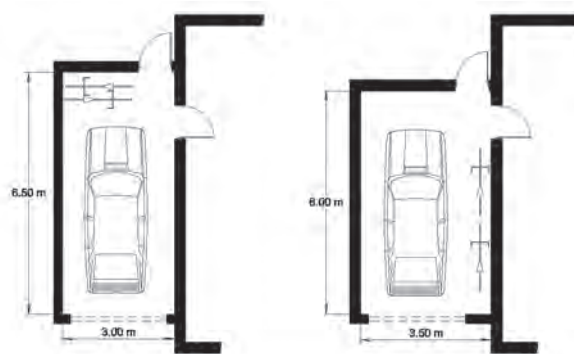


Figure 6.24 Cycle parking within garages.

6.59 Where houses are reliant on on-street or, occasionally, courtyard parking, cycle parking should be provided in purpose built covered areas within rear gardens, conveniently located adjacent to rear garden gates as suggested in Figure 6.25. These covered areas should also be designed to accommodate recycling bins where necessary, and should not be counted in garden area calculations.

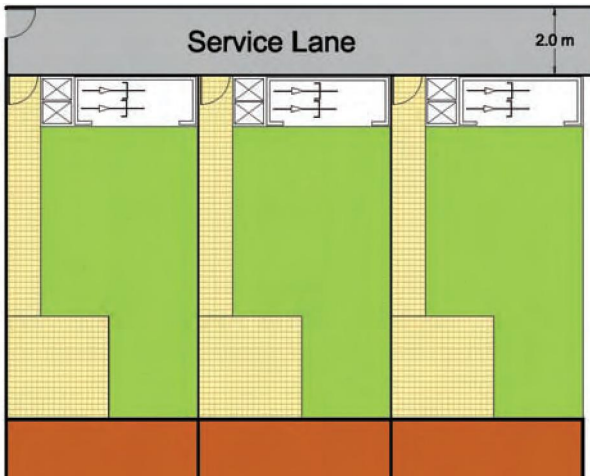


Figure 6.25 Cycle parking in rear gardens.

Cycle parking for flats

6.58 As with bin storage (see Chapter 8) it is essential that cycle parking for flats is considered at the outset of the design process so that the facilities may be incorporated without spoiling the townscape or residential amenity. One of the main aims of the SPD is to ensure that high quality spaces are created between buildings and it is, therefore, important that these spaces are not considered as a depository for facilities such as bicycle or bin storage at the cost of creating high quality places.

6.59 The first choice location for cycle parking for flats is within the building, either in a ground floor communal area close to the main entrance, under stairs or in underground or semi-basement areas. If the nature and size of space between buildings allows separate storage, facilities may be incorporated into boundary walls or elsewhere where the storage will not dominate the space being created (Figure 6.26).



Figure 6.26 A bicycle store integrated into the overall design of a development.

6.60 Sheffield stands provide a simple and convenient means of securing bikes within communal areas. The internal layout of the cycle store needs to refer to the dimensions shown in figure 6.27. A minimum of 600mm of space should be provided at the sides and end of cycle stands.

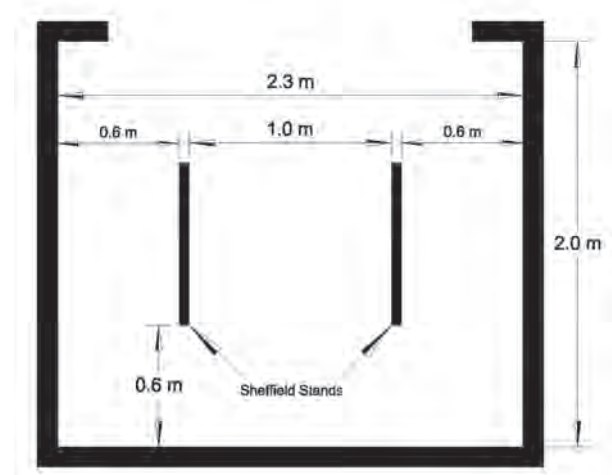


Figure 6.27 Internal dimensions of a communal cycle store

Visitor cycle parking

6.61 Visitor cycle parking should be provided in well-overlooked areas, convenient for access to the building, which may often be the street itself. Sheffield stands or similar should be used. Cycle stands need to be located clear of pedestrian desire lines. They should be detectable by people with little or no sight. If there is a well-defined need to provide storage for cyclists with baskets and panniers, stands should be a minimum of 1 metre apart. There should be a minimum space of 600mm between a stand and any wall.