5.0 Cycle Parking Design Guidance

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1.0 Purpose of document

The purpose of this document is to
- set out BBC cycle parking standards for new developments and
- give guidance on the nature and layout of cycle parking.

Cycle parking needs to be designed early on in the process. It is imperative that cycle parking forms an integral part of any planning application and that it is not treated as a secondary issue to be resolved by conditions.

New developments should not only adhere to the standards in this document but must also meet the other requirements of access, space, lighting and layout set out in this document.
Fundamental Principles

When planning new cycle parking the following fundamental principles have been followed:

- Good quality cycle parking should be designed from the outset and not tacked on later as an afterthought;
- The parking provided must be easy to use by all members of the community at all life stages and parking layouts should not require the user to have to lift or drag the cycle at any time;
- Where dimensions are quoted, these should be considered to be the minimum acceptable and not compromised further;
- Additional space will be required to accommodate trailers, child buggies, tandems, adult tricycles etc in flats and other multi-occupancy dwellings;

Long and short stay parking

Cycle parking standards are divided into 2 different categories:

- Short stay parking
- Long stay parking

Short stay parking is primarily aimed at people making short visits, e.g. to visit people’s houses, shops, facilities or businesses i.e. leaving their bikes for anything from a few minutes to a few hours. The most important factors are convenience, visibility, ease of access and security. In most cases the cycle parking should be next to the front entrance. If that is impossible, it needs to be visible from the front entrance and no more than a very short walk from the front entrance. For larger establishments and where there are particular space constraints, research\(^1\) shows that a walk of 20 metres is the maximum walking distance, before it can be expected cyclists will ignore the cycle parking and leave their bikes locked to a convenient post.

Long stay parking is primarily aimed at people who will be leaving their bikes unattended for most of the day or overnight, or in the case of homes, possibly several days and nights. However, it should still be convenient to use and access; it is not intended to be “cycle storage” where the cycle is unused for a long time. Typical examples are people working and leaving their bikes throughout the day at their place of work, cycle parking for children at schools and for commuters at railway stations, and residents parking their bikes over night. The most important factors are security, weather protection, convenience and ease of access.

Further information about “Why cycling is important” and “Cycle Parking basis and rationale” can be found in Appendix 4.

\(^1\) dft_roads_pdf_504716 Cycle parking
## 2.0 Best practice

**Cycle parking should be:**

<table>
<thead>
<tr>
<th>Convenient</th>
<th>Convenience is the ability to easily park or remove your bike. All cycle parking should be sited in a manner which encourages the use of a cycle as first choice for short trips.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>It should always be placed as close as possible to the main entry/exit points.</strong> Short stay should be next to the main entrance and at the most within 20m. Long stay parking should be located as by preference on a natural route to and from the development and generally within 50m of an entrance.</td>
</tr>
<tr>
<td></td>
<td>The spacing between stands should be wide enough to allow cyclists easily to lock and unlock their bikes and move their bikes in and out of the cycle parking without the danger of cycles becoming entangled with each other.</td>
</tr>
<tr>
<td></td>
<td>The location should be lit so it is easy to see what you are doing when locking or unlocking the bike.</td>
</tr>
<tr>
<td></td>
<td>Where parking for cycles is provided within a private garage, it is essential that they can be taken out easily and without the need to first remove any cars or other cycles already parked within the garage.</td>
</tr>
<tr>
<td>Visible</td>
<td><strong>Short stay parking should be visible to visitors.</strong> Short stay parking should be easy to find and located next to all main entrances. In larger developments with more than one entrance, short stay cycle parking should be provided at each public entrance.</td>
</tr>
<tr>
<td>Easy to access</td>
<td><strong>All parking should be easy to get to, with no inconvenient detours, steps, steep slopes or narrow access ways.</strong> The route all the way to and from the highway/cycle path must be fully accessible and the surface should be smooth, stable and durable. Care should be taken that the design does not allow car parking accidentally to obstruct the route.</td>
</tr>
<tr>
<td></td>
<td>Any doors and gates for indoor or covered cycle parking should be easy to use.</td>
</tr>
<tr>
<td></td>
<td>The facilities provided should be easy to use by all members of the community as appropriate and does not discriminate in terms of gender or age avoiding the need to lift or drag the cycle to park it.</td>
</tr>
<tr>
<td>Secure</td>
<td><strong>Cycle parking should always give cyclists the fullest confidence that their cycle will still be there when they return.</strong> First and foremost, this means that cyclists should be able to lock their bike securely to an immovable object.</td>
</tr>
<tr>
<td></td>
<td>For short stay parking, the location should have natural surveillance and be lit, either by ambient light from street lamps or by direct lighting.</td>
</tr>
<tr>
<td></td>
<td>For long stay parking, the cycle parking should normally be within a lockable secure compound, shed or garage, and, where it is shared, with the additional security of being able to lock individual bikes to secure fixings. If the bike shed is open without gates, it should be in a secure area not open to the public. Direct lighting is essential for convenience and personal security.</td>
</tr>
<tr>
<td></td>
<td>The location for both short and long stay parking must also help users feel personally secure to allow cycling all year round. Locations that make users feel at risk will not be used.</td>
</tr>
<tr>
<td>Protected from the Weather</td>
<td><strong>Long stay cycle parking should always be covered.</strong> Cycles do not have the same level of built in protection against rain that modern cars do. Though not necessary, where possible, this should also apply to short stay parking, mostly for the convenience of cyclists locking or unlocking in the rain.</td>
</tr>
</tbody>
</table>
Cycle Parking Design Guidance

**Cycle parking should be:**

<table>
<thead>
<tr>
<th>Fit for purpose</th>
<th>The default choice is the ‘Sheffield’ type stand. Sheffield stands have the advantage of being sturdy, low cost, easy to use and maintain. Where other racks or support systems are used, these should provide good security and allow the cycle frame and at least one wheel (preferably both) to be secured.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well managed and maintained</td>
<td>The long term maintenance of cycle parking and the cycle parking area needs to be considered from the outset. In general, for short stay parking, individual or small clusters of Sheffield stands or wall hoops need little or no maintenance and give many years of fault free service. In many cases, such as individual homes and businesses, long stay parking will clearly fall to the owners to maintain. Parking areas in shared ownership, such as shared residential cycle parking in flats and apartments should be the subject of a funded maintenance regime that ensures that the parking area is kept clean, well lit and the parking equipment properly maintained with procedures to remove abandoned bicycles. New residents or staff must be made aware of the location, nature and function of the cycle parking provided. The process of issuing of keys, smart card and proximity devices etc. should be transparent to all users.</td>
</tr>
<tr>
<td>Suitable for all users</td>
<td>Cycling is a form of transport open to nearly all the population, regardless of age, wealth or physical ability and for a range of purposes. Children begin to cycle from the age of around 4 years and pensioners can continue to cycle into their 90s. People use cycling for commuting, for shopping, for accompanying and carrying children to school, for visiting friends, for trips to town or going to church or the bank and for recreational rides. As far as possible, cycle parking should accommodate the different uses and different bikes that will be used by different groups. Where possible and appropriate, additional space for tandems, tricycles, trailers, ‘tag-alongs’ etc. should be considered along with the need to lock different designs of bikes, such as children’s bikes, racers, step-through bikes and bikes with baskets.</td>
</tr>
</tbody>
</table>

3.0 How to use this document

Section 4 gives numeric standards for different use classes with specific design guidance. This should be used in conjunction with Sections 5 and 6 of this document which give generic design guidance for cycle parking and access. Section 7 covers the management of cycle parking facilities.
4.0 Use class specific requirements

For each use class there is a table of minimum cycle parking. Developers should supply the sum of both short and long stay cycle parking, with a minimum requirement of 1 Sheffield stand (or equivalent) to allow for 2 cycles to be parked. The standards are expressed in terms of spaces. Note that 1 Sheffield stand = 2 spaces only if it can be used from both sides.

Other acronyms: GFA = Gross floor area; PFA = Public Floor Area; RFA = Retail Floor Area; TBA = to be agreed with Highway Authority. Area expressed in m² (square metres)

Where ratios are for staff, this will normally be calculated for the full time equivalent or, where there is shift working such as in hotels, hospitals and care homes, for the maximum number of staff using the development at any one time.

For each use class, the standards are stated first, followed by examples and photos setting out how to implement the standards.

When preparing designs, the following sections must to be consulted. These form part of the guidance requirements and set out minimum standards for cycle parking type and spacing and access requirements.

<table>
<thead>
<tr>
<th>Section</th>
<th>Purpose</th>
<th>Class Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key dimensions</td>
<td>To understand the footprint of parked cycles</td>
<td>All</td>
</tr>
<tr>
<td>Sheffield stands</td>
<td>To understand the design requirements and footprint of stands.</td>
<td>All</td>
</tr>
<tr>
<td>Movement space</td>
<td>To understand the minimum footprint of cyclists pushing their bikes to and from parking areas.</td>
<td>Particularly in constrained sites</td>
</tr>
<tr>
<td>Door widths</td>
<td>To understand the requirements where cycle parking is in sheds or compounds</td>
<td>All</td>
</tr>
<tr>
<td>Aisle widths</td>
<td>To understand the space requirements with multiple rows of Sheffield stands</td>
<td>Particularly in larger sites</td>
</tr>
<tr>
<td>Management</td>
<td>Sets out management and maintenance requirements</td>
<td>Particularly where there is shared cycle parking area</td>
</tr>
<tr>
<td>Cycle parking equipment</td>
<td>Default is Sheffield stand. Sets out the pros and cons of alternatives.</td>
<td>Where Sheffield stands cannot be installed</td>
</tr>
</tbody>
</table>

Table 4

Class A: Retail and services

Minimum number of cycle spaces

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Description</th>
<th>Short Stay 1 space per</th>
<th>Long Stay 1 space per</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Food and non-food</td>
<td>Small shops (&lt;1000m²)</td>
<td>100 GFA</td>
<td>10 staff</td>
</tr>
<tr>
<td>A1 Retail Foodstores</td>
<td>Supermarkets</td>
<td>250 GFA</td>
<td>10 staff</td>
</tr>
<tr>
<td>A1 Non-food retail</td>
<td>Larger non-food retail</td>
<td>200 GFA</td>
<td>10 staff</td>
</tr>
</tbody>
</table>
Use Class | Description | Short Stay 1 space per | Long Stay 1 space per |
--- | --- | --- | --- |
Retail warehouses | 250 GFA | 10 staff |
Garden Centres | 100 RFA | 10 staff |
A2 Financial & Professional | Banks, building societies, estate agents, betting shops | 100 GFA | 10 staff |
A3 Restaurants and cafes | a) Restaurants, cafes | 20 PFA | 10 staff |
A4 Drinking establishments | b) Public houses, bars | 20 PFA | 10 staff |
A5 Hot food takeaway | c) Hot food takeaways | 20 PFA | 10 staff |
d) Fast food drive-throughs | TBA | 10 staff |
e) Roadside restaurants, Transport cafes | TBA | TBA |

**Rationale:**

**Class A1: retail**

Urban shopping is a key element for increasing cycling, especially in accessible locations such as town centres and local shopping centres. Continental European research shows that cyclists visit shopping centres more frequently than car drivers, and have the highest retail profitability in terms of parking space. In spite of the common belief that shopping requires a car, the research found that only 25% of car-borne shoppers left with the quantity of shopping (more than 2 bags) to require a car to carry it. Whereas nationally in England cycling levels to shops are very low (1%), in many ways, cycles are better designed for carrying shopping than either walking or going by bus, which explains how in Germany 13% and in Netherlands 31% of all shopping trips are by bike. In both countries, these cycle shopping journeys have replaced potential car journeys.

There is no data for Bedford in terms of modal split to shops or other public facilities. Looking at national data, aggregated across the population, men make 22 trips per year by bike, of which 8.5 are for commuting, 2.5 for shopping, 4.6 for social entertainment and 6.9 for other purposes. Women make 8.6 cycle trips a year, of which 2.4 are for commuting, 1.3 for shopping, 1.5 for social entertainment and 3.4 for other purposes. Surveys of cyclists in town centre pedestrian areas in Hull, Cambridge and Salisbury found that 66% of cyclists were there for shopping, 16% for work and 16% for personal business.

Research in Oxford found that journeys to local shops were predominantly local (under 1 mile) and around 15% of journeys were by cycle. Cyclists visited the local shopping centre more frequently than motorists and as a result cyclists contributed around 15% to the retail spend in the shops – the same as their modal share, whereas on average motorists spent twice as much as cyclists per trip but made fewer trips. Two groups were identified – those without a car, where local shopping provided an essential source of main shopping and those owning a car, for whom local shops provided top-up shopping and replaced what would have been otherwise car journeys.

TRL found that 15% of cycle thefts occurred in shopping areas. For shops in local shopping centres and urban centres, where the cycle parking requirement cannot be met on site (as will be common in traditional streets) commuted payments should be made to provide communal on-street cycle parking to serve the whole shopping centre.

Garden centres act in part as leisure destinations and should be viewed as a cycling leisure destination.

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2 Fact sheet 03
3 National Travel 2002-2008 aggregated data – special tabulations
4 TRL 583 Cycling in vehicle restricted areas Davies et al 2003
5 Lingwood PhD Walking to the shops
Class A2 Financial
These are basically similar to small shops in class A1 – shops likely to be in urban and local centres with many customers. Where the development is basically offices rather than to serve customers, these should be treated as B1.

Class A3 Food and drink
Journeys to pubs and takeaways tend to be local. There are obvious safety benefits if people cycle to pubs rather than drive.

Implementation:

| Short stay cycle parking – for small urban shops, a solid ring attached to a wall on hard standing and in a visible convenient location may be sufficient | Cycle parking at mini-supermarket next to entrance is likely to be well used but needs to support cycles and cater for panniers and baskets. Photo Patrick Lingwood |

Cycle parking at larger supermarkets should be next to the entrance, signed and covered. Photo Patrick Lingwood
Lack of adequate convenient cycle parking at retail centres will result in cycles parked near the entrances to other fixtures. Photos Patrick Lingwood

Class B: Offices and industry

Minimum number of spaces

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Description</th>
<th>Short Stay</th>
<th>Long Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 space per</td>
<td>1 space per</td>
</tr>
<tr>
<td>B1 Business</td>
<td>a) offices</td>
<td>*500 GFA</td>
<td>200 GFA</td>
</tr>
<tr>
<td></td>
<td>b) R&amp;D</td>
<td>*500 GFA</td>
<td>200 GFA</td>
</tr>
<tr>
<td></td>
<td>c) light industry</td>
<td>*500 GFA</td>
<td>200 GFA</td>
</tr>
<tr>
<td>B2 General Industry</td>
<td>General industry</td>
<td>*500 GFA</td>
<td>200 GFA</td>
</tr>
<tr>
<td>B8 Storage</td>
<td>Wholesale distribution, builders’ merchants, storage</td>
<td>**1000 GFA</td>
<td>500 GFA</td>
</tr>
</tbody>
</table>

*For larger developments above 4000 GFA (**8,000 GFA), a maximum of 8 cycle parking spaces at each public entrance need to be provided.

Rationale

Class B1 and B2 Offices and industry

The major impact on cycling of this class will be on people cycling to work. The long term cycle parking figures have been calculated on an average floor area ratio of 1 in 10 workers. Short stay is for visitor parking. Currently in UK 3% of people cycle to work compared to 13% in Germany and 28% in Netherlands.

Class B8 Warehousing and storage

Because these are likely to have less intensive use and potentially be situated in less accessible locations, the cycle parking standards are lower.
Class C: Residential (for C3a houses and flats see next table)

Guidelines

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Description</th>
<th>Short Stay</th>
<th>Long Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C1 Hotels and hostels</strong></td>
<td>a) Hotels</td>
<td>10 bedrooms</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>b) Guest Houses</td>
<td>10 bedrooms</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>c) Hostels</td>
<td>5 units</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) Caravan &amp; campsites</td>
<td>10 pitches</td>
<td></td>
</tr>
<tr>
<td><strong>C2 Residential institutions</strong></td>
<td>a) Residential home with care staff on premises (including elderly peoples homes and nursing homes)</td>
<td>20 beds</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>b) hospitals, hospices</td>
<td>20 beds</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>c) Education hall of residence</td>
<td>10 beds</td>
<td>1 bed</td>
</tr>
<tr>
<td></td>
<td>b) Houses in multiple occupation (i.e. sharing facilities)</td>
<td>2 per unit</td>
<td>2 bedrooms</td>
</tr>
<tr>
<td><strong>C3 Residential</strong></td>
<td>c) Elderly peoples’ accommodation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>i) retirement dwellings</td>
<td>1 per unit</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>ii) sheltered dwellings (warden on call)</td>
<td>1 per unit</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>iii) sheltered &amp; extra care dwellings (warden and communal facilities)</td>
<td>1 per unit</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>iv) Extra care sheltered flats in larger building (warden and communal facilities)</td>
<td>20 beds</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>v) full nursing care</td>
<td>20 beds</td>
<td>10 staff</td>
</tr>
</tbody>
</table>

Rationale

**Class C1 Hotels**
Hotels potentially generate many journeys with functions, bars, food as well as catering for cycling guests. Additionally, hotel workers are often low paid and work unsocial hours so that cycling is a useful form of transport.

**Class C2 Residential institutions**
These are public institutions with a large residential element. The standards are initial guidelines, as Travel Plans should play an important role in any Transport Assessment for educational facilities and hospitals, together with other important considerations such as patient and staff catchments, location and non-car accessibility. Where a proposal involves relocation or reorganisation (as may well be the case in respect of hospitals), data on the existing catchment and travel patterns can provide a valuable input into the assessment process. The same can apply to educational establishments. Account should be taken of the number of staff permanently accommodated on-site.
Whilst hospitals and care homes cater for people who will primarily not cycle themselves, this is not necessarily true of visitors. The cycle parking standards are based on a ratio of visitors to beds.

**Class C3 Residential**

**Elderly people’s (and other sheltered) accommodation**

These range from individual dwellings for active elderly people, where there is a strong likelihood that individuals and both partners of couples will have cycles, to blocks tending for people who need high levels of care who have severe mobility problems or dementia and will not have cycles. In between there are cases where, for instance, one partner in a dwelling will have health problems that prevent cycling, but the other partner may be healthy and a cycle can help provide mobility. The standards give guidance on the likely level of residential cycle parking, along with staff cycle parking and short stay (visitor) parking.

Cycling is a particularly healthy form of exercise for older people, and can significantly increase the length of healthy disability free life. Whereas cycling levels for older people in England are low, this is by no means inevitable. In Netherlands, 25% of all journeys for those aged 75+ are by cycle.

Sufficient mobility scooter parking must also be catered for, so access to cycle parking is not compromised. Guidance on mobility scooter provision is available on request.

**Implementation**

Guidance on implementing cycle parking for these classes will generally follow the sections under C3a) below.

Halls of residence: One long stay space per bed should be provided up to 20 beds. In larger sites, above 20 beds, where there is on site management, the ratio of 4 cycle parking spaces for every 5 beds can be considered.
Class C3 a): Houses and Flats

Guidelines

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Description</th>
<th>Short Stay</th>
<th>Long Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3 Residential</td>
<td>a) i) Houses</td>
<td>2 per unit</td>
<td>1 to 4 bedrooms - 1 per bedroom - 4+ bedrooms - 4 spaces</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) ii) Flats</td>
<td>1 per 2 units (up to 10 flats)</td>
<td>1 per 2 bedrooms (up to 2 bedrooms) Where cycle parking is shared between flats, 1 per bedroom up to 10 flats (2+ bedroom flats are counted first), then for 11+ flats 1 per 2 bedrooms.</td>
</tr>
</tbody>
</table>

Rationale

Houses

Nearly all cycle journeys start from home. It is essential that adequate convenient cycle parking is provided for all adults and children who own cycles to encourage future growth in cycling.

It should be noted that cycle ownership is much higher than cycle use. Currently cycle ownership is around 450 cycles per 1000 population. An increase in cycling levels is likely to lead to higher levels of cycle ownership. Germany with national cycling levels of 10% of journeys by cycle has 900 cycles per 1000 population i.e. almost one cycle per person.

Research for the Scottish Government examined cycle ownership by whether anyone owned an (adult) cycle in the household by age group. In households headed by 16-34 year olds, 70% owned at least one adult cycle and 43% owned 2 or more cycles. Among 35-64 year old households, 55% owned at least one cycle and 35% owned 2 or more cycles. In households of class AB (most likely to live in houses rather than flats) 55% owned at least 2 cycles. Only for 65+ year olds was the ratio very low at 10% owning a cycle.

It can therefore be assumed that most households especially those with children will need to park at least one adult cycle and several children’s cycles.

The common assumption that a garage without specific locking facilities for cycles is an adequate substitute for formal cycle parking is not supported by research, because:

1) 48% of all cycle thefts occur from garages i.e. a garage is not a secure location for unlocked or unsecured cycles.

2) Unless the cycle parking in the garage is convenient and easy to get to, a garage may not always be the most convenient location from which to choose to use a cycle. Nearly half of all households (49%) leave their car in front of rather than inside a garage. The time advantage of using a cycle in urban areas compared to car use is marginal, and it is likely that the need to get a cycle out from the back of a garage will sway the choice towards using a car.

3) A garage does not provide a cycle parking space for visitors.

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Cycle Parking Design Guidance

Parking for houses and flats is a mixture of long stay secure covered parking (for overnight parking, weather protection and for expensive bikes) where bikes can be securely locked to an object, either by Sheffield stands or cycle rings, in a secure location such as a dedicated cycle shed or garage.

Additionally, short stay Sheffield stands or hoops are to be provided at a convenient location by the house entrance for visitors and every day use by occupants.

Implementation:

Houses

Short stay parking
Short stay parking should be provided as close as possible to the front of the house and take the form of a suitable stand or wall bar/ring: mounting height 500mm. (There may also be instances where suitably designed boundary railings could also be considered). The short stay parking should meet guidelines, notably: be visible, feel secure, be accessible to visitors and convenient. The route to the parking should be of sufficient width, smooth and surfaced. There should either be ambient lighting from street lamps or dedicated lighting to allow cyclists to use the parking at night and dark times of the year. There should be hard surfacing where the cycle stands.

Short stay parking: a Sheffield stand conveniently placed next to the front door with hard standing and good level access. Photo: Ian Holloway

Short stay cycle parking, located in front garden with hard standing, good access and landscaping. Photo: Patrick Lingwood
Short stay cycle parking: A wall fixing at side of house by driveway. Note hard standing, but length of hard standing should have been longer. Photo: Ian Holloway

Short-stay cycle parking: Suitably designed railings can be used providing it is easy to lock to and the handle bars do not protrude into pedestrian routes. Photo: Ian Holloway

Long stay parking
At a minimum, proposed long-stay cycle parking will need to show consideration of the matters set out in Section 4.0 above.

Ideally, to promote ease of use and modal choice the parking should usually be located at the front of the building.

Dwellings without garages (or garages remote from dwelling)

Example - Integral cycle parking room
It is preferable in terms of convenience and accessibility to design dedicated cycle parking within the footprint of the building nearest the main access to the plot. When provided within
the footprint of the dwelling, the parking area should be accessed by means of a door at least 900mm wide (preferably 1200mm) wide and be at least 2000mm deep (or more if incorporating an access/manoeuvring aisle in preference to multiple/wider doors for larger numbers of cycles)

Diagram 14: space required to park two cycles and remove without lifting

The parking should be secure, covered, preferably constructed from the same materials as the main structure and of a size derived from the guidance on space requirements. As a minimum requirement, doors should be secured by mortice locks. Where more than two bicycle spaces are required some form of stand should be provided. Unless other dedicated covered secure storage space is provided within equal proximity, at least 1m² storage space must be provided within the shed, for garden equipment etc, in addition to that provided for cycle parking

Cycle parking built into an extension of the porch: preferred approach
(Note: doors should be wider and mortice locks fitted)
Residents opting to use front bin stores for cycle parking due to convenient location instead of less accessible sheds in rear garden which are used to store garden equipment. This has led in turn to the bins being left outside to the detriment of the public realm. All design requirements must be facilitated in a practical and convenient manner.

**Free-standing cycle parking building**

The parking should be secure, covered, preferably constructed from the same materials as the main structure and of a size derived from the guidance on space requirements. As a minimum requirement, doors should be secured by mortice locks. Where more than two bicycle spaces are required some form of stand should be provided. At least 1m$^2$ storage space must be provided within the building, for garden equipment etc, in addition to that provided for cycle parking so that both cycles and garden equipment are easily and independently accessible.

**Example - Wooden Sheds**

Domestic wooden sheds are not recommended unless they have walls of tongue and groove construction at least 18mm thick. Walls and floors should also be stout enough to allow the attachment of wall bars and stands fitted with anti-tamper fixings. Doors must be secured by mortice locks and not padlocks.

---

![Diagram 13](image-url)

*Minimum 1m$^2$ for garden tools etc, that would otherwise be placed obstructing cycles (see Code for Sustainable Homes)*

3 spaces provided in accordance with Bedford Borough Council minimum standards. Minimum of 2 cycles independently accessible.

**Diagram 13**

Secure covered long-stay residential cycle parking example for 3 bedroom house

Garden sheds must include an additional minimum of 1 sq metre of general storage space for garden equipment.
Dwellings with garages

Subject to access and size garages at the front or side of a house are sometimes the most convenient and secure place to park cycles. If this is the only provision for cycle and car parking, the size of the garage must allow cycles to be removed from the garage easily without first driving out any car parked within it (see Diagram 12 below). To accommodate this, a minimum clear space of 1200mm should always be provided between the predicted position of the car and any parked cycle/other obstacle/wall etc. This will permit a cycle to be wheeled in or out without difficulty.

Where cycles are to be parked at the rear of a garage an additional door may be provided there to facilitate cycle parking if there is a separate rear access to the property. If this is not the case, the clearance in front of the car should be increased to 1.5m to provide space to turn the cycle. Designers should also create a clear space of at least 1.2m between the garage door jamb and the closest point of a parked car. These requirements are in addition to general storage space to be provided within the garage (minimum 3m$^2$). Where they cannot be met, consideration should be given to other arrangements such as the provision of a secure shed (see above). Main garage doors shall be at least 2.44m wide (NB may need a wider opening to house the frame/mechanism) depending on the length of the garage and consideration should be given to providing a separate cycle/pedestrian door adjacent to or within a widened main door.
Diagram 14: Indicative garage layout

- Minimum dimensions of garage 3300mm x 6000mm
- Circulation space (minimum width 1000mm) to allow cyclist pushing a bicycle past parked vehicle
- Area allocated to allow vehicle door opening (minimum 450mm)
- Minimum circulation space required to allow access to cycles without the need to remove vehicle
- Area which could be used for the storage of cycles as detailed in the following illustrations dependent upon the arrangement and number of cycles to be stored

N.B The garage will also need to accommodate 3 sq metres of general storage space.
Garages are used for many things other than storing a car, including cycle parking, freezers and general storage. *Photo: Patrick Lingwood*

**Diagram 15:**
Example of long-stay parking using a single garage for a four bedroom house

**NB** At least 2 cycles must be independently accessible in all layouts
Secure parking for both cycles and car provided by the use of two gates

Wide doors can be a design feature

Flats, Apartments and other Multiple-occupancy dwellings

General
Whether provided internally or externally cycle parking should be sited within 20m of the relevant entrance of the building and in all cases closer than the nearest non-disabled parking space. It should be well lit, create a sense of personal safety and included in any wider premises CCTV surveillance system. External parking should be designed to be overlooked by the dwellings and not hidden by landscaping or planting.

Parking areas should preferably be housed internally on the ground floor. Where the block of flats contains more than 20 flats, cycle parking should be divided into separate enclosures or compounds with their own distinct secure entry, as a way of increasing security and sense of individual ownership. Arranging each enclosure by floor would be a sensible arrangement within a large block of flats.

As a general rule, it is not recommended that parking for cycles should be accommodated within individual apartments above ground floor level. But where this happens, lifts for the use of cyclists should be sufficiently large to accommodate their cycles i.e. at least 2m deep and preferably 2m wide with an overall door aperture of 1.2m.

Short stay parking spaces should be provided at each public entrance of blocks of flats.

It is highly desirable to provide suitable space for the parking of such items as tricycles, trailers etc. particularly if flats are likely to be occupied by families and people with mobility impairments.

In all cases secure compounds must not have apertures large enough for anyone to climb in or a cycle to be passed through.
Good quality design and location of short stay parking marred by inadequate protection from the elements.

This building provides protection from driving rain, but the lack of surveillance or gates provides opportunities for bicycle theft.

**Small blocks of flats**

The preferred solution is for the cycle parking to be within the building footprint with an individual cage for each dwelling or a lockable supported space for each cycle. Parking provided outside of the building should be within a lit, covered enclosure, again with cages or racks. If the parking area is open access the enclosure should be lockable. The parking should also be connected to the general highway and cycle networks by an open, lit, surfaced access path preferably 2000mm (1500mm minimum) wide.

**Medium and large blocks of flats**

Cycle parking should be spread throughout the site and relate to either each block or floor of the flats depending on the size of the building. When located within an under-croft or underground car parking area the cycle parking should, again, be sited next to the relevant access points (and closer than the nearest non-disabled car parking space). When the car parking area is not itself subject to some form of key-controlled entry then the cycle parking should be provided in secure lockable compounds relating to each floor or block. A maximum of 20 cycles is recommended for each enclosure.
Ramps to underground parking areas should be well lit and wide enough to permit access for cyclists unimpeded by other traffic. Consideration may be given to separate ramped access for cyclists but these must be no less convenient than the access provided for motor vehicles. Where used by cyclists, ramps should not exceed a gradient of 7% (1:14) with a rounded transition at the top and bottom of the ramp. Single lane ramps shared with motor traffic with a width of between 2.75m and 3.25m should be avoided.

Where access to the cycle parking area is derived by means of steps, these should always be accompanied by a wheeling ramp, preferably on both sides of the steps to allow users to pass when going in and out and to wheel their cycles on their natural side whether going up or down. The slope of any ramp (and steps) should not exceed 50% (1 in 2) but should always be as shallow as possible to promote ease of use.
## Class D: Non-residential

### Minimum number of spaces

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Description</th>
<th>Short Stay</th>
<th>Long Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1 Non-residential</td>
<td>a) Public halls/places of assembly</td>
<td>25 PFA or 10 seats</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>b) Community/family centres</td>
<td>50 PFA</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>c) Day centres</td>
<td>50 PFA</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>d) Places of worship</td>
<td>10 seats</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>e) Surgeries, clinics, vets</td>
<td>1 consulting room</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>f) Libraries</td>
<td>30 PFA</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>g) Cultural buildings – Galleries and museums</td>
<td>100 GFA</td>
<td>10 staff</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Description</th>
<th>Short Stay</th>
<th>Long Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1 Non-residential (education)</td>
<td>a) Nurseries, crèches, playgroups (urban)</td>
<td>20 children</td>
<td>10 staff 20 children</td>
</tr>
<tr>
<td></td>
<td>b) Lower (urban)</td>
<td>20 pupils*</td>
<td>10 staff 10 pupils</td>
</tr>
<tr>
<td></td>
<td>c) Middle (urban)</td>
<td>20 pupils*</td>
<td>10 staff 10 pupils</td>
</tr>
<tr>
<td></td>
<td>c) Upper (urban)</td>
<td>20 students*</td>
<td>10 staff 5 students</td>
</tr>
<tr>
<td></td>
<td>d) University, CFE</td>
<td>20 students*</td>
<td>10 staff 5 students</td>
</tr>
<tr>
<td></td>
<td>a), b), c) (village)</td>
<td>20 pupils*</td>
<td>10 staff 20 pupils</td>
</tr>
</tbody>
</table>

*with a maximum of 8 cycle spaces at each public entrance

### D2 Assembly and Leisure

#### a) Indoor leisure

<table>
<thead>
<tr>
<th>Activity</th>
<th>Spaces</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Cinema</td>
<td>20 seats</td>
<td>10 staff</td>
</tr>
<tr>
<td>ii) Concert hall, theatres, bingo halls, casinos</td>
<td>20 seats</td>
<td>10 staff</td>
</tr>
<tr>
<td>iii) Conference centres</td>
<td>20 seats or 50 GFA</td>
<td>10 staff</td>
</tr>
<tr>
<td>iv) Night clubs, discos, dance halls</td>
<td>20 seats or 50 GFA</td>
<td>10 staff</td>
</tr>
</tbody>
</table>

#### b) Indoor sport activities – multi-purpose sports centres and MUGAs

<table>
<thead>
<tr>
<th>Activity</th>
<th>Spaces</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Swimming Pools</td>
<td>10 peak visitors</td>
<td>10 staff</td>
</tr>
<tr>
<td>ii) Indoor tennis, squash, badminton</td>
<td>10 max visitors</td>
<td>10 staff</td>
</tr>
<tr>
<td>iii) Ice rinks</td>
<td>10 max visitors</td>
<td>10 staff</td>
</tr>
<tr>
<td>iv) Sports clubs, fitness</td>
<td>10 max visitors</td>
<td>10 staff</td>
</tr>
<tr>
<td>v) Ten pin bowling</td>
<td>10 max visitors</td>
<td>10 staff</td>
</tr>
<tr>
<td>vi) Snooker halls</td>
<td>10 max visitors</td>
<td>10 staff</td>
</tr>
</tbody>
</table>

#### c) Stadia

<table>
<thead>
<tr>
<th>Activity</th>
<th>Spaces</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>c) Stadia</td>
<td>TBA</td>
<td>10 staff</td>
</tr>
</tbody>
</table>

#### d) Outdoor sports

<table>
<thead>
<tr>
<th>Activity</th>
<th>Spaces</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Tennis courts</td>
<td>1 court</td>
<td>10 staff</td>
</tr>
<tr>
<td>Use Class</td>
<td>Description</td>
<td>Short Stay</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 space per</td>
</tr>
<tr>
<td>ii) Sports grounds</td>
<td>10 players or 5 per pitch</td>
<td>10 staff</td>
</tr>
<tr>
<td>iii) Golf</td>
<td>10 max players</td>
<td>10 staff</td>
</tr>
<tr>
<td>iv) LEAPs (local equipped areas of play)</td>
<td>Individual play equipment** (min. 4 spaces)</td>
<td></td>
</tr>
<tr>
<td>v) Multi-Use Games Areas (MUGAs)</td>
<td>6 spaces min.**</td>
<td></td>
</tr>
<tr>
<td>vi) Country parks, Gardens, Zoos</td>
<td>TBA</td>
<td>10 staff</td>
</tr>
</tbody>
</table>

** Stands should be sited close to the entrances to the areas and be laid out in accordance with the key dimensions section above. Where possible, stands should be within the enclosed area. Cycle parking should be adapted to lock both children’s and adults’ bikes and have space for child seats and tag-alongs.

** Rationale**

**D1 Non-residential (non-education)**

These are developments open to the public. In most cases, the focus should be on providing visitors with cycle parking spaces. Journeys to most of these will be relatively short and their location should be accessible by bicycle.

Short stay cycle parking outside health centre. Photo: Patrick Lingwood
Cycle Parking Design Guidance

D1 Educational
Encouraging children to cycle is an essential element of increasing cycling. Nationally, around 3% of all journeys to school by boys under 18 are by cycle and 1% of journeys by girls under 18 are by cycle in UK, compared to 23% in Germany and 50% in Netherlands.

There is data on cycle access for most schools in Bedford. Across all schools in Bedford Borough, the percentage of journeys by cycle is 3%, with a 4% split for urban schools and 1% split for rural schools. This masks significant variation. The urban level of cycling to lower schools ranges from 0-4%, to middle schools from 0-5% and upper schools 2-18% (so that for 2 schools the numbers arriving by cycle outnumber those arriving by car). When asked, many children say they would prefer to cycle, rather than go by car or walk. There are significant opportunities to encourage cycling. Research shows that the peak time to encourage children to cycle is in primary school from around 8-10 years old.

Residential developments, particularly in Bedford and Kempston urban area, should therefore ensure and support good links to local schools. Likewise schools need to link to their catchment areas by good quality cycle paths. In most cases, new schools will require a Travel Plan. These parking standards therefore indicate minimum standards of cycle parking.

D2 Leisure
D2 class order includes a wide range of developments related to leisure which have different potential for cycle use. Standards for each category of development have mostly been determined from existing standards and cycling potential. It should be remembered that many uses occur at weekends and in the evening when public transport options are poor. This means that the realistic alternatives are often between car use and cycle use. In some cases, there is a potential to promote cycling to sports facilities to improve fitness.

Implementation:

Schools
Short stay parking should be provided for visitors to the school by the main public entrance door where a minimum of 3 Sheffield stands should be installed. Short-stay parking is also required at primary and lower schools in/adjacent to the waiting areas used by parents when collecting children.

Long-stay school cycle parking should use Sheffield stands laid out in accordance with the key dimensions section above and be housed in secure covered lockable enclosures *with good lighting and surveillance.

Secure covered school cycle parking compound
Photo: Royal Borough of Windsor and Maidenhead

*Open fronted shelters may be considered in some circumstances where the areas containing the cycle parking within the campus are locked during the day.
For younger children, child sized Sheffield stands should be used (690-720mm long, 600mm high), but it is still important to have adequate space between stands and rows in accordance with the dimensions in this document to ensure good access and maximum usage of stands. Not all “toast racks” sold in cycle equipment catalogues meet these requirements.

Secure cycle parking in compound marred by inadequate space. Note how stands are only used on one side. Photo: Patrick Lingwood

### Transport Developments

#### Minimum number of spaces

<table>
<thead>
<tr>
<th>Use Class</th>
<th>Description</th>
<th>Short Stay 1 space per</th>
<th>Long Stay 1 space per</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSPORT</td>
<td>Garages</td>
<td>TBA</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>Petrol stations (with shops)</td>
<td>100 GFA shop</td>
<td>10 staff</td>
</tr>
<tr>
<td></td>
<td>Bus stations</td>
<td></td>
<td>10 staff 50 peak passengers</td>
</tr>
<tr>
<td></td>
<td>Railway stations</td>
<td>TBA</td>
<td>10 staff * See below</td>
</tr>
<tr>
<td></td>
<td>Park &amp; Ride</td>
<td>TBA</td>
<td></td>
</tr>
</tbody>
</table>

*Cycle facilities at railway stations to be provided in accordance with ATOC Cycle-Rail Toolkit (July 2012)

**Rationale**

These include various uses related to transport. To a large extent, such developments should be assessed on the basis of observed cycle parking need. Railway stations, in particular those with commuter trains to large urban centres, have a large potential for cycle journeys and should be assessed carefully.

**Implementation**

It should be noted that it will generally impractical for cycle compounds/shelters to be locked at transport interchanges so natural surveillance and CCTV will be particularly important.

Clear visible signage to cycle parking areas will be important.
Public Realm

In town centre and some business locations, the most appropriate parking location may be in the public realm, shared between shops and businesses. These diagrams give an indication of dimensions to be considered in such cases, in terms of combining footways and cycle stands or positioning stands within the carriageway.

Diagram 1: Stands parallel to wall or building line

Diagram 2: Stands parallel to kerb
Diagram 3: Stands at 90° to wall or building line

Diagram 4: Sheffield stands at 90° to kerb
Diagram 5: Tactile/textured paving

Diagram 6 Stands at 45° to wall or kerb
Diagram 7: Aisle width

Diagram 8: Stands in carriageway at 90° to kerb
Change of use and Retro-fit Applications

In circumstances where cycle parking is to be provided as the consequence of the redevelopment of an existing building, for example conversion of a large house into separate flats, discretion may be exercised by this authority. Each application will be judged on its merits and solutions arrived at by the application of the principles and guidance set out in this document.

In conservation areas additional consents may be required, especially if cycle parking is to be provided at the front of the building being developed. In such cases the authority will be pleased to give guidance on the procedures to be followed.

Conversion of garage

Where a garage is converted to living space and there is no other existing secure location to park a bicycle or bicycles, cycle parking standards in line with new residential guidelines will be applied.
5.0 Basic dimensions

The purpose of this section is to ensure that adequate room is provided for both cyclists and cycles when using the parking provided. This requires an understanding of the space needed by a cyclist to get to the cycle parking and to ensure that the cycle parking itself is adequately spaced.

<table>
<thead>
<tr>
<th><strong>A pedestrian</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The width of an average adult male pedestrian wearing normal winter clothing is taken to be 700mm. This compares with the normally accepted width of a mounted cyclist as 750mm.</td>
<td><img src="image" alt="Pedestrian Diagram" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>A cyclist pushing a cycle</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclists generally push their cycles by holding the handlebars. They also instinctively lean the cycle slightly towards themselves to avoid hitting their shins with the pedals and so 1100mm is a general guide to the width needed. Additional width must be added on each side to give clearance to fixed objects such as walls or parked cycles. Absolute minimum 50mm on each side for straight routes up to 10m long. For distance over 10m this should be increased to 200mm on each side.</td>
<td><img src="image" alt="Cyclist Diagram" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Design cycle</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle size may be affected by the addition of such features as child seats, panniers and baskets: all are regularly encountered where cycling is common. These do not usually add much to the overall width but can have a significant impact on the ease with which the cycle can be locked to a stand and the space needed between stands.</td>
<td><img src="image" alt="Design Cycle Diagram" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Two parked cycles</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In order to avoid a clash of handlebars and pedals the second cycle to be parked will be parked slightly to the front or rear of the first. This gives an overall length for 2 cycles of 2000mm. The effective overall width of two cycles parked on one stand may be taken as 750mm. This figure makes a small allowance for the width of a cycle frame and the stand but does not take into account the presence of panniers, baskets or child seats. The amount by which a cycle sticks out from the centre line of a Sheffield stand may be taken as 375mm.</td>
<td><img src="image" alt="Two Cycles Diagram" /></td>
</tr>
</tbody>
</table>
**Footprint**
The ‘footprint of two cycles parked at a Sheffield stand should be taken as 2m x 1m. This may be used to calculate the space required for a given number of stands, but note that end spaces will require additional width. For access and manoeuvring aisle widths see below.

---

**Basic stand**

![Diagram 2: Sheffield Stand](image)

Based on London Cycling Design Standards TFL 2005

The preferred size is **750mm high and from 750mm to 1m long. The size of a typical bicycle is 0.65m wide and 1.8m long.**

The addition of a horizontal bar approximately 500mm above ground level will make it easier to secure children’s cycles and some types of adult bikes, such as folding bikes, and reduce the likelihood of cycles slipping down the stand if properly locked.

When used in the public realm, for example for visitor parking, the first and last stands in a row should be fitted with a tapping rail for the benefit of blind and partially sighted people. Where stainless steel stands are provided to enhance the public realm these must have a brushed finish and should only be used where they will stand out against a contrasting background. This will make them more easily detected by people whose vision is impaired.

There are a number of variations on the basic Sheffield stand design (see below)
Extended Sheffield stands (shown here in the public realm) with additional cross bar facilitate the use of two locks

'A' frame style stands are an acceptable variation where space is short but cycles easily roll off around the stand.

Note: Sheffield stands should always be fixed at right angles to any slope. This overcomes any tendency for the parked cycles to roll downhill.

Spacing between stands
Stands should always be sufficiently far apart to allow users to park and lock their cycles with ease. The minimum spacing between Sheffield stands should be 1000mm. This distance is always measured from the centre line and at right angles to the longitudinal axis of the stand, even when stands are at an angle to a wall or kerb line. Adequate space of 900mm (600mm absolute minimum) must be left between the end stand and the wall if the stand is to be counted as 2 sided.
Aisle widths

It is essential to provide aisles between every 2 rows of Sheffield stands and at regular intervals between groups of stands. The aisles should be a minimum of 1500mm (equivalent to 3500mm lengthwise between the centres of stands) to allow cyclists to get past parked cycles and turn to park (see diagram 4 below).

Where large numbers of stands are provided and two-way flows of cyclists pushing their cycles are likely at peak times (e.g. at railway stations), aisle widths should be increased by at least 500mm.
A common error in laying out cycle parking is to fill out all the available space with stands and not to leave an adequate width aisle to get to all the stands. The result is that the stands at the front fill up and the stands at the back remain empty.  
*Photo: Patrick Lingwood*

## 6.0 Movement space dimensions

It is necessary to check whether adequate space has been provided to allow a cyclist conveniently to get to and from the cycle parking. The following four diagrams illustrate the outer swept paths of common manoeuvres. Four common manoeuvres are illustrated:

- pushing a cycle through a right angle (to left and right)
- turning through 180 degrees to reverse direction (to left and right).

Right handed cyclists will tend to push their bikes on their right whilst walking on the left side of the bike. The diagrams may be reversed to represent a cyclist standing on the right hand side of the cycle. It should be noted that the outer edge of the ‘envelope’ is generally created by the elbow/shoulders of the cyclist on one side and either the handlebars or the front wheel on the other. The latter occurs when the cycle is leant over during the turning manoeuvre.

Whilst the space required to turn a cycle will vary with the size of the cyclist and his or her ability to handle their cycle without lifting or dragging it, the drawings represent the amount of free space needed to achieve the various manoeuvres in comfort. No allowance has been made for the need to allow clearance between the swept paths and walls and other fixed points. An additional 150 mm should be provided on each side by a vertical surface for comfort to avoid damaging paintwork, doorways etc.
Diagram 5: Cyclist stood on left of cycle turning right

(Positions A and B represent the start and finish positions of the turning movement. The dotted outline represents the size of the area needed to complete the turn.)

Diagram 6: Cyclist stood on left of cycle turning left
Diagram 7: Cyclists stood on left of cycle turning right through 180 degrees

Diagram 8: Cyclist stood on left of cycle turning left through 180 degrees
Access and driveways

There should be an adequate smooth, stable and durable surfaced path all the way to the cycle parking. Where cycle parking is provided to the rear or sides of private dwellings the access way should be 1.5m wide or a minimum of 1.2m over a distance of no more than 10.0m.

Diagram 10: Access widths
Where the cycle access is via a driveway and is used for car parking, a minimum of 1.2m wide clear demarcated space should be provided adjacent to the space where the car would

Diagram 11: Minimum single, twin and double driveway widths to allow cycle access and car doors to open on both sides
Door widths

Any door or gateway that cyclists have to pass through to gain access to parking must be at least 900mm wide, preferably 1000mm. Communal doorways should be a minimum of 1200mm.

External doors should be self closing and locking. For larger facilities automatic doors should be considered and fitted with a mechanically damped closer which will allow cyclists to pass in good time.

Consecutive doors

Consecutive doors should generally be avoided. Where they are planned they should be arranged to permit easy access. When faced with any kind of door that is not automatically opened or mechanically held open, a cyclist will have to stretch to first reach for the door handle and then hold the door open whilst passing their cycle through. This means that the distance between consecutive doors must be at least the sum of the width of the door being passed through plus the length of a cycle. In communal areas this should be a minimum of 3.5m. This figure may be reduced by the use of double doors with workable layouts derived by the use of the swept path diagrams.
Cyclists need space to negotiate doors and gates

In addition to demonstrating the amount of space need to turn a cycle to park it, the diagrams above also serve as indications of, say, the width of a lobby needed to turn at right angles and pass through a door. The illustration below allows a small margin between the cyclist and their cycle and any enclosing walls.

**Diagram 10: Indicative lobby depth in front of a door: derived from turning diagrams**

**Corridors**

Corridor widths should be also be sufficiently wide to permit both easy access and to accommodate any turning movements that may be necessary. Push buttons to activate automated doors should be conveniently sited to aid ease of use.
7.0 Management of cycle parking areas

Private cycle parking

The long-term management of private parking will rest with the owners or tenant of the associated dwelling. No control can be exercised over the subsequent maintenance of the facilities provided. It is essential therefore that as far as possible cycle parking is low-maintenance, easy to use and self-explanatory to future owners and tenants. Advice on the use of cycle parking should be provided in welcome packs where these are required as part of the development’s residential travel plan.

Cycle parking in shared areas

The future maintenance of the cycle parking equipment and surrounding area should be agreed as part of the planning process. This should include not only the day to day up-keep but also the issuing of keys or other entry devices together with the introduction of the facilities and their use to new residents. Doors to shared cycle parking facilities must be self-closing and locking.
The use of smart card and proximity keys is recommended for secure access to communal sites, however, this needs to be well managed to remain effective.

Any site travel plan should also encourage the setting up of a bicycle user group (BUG) which can work together to share specialist tools, quality pumps and general help amongst its members.

8.0 Notes on other common forms of cycle parking

**High-low stands and Two-tier stands**

The use of high-low stands and two-tier stands is generally not acceptable for new residential developments but may be considered on a case by case basis (e.g. large student accommodation). Both designs force cyclists to lift their bikes to the upper racks which will therefore not be available to cyclists without that strength.

**High-low stands**

Although common in mainland Europe high-low stands are not universally popular with users. In large part this is because European bikes have central locking systems, whereas in England bikes need to be secured to a fixing post. Additionally, many of these styles are difficult to use when cycles are fitted with baskets and child seats and usually require lifting. This can be difficult for the less able or those with heavy cycles.

The aisle width for high-low stands should be a minimum of 1000mm measured from the rearmost point of the parked cycle (see individual manufacturer’s specifications for details). The spacing between stands should be a minimum of 500mm between centres.

High-low stands: Note that the easier lower level is first to be taken. Such stands will only be acceptable where some means of locking the frame to the stand is provided.
Two-tier stands

Two-tier stands are not universally popular and may have greater maintenance requirements. Where two-tier stands are installed a minimum aisle width of 2500mm beyond the lowered frame is required. This is to enable the cycle to be turned and loaded in comfort. An overall aisle width of 3500mm should be provided where frequent two-way movements are likely within an aisle with stands on either side. The need to provide a wider aisle in front of two-tier stands, in order to provide space to turn and load the cycle onto the higher level, may also mean that apparent density advantages of such systems are reduced. The headroom required will vary with system but generally 2800 – 3000mm will provide an adequate margin above parked cycles.

Diagram 5: Aisle width for two-tier parking

Generally Sheffield stands (left) are much more popular than 2-tier parking (right). Note also that the aisle width is insufficient between the Sheffield stands and 2-tier parking.

Photo: Patrick Lingwood
Cycle parking – picture gallery

There are unfortunately plenty types of cycle equipment for sale in bike catalogues which fail to meet the standards set out in this document. This guide is to help planners and developers make the right choices.

Key:

- Default choice
- Some limitations
- Site specific approval required

Long and short stay recommended designs

1. Default choice – Sheffield stand

- Parks two cycles to one stand; cheap to buy, install and easy to maintain
- Allows front and rear wheels and frame to be locked
- Allows use from either end (where symmetrical design and layout permits)

General suitability: 3 3 3 3 3

Retro fit: 3 3 3 3 3

2. ‘A’ frame

- Similar to Sheffield stand, but often narrower profile. This has the advantage of taking up less space, but the disadvantage of making it more difficult to hold the bike in place so that bikes may pivot untidily onto their sides.

General suitability: 2 2 2 2 3

Retro fit: 3 3 3 3 3

3. ‘CaMden’ stand

- Designed to encourage locking of wheels and frame
- Note: this should not be confused with the ‘ribbon’ or ‘wave’ stand (see later)
- Main disadvantage is that it is more expensive than a standard Sheffield stand.

General suitability: 3 3 3 3 3

Retro fit: 3 3 3 3 3
4. Asymmetric stands
Unidirectional use only (as shown). With the cycle in the other direction, there is a tendency for it to fall over.
Another disadvantage is that right handed cyclists often like to reverse cycles into the right side of a stand to avoid holding the bike on their left side.

5. Wall bars or rings
Recommended mounting height 500-550mm
Useful for short stay parking at individual houses because of low visual impact. It must be accompanied by hard standing.

Secure compounds
Security depends on effectiveness of gate/locking systems. Some form of management and maintenance will be necessary.

Open shelters
Provides for short stay but does not provide adequate security for long stay, unless in managed and secure area, e.g. in small work places. Not suitable for long stay residential parking. For short stay, the design should be positioned to allow surveillance and avoid opportunities for theft.
### Secure under-croft parking

Provides effective security when access is restricted to residents. Some form of management and maintenance will be necessary. However, generally parking should be in a secure compound with no more than 20 cycles per compound.

**General suitability:** 🌟🌟🌟🌟🌟

**Retro fit:** 🌟🌟🌟🌟🌟

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### Cages

Useful in smaller blocks of flats etc. (stand type by agreement)

**General suitability:** 🌟🌟🌟🌟🌟

**Retro fit:** 🌟🌟🌟🌟🌟

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### Specialist applications

These designs are generally **not** recommended, but may be considered in special circumstances, when there are site specific limitations. Special approval is required to meet guidelines.

#### 1. Two-tier systems

Can add capacity but should only be considered for larger, constrained and managed sites such as for student accommodation: not universally liked by users. Strength is needed to load the upper decks. The mechanisms also need maintenance.

**General suitability:** 🌟🌟🌟🌟🌟

**Retro fit:** 🌟🌟🌟🌟🌟

#### 2. Domestic lockers

Capacity limited and not always convenient to use.

**General suitability:** 🌟🌟🌟🌟🌟

**Retro fit:** 🌟🌟🌟🌟🌟
3. **Lockers general** (vertical and horizontal)
   Horizontal lockers are preferred: vertical ones require lifting and some do not accept larger cycles. Advantage of allowing helmets and other paraphernalia to be stored with cycle. Disadvantage that they can be abused to store all kinds of things. Need to be managed.

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<tr>
<th>General suitability:</th>
<th>Retro fit:</th>
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<td>✑ (horizontal)</td>
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4. **‘Planter’ stands**
   May be suitable for short stay parking

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5. **Ramped ‘Wheel grabbers’**
   To be avoided in most instances, because it is impossible to lock the bicycles adequately. However, these may have a limited retro-fit role in cages or individual domestic sheds where security is provided by other means and more than two cycles are to be parked

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<th>General suitability:</th>
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6. **Hanging systems**
   Not recommended for general use because of the strength needed to lift bikes and the lack of security. They are primarily used where cycles are “stored” rather than used.

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7. **High-low stands**
   Not recommended for general use in new build due to lifting necessary but may be acceptable for retro-fit in larger, constrained sites - only acceptable where central posts allow the frame of the bicycle to be locked. Common design on continent because of its high density and continental bikes have frame locking.

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**Designs to be avoided**

The following picture gallery show designs which are commercially sold but not recommended *under any circumstances* because of general inadequacies, including lack of security, lack of support for bicycles or complexity and general misuse.

1. Traditional concrete “wheel benders” – the absolute worst of all types

2. Traditional concrete “wheel grippers” – no way of securing cycle

3.

4.

5.

6.

7.

8.

9.

10.
11. Various hanging systems

12. 2-tier without lifting mechanism

13. Various hanging systems

14. 2-tier without lifting mechanism

15. Various hanging systems

16. 2-tier without lifting mechanism