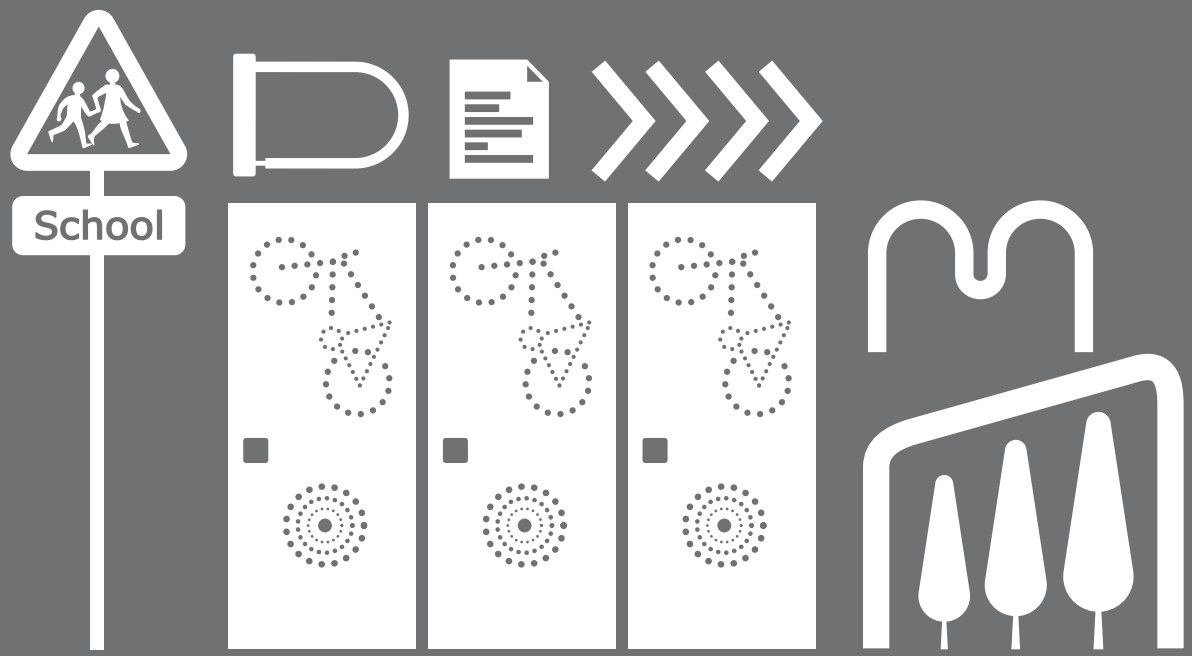
# 8. Cycle parking

This chapter focuses on the planning and design of high quality parking facilities for all cycle users – fit-for-purpose, secure and well located.

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# 8. Cycle parking


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## 8.1 Why cycle parking is important

### 8.1.1 Supporting cycling policy

'We will deliver 80,000 additional cycle parking spaces in residential locations, stations, workplaces and other trip destinations by 2016. We will put them where people most need them.' Mayor's Vision for Cycling (2013)

Provision of cycle parking and its security are essential for supporting the development of cycling as a practical transport choice. A lack of appropriate cycle parking facilities is often cited as a barrier to cycling and cycle ownership and use, and could be a constraint on the future growth of cycling.

> The number, quality and range of types of cycle parking spaces available must not only keep pace with the growing use of cycles in London, but also needs to allow for the substantial future growth set out in the Mayor's Vision for Cycling. Some, more accessible locations will see higher-than-average increases in cycling, and so will need cycle parking to support this level of use.

Opportunities to provide more and better cycle parking should not have to come exclusively through programmes and projects aimed at promoting cycling. Various streetscape and highway improvements offer the possibility of raising the quality of cycle parking provision in the public realm.

Cycle parking also needs to be a key consideration for any new development that people are expected to travel to and from – just as journeys on foot, by public transport and by private car are planned for. Through the planning process, high quality cycle parking should be regarded as an integral part of a scheme, an essential part of the attraction of a development – never just an add-on to meet minimum policy requirements.

### 8.1.2 Cycle parking principles

Cycle parking should be:

**Fit-for-purpose** – meeting identified current and future demand, with an appropriate balance of short-stay and longer-stay provision, and accommodating all types of cycle.

**Secure** – stands in secure private or indoor spaces, or in visible, well-lit places that have high levels of natural surveillance.

**Well-located** – convenient, accessible, as close as possible to the destination, and preferably sheltered.

Planning and design of cycle parking needs to take into account the different types and sizes of cycle that exist – including, for example, handcycles, upright and recumbent tricycles, tandems and solo cycles with adaptations to suit the rider's specific needs (see section 3.2 for further details and dimensions). This is important for ensuring that any cycle user with a physical, sensory or cognitive

Cycle parking in Covent Garden

impairment can enjoy access to good quality cycle parking. An inclusive approach to cycle parking is recommended and includes:

- Step-free access, which may require provision of shallow ramps or lifts large enough to carry all types of cycle
- Signing to accessible facilities at locations where the type of cycle parking is difficult or impossible for all to use
- Making available spaces for larger models and, potentially, reserving allocated spaces for disabled cyclists

## 8.1.3 Quality of provision

Local authorities and developers are expected to make appropriate provision for cycle parking to support targets for cycling. In order to fulfil that role effectively, the quality of cycle parking will be as important as the quantity. A number of key issues around the quality of cycle parking have been raised in the London Assembly report, Stand and Deliver: Cycle Parking in London (2009) and in TfL's Cycle Security Plan (2010).

Achieving the best quality of provision, in terms of location, design and type is important in order to:

- Ensure that adequate facilities are available for those who already cycle
- Reduce cycle theft through appropriate facilities to lock and store bikes
- Encourage more people, and a more diverse range of people, to choose cycling as a mode of transport
- Encourage inclusive cycling
- Reduce obstruction and other nuisance caused by ad-hoc parking
- Relocate any under-used cycle parking
- Help more children and older people to cycle

## 8.1.4 Planning requirements

The planning process should be used to help deliver high quality cycle parking through:

- Applying London Plan and Local Plan policies and standards to new development
- Ensuring that development and transport plans include proposals for addressing existing gaps in provision
- Using planning obligations and conditions to help deliver additional high quality, inclusive cycle parking facilities to meet those identified gaps

The London Plan requires better cycle parking through planning. In the Further Alterations to the London Plan (2014) new cycle parking standards are proposed for new or re-development in London by use class, drawing from research conducted for TfL by SKM Colin Buchanan: Cycle parking standards supporting evidence report (2014).

The new standards include specific requirements for both long- and short-stay parking (see section 8.3.1 for explanation of long- and short-stay). While these standards establish minima for cycle parking provision, clients, designers and planners should seek to identify and meet identified future demand, which will invariably lead to a higher level of provision than the minimum standards.

Applicants should also note that the Accessible London supplementary planning guidance (2014) – which has been prepared to support the London Plan policy 7.2 on inclusive environments – articulates Mayoral support for promoting cycle use by people with physical, sensory and cognitive impairments. Implementation point 21 states that 'boroughs and developers should seek to encourage inclusive cycling through providing an element of secure parking suitable for inclusive cycles, cargo cycles and tricycles, within general cycle parking, that is accessed via a step-free route'.

Growing demand for cycle parking

## 8.1.5 Determining cycle parking requirements

Providing the right cycle parking for a place requires an understanding of the dynamics of current and likely future cycle use in an area, and ideally should be planned in an integrated way with cycle routes. Qualitative criteria are just as important as the quantity of cycle parking provided.

There is a clear case for providing cycle parking where there is existing evidence of use but simply serving existing demand is unlikely to accommodate the projected growth in cycle use. Setting targets for cycle parking in locations where use is currently low, but where an authority may wish to promote cycling, will depend on the potential to attract use and to provide facilities that meet the standards set out in this document.

Cycle parking may well be needed to serve a demand that is currently suppressed. Analysis of trip generators and the relationship between likely origins and destinations can help inform this projection of future demand.

The right amount of cycle parking for a site or area would be at a level that:

- Meets existing baseline demand
- Meets the potential demand generated by the existing and proposed land uses in the area
- Ensures there further is allowance for spare capacity (ideally, at least 20 per cent)

### Destinations

All destinations should be served by cycle parking that can accommodate employees, customers, residents and visitors. Key destinations include:

- Residential areas, including housing estates and private houses and flats
- Shopping centres and high streets
- Workplaces
- Hospitals and health centres
- Council buildings
- Education establishments including schools, colleges and universities
- Community facilities and services eg libraries, pre-school and day-care facilities
- Entertainment and leisure venues
- Public transport interchanges such as: National Rail, Docklands Light Railway and London Underground and Overground stations, and docks providing river boat services

### Assessing potential demand

Methods include:

- Surveys of existing patterns of cycle parking, taking into account formal and informal parking areas, existing cycle stands in public and private areas, and 'fly parking' to street furniture and guard railing

Cycle parking serving destinations

- Surveys at different times of the day, week and year – cycle parking demand in winter tends to be approximately 60-80 per cent of the demand in summer, while identifying variations by time of day and day of week can reveal peaks and give indications of trip purpose
- Making a broader assessment of where trip generators are, and where and when people are likely to, or could, travel there by cycle – this includes identifying where and when new developments are proposed locally
- Trialling temporary stands, including stands for larger types of cycle – temporary parking for events or in support of trial layouts can help demonstrate how much cycle parking could be accommodated with more permanent solutions

Temporary cycle parking provided as a trial measure

Provision of new or increased cycle parking should also be informed by consultation with cyclists, pedestrians, retailers and local residents, many of whom will be able to give a more rounded view about variation of cycle parking demand through the day, week and year.

This should be proportionate to the level of investment and the likely impact on other users.

For new development, applicants should consult the latest version of the London Plan to verify minimum requirements, and should check with the local planning authority, which may have its own minimum standards in its Local Plan. Developers and planners should seek greater provision than the minimum wherever possible, particularly in locations where trips by cycle could grow substantially. The quantity and quality of cycle parking is likely to become an ever more important factor in attracting potential buyers, occupiers and customers.

### Constraints

The feasibility of providing cycle parking in a given location needs to be considered alongside assessing demand. Carriageway or footway space and underground utilities or structures will determine whether locations are suitable. Clarity about these constraints is important before consulting on any options for new cycle parking.

A Traffic Order is necessary for on-carriageway cycle parking, but not for off-carriageway (ie on the footway), although this may be an effective form of consultation in some sensitive areas. Alternatively, a temporary Order may be secured more quickly for a temporary use of part of the carriageway for cycle parking, for up to 18 months. See section 2.4.6 for guidance on procedures for Traffic Orders.

## 8.2 Fit-for-purpose cycle parking

### 8.2.1 Cycle parking for all

In addition to the considerations of security and location covered in sections 8.3 and 8.4, fit-for-purpose cycle parking should:

- Be accessible to all and signposted as necessary
- Meet recommended space requirements but use space efficiently
- Serve identified uses, with an appropriate balance between long- and short-stay
- Provide for flexible use during the day and week
- Be integrated well with other uses of a street or public or private space

Cycle parking needs to take into account all user needs, so as not to exclude or disadvantage riders of certain types of cycle. This includes people who use handcycles, tricycles, tandems and models adapted to suit the rider's specific needs, as well as cargo cycles.

Larger cycles can be accommodated where tubular stands are used, in or outside of a building, shelter, cage or compound, provided they have step-free access and sufficiently wide door openings (see below). The most practical method is to ensure that stands are provided in short runs with large gaps between runs to allow a larger cycle to be secured to each end stand. It is recommended that at least 5 per cent of all spaces should be capable of accommodating a larger cycle.

Space at the end of a run of stands in Copenhagen

Dedicated spaces for larger cycles, Houten station cycle park, Netherlands

## Space requirements for larger cycles

Where cycle parking is inside a building, it should have step-free access, wide doorways and spacious corridors. Accessing the parking area should involve passing through no more than two sets of doors, with a recommended minimum external door width of 2 metres. Lifts or shallow gradient ramps should be provided to any basement cycle parking. To accommodate all types of cycle, lifts should have minimum dimensions of 1.2 by 2.3 metres, with a minimum door opening of 1000mm, and any door to a cycle parking area should be automated – push button or pressure pad operated.

## 8.2.2 Signing to cycle parking

The signing strategy in an area should help people to find cycle parking and to continue their journey from the parking area. TSRGD contains a standard sign, diagram 968, for this purpose on-highway. Wherever it is necessary, any such sign should be mounted so as to avoid creating additional sign clutter in the public realm.

Off-highway, owners or managing authorities should provide their own signing. They may wish to demonstrate where step-free parking for non-standard cycles is available by using signing such as 'trailer/tricycle/disability cycles parking' at the end of bays. Kerb-free access from such spaces to the carriageway will be required, so a suitably positioned section of dropped kerb will need to be provided.

For any parking area where access is not step-free, or where stands are difficult to use by people with larger models of cycle or who cannot lift a cycle, signing should provided to accessible cycle parking areas. This is likely to be the case where two-tiered stands are used.

## 8.2.3 Efficient use of space

Space available is always likely to be a constraint, although the choice of cycle parking type should not be dictated by space alone. To calculate indicative space requirements, at least 1.4 square metres should be allowed for per space if using Sheffield stands that accommodate two cycles per stand. An area of at least 1,400 square metres is therefore required for every 1,000 spaces, in the most ideal circumstances.

A higher figure will be needed where there are physical constraints and where stands are arranged in bays with generous gaps (to allow for access for all types of cycle). Some stands may be more space efficient: 0.7 square metres per parking space should be allowed for if using two-tiered stands.

Some indicative space requirements are summarised in figure 8.1, based on the Sheffield stand. There are many other products on the market, particularly those that private owners may consider within their property, and space requirements will need to be calculated based on the characteristics of each type. The Cambridge cycle parking guide (2008) and Cambridge cycle parking guide for new residential developments (2010) are good sources for further guidance on the range of different types of stand and on space requirements for standard cycles.

Figure 8.1 Recommended cycle parking space requirements (based on bays of multiple Sheffield stands in a parallel arrangement)

| | Recommended | Minimum |
|---|---|---|
| Bay width (length of cycle parked on a stand) | 2m | 2m |
| Access aisle width (if larger cycles are accommodated on end of bay) | 3m | 1.8m |
| Access aisle width (if larger cycles need to use the aisle) | 4m | 3m |
| Width needed for access aisle + bay on one side | 5m - 6m | 3.8m - 5m |
| Width needed for access aisle + bay on both sides | 7m - 8m | 5.8m - 7m |
| Spacing between stands | 1.2m | 1.0m |

## 8.2.4 Meeting demand flexibly

It is important to ensure that the spread of demand across the day is considered, in conjunction with planning for provision that is appropriate for trip purpose and length of stay.

In most workplaces, it may be assumed that the demand for spaces will occur at peak times during the working day, and there will be a low turnover in use of a given space in one day. In these instances, visibility of cycle parking is not critical, although it can be important for encouraging more people to take up cycling.

In contrast, a Sheffield stand located in a busy shopping area is likely to offer a convenient facility, suitable for short stays, and should be located in a highly visible area with good natural surveillance, covered if possible. This parking is also likely to have a higher daily turnover of use.

## 8.2.5 Tubular stands

Sheffield stands, bolted to the surface or embedded in the ground, are the most common type of tubular stand. They offer a simple, robust and cost-effective cycle parking solution: two cycles can be parked on one stand and a range of locking positions are possible.

For consistency, it is recommended that the finish of stands on the highway should be either black, signal grey or stainless steel. On the TLRN, black, nylon-coated stands are the standard for central London and town centres, with stainless steel being standard for arterial roads. Designers are advised to consult guidance on street furniture issued by the relevant highway authority.

Consideration must be given to helping visually impaired people identify areas of cycle parking. Stands on the footway should not be placed in obstructive locations – they should be in an identified street furniture zone keeping at least 2 metres' clear width for pedestrian movement (see section 8.4 for more details). They must also have a strong visual contrast with the surrounding environment. Use of visibility bands in a contrasting colour on Sheffield stands is generally a good approach (white on black or black on stainless steel are the requirements on the TLRN). A tapping rail is also recommended for the end cycle stand, so that an empty stand can be identified by anyone using a cane.

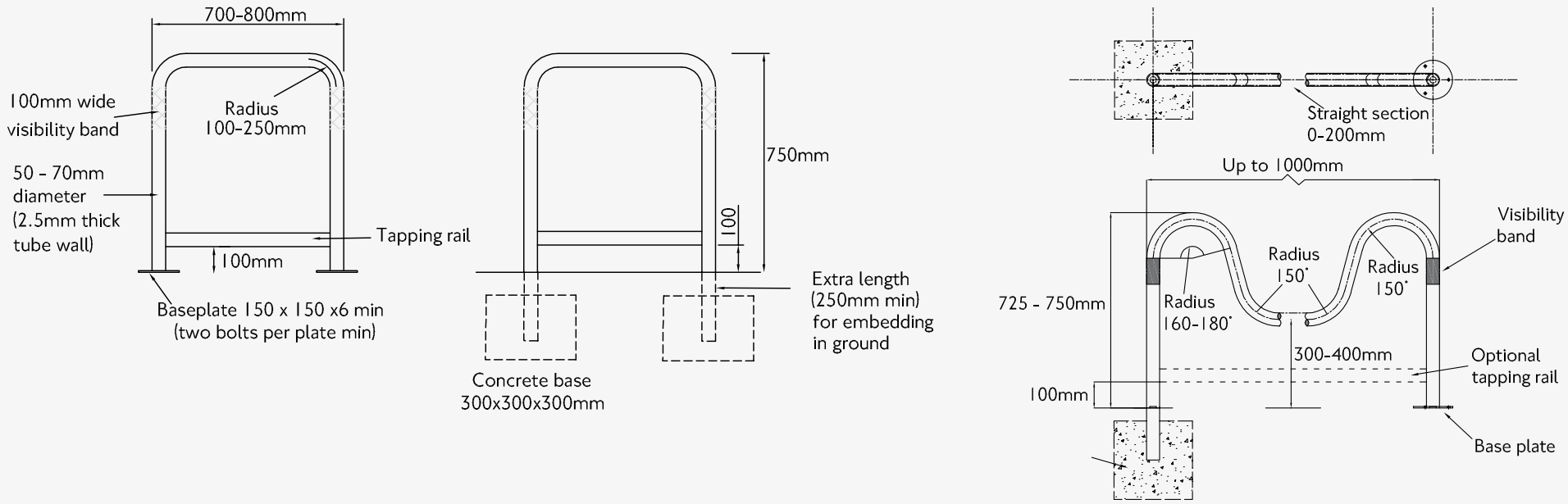
Sheffield stand, with visibility bands and tapping rail

M-profile stand

Typical use of stands between footway and carriageway

An alternative to the Sheffield stand is the M-profile stand, which has been designed specifically to facilitate double locking.

Other tubular cycle parking designs are available on the market, and may be suitable in many locations. While it is important to take a flexible approach to the design of cycle parking stands, they should always fulfil the main function of allowing for two-point frame and wheel locking.




Standard details and dimensions for Sheffield stand (left) and M-profile stand (right)

## 8.2.6 Two-tier stands

Where they are of good quality, durable, easy-to-use, and in secure or well overlooked locations, two-tier cycle racks are an innovative solution to space constraints and high demand for cycle parking. The racking system stores cycles above each other, with a retractable upper tier, which increases the capacity of the site. Racking systems are best provided in locations where instructions for use can be given to ensure that cyclists use the facilities safely.

A minimum aisle width of 2500mm beyond the lowered frame is required to allow cycles to be turned and loaded. An overall aisle width of 3500mm should ideally be provided where there are racks on either side of aisles, though this may limit the density advantages of two tier stands. The minimum height requirement is 2600mm.

Two-tiered, high capacity cycle parking at Euston station

Two-tier stands tend not to be suitable for all users and all types of cycle – using the upper tier, in particular, would be difficult for many people. They should therefore be used in conjunction with other types of stand in the vicinity, with signposting to more accessible stands as necessary.

Careful consideration should be given to:

- The location of stands, minimising conflict with pedestrians using the surrounding area
- The level of natural surveillance surrounding the stands to ensure users feel confident to lock their cycles using the stand
- The design of the chosen stand, to ensure cycles can be locked by securing at least one wheel and the frame – it is possible to specify two-tier racks with an additional security bar, to enable both wheels and the frame to be secured

## 8.2.7 Cycle lockers

Cycle lockers can offer secure and dry parking, and other storage facilities for longer stays. However they require more management than other cycle parking solutions.

Consideration should be given to:

- The design of the locker, particularly any moving parts, which are particularly vulnerable to vandalism or leverage by thieves
- The space available and cycle parking demand – some cycle lockers, particularly those that store cycles horizontally rather than vertically, have a large footprint
- Accommodating all sizes of cycle
- A management system, which may be provided by the supplier or planned separately
- The level of supervision of locker sites, ensuring they do not suffer from vandalism or misuse
- The location of lockers within a site, to ensure the facility is convenient and accessible
- The operation and management system of lockers when installed and sustainability of any system in the future, allowing access to anyone who wants to use it
- Liability for securing contents, which may need to be clearer than with open parking
- The ability to open and search lockers for security reasons

Cycle lockers

## 8.2.8 Secure shelters and compounds

Secure shelters, compounds and cages can be used to provide additional security for longer-stay cycle parking at locations such as public transport interchange points, workplaces or high density residential developments.

Access can be enabled by a fob or swipe card operated by a registered user. Any control box should be mounted at a maximum height of 1400mm to allow for access by all users.

Some shelters are designed for use in the street environment, making more efficient use of space previously dedicated to car parking. They are particularly useful in areas of terraced housing where space for cycle storage is often in short supply.

For any secure shelter or compound, careful consideration should be given to:

- Access to the facility, ensuring spaces are available to registered users
- Administration of the access system and responsibility for keys/access cards, including a deposit system for cards and whether a charge is levied
- Type of cycle parking racks, allowing cycles to be secured within the compound and enabling parking of larger models of cycle
- Personal security of those accessing the compound, including lighting, CCTV, visibility in the compound, doors opening away from the carriageway
- Maintenance and operational costs
- Management of the facility – if managed by a private company, legal agreements may be needed to enable this use of highway space
- Retaining access for street cleaning
- Ensuring that drainage is not adversely affected

Shelter in car parking space on residential street in Hackney

Secure compound

## 8.3 Secure cycle parking

### 8.3.1 Secure locations

Where it is in the public realm, cycle parking should be in a location that people feel safe using at all times of the day – visible, accessible, well-overlooked and well lit. Otherwise, the preference is for parking areas that can be secured and with controlled access, or where efforts have been made to address security concerns, such as installation of CCTV.

> Users need to feel both that their cycle will be safe where it is parked, and that they will be safe accessing and using the parking.

A key consideration is the balance between long- and short-stay cycle parking. Long-stay is for residents, employees and others who may be leaving their cycle over a night or more, and normally has limited, controlled access. Short-stay is for visitors, customers and other, more flexible uses, and tends to be in the public realm with open access.

Long-stay cycle parking is best located in a building, for example in a basement parking area, provided the entrance is well overlooked and well lit. Access needs to be considered carefully, particularly for those using non-standard cycles, with clear signing from the main entrance of the building to the parking area. It is recommended that external doors are a minimum of 2 metres wide. Refer to advice given on use of shallow ramps and lifts in section 8.2.1 above.

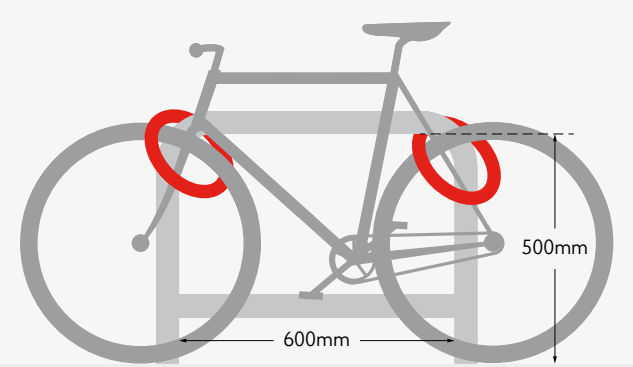
Where location in a building is not possible, bespoke shelters and lockers are an option, but consideration needs to be given to planning requirements. Cycle parking outside of buildings should be:

- Sited in locations that are clearly visible and well overlooked with high levels of natural surveillance, and CCTV where necessary
- Designed with consideration of sight lines into and out of the cycle cages, compounds or secure store
- Adequately lit and overlooked, particularly at night-time or where the parking is under cover

### 8.3.2 Secure locking

A wide range of cycle parking products are available, but the cycle parking design chosen, and the location of the cycle parking should, as far as possible: allow the frame and both wheels of the cycle to be secured, and provide support for any type of cycle without damaging it.

In order to allow for securing the cycle by the frame and both wheels, locking points should be approximately 600mm apart and 500mm above ground. The stand shape should provide locking within 100mm of these points to facilitate the use of two 'D' locks, ie a range of 400-800mm in width and 400-600mm above ground. It should be noted that stands thicker than 75mm will stop the use of a 'D' lock.




Recommended double locking practice

Damaged or vandalised cycles left in public often signal the insecurity of cycle parking and, in some areas, cycle parking facilities are unlawfully occupied by motorcycles and scooters, sending a similar negative message. It is therefore important that cleaning and maintenance of areas of cycle parking is considered during the planning and design of new facilities. Regular inspections should be made by the managing authority to identify where maintenance of stands and parking areas is required, including the removal of damaged cycles after a suitable warning period.

## 8.4 Well located cycle parking

### 8.4.1 Serving destinations

A good location for on street cycle parking is essential so that facilities will be well used and integrated with other street functions as appropriate. Parking should be located in close proximity to user destinations and accessible to local services. Boroughs should consider advertising cycle parking locations on their websites and elsewhere.

> The preferred way to integrate street cycle parking with other functions is to locate it in carriageway rather than footway space.

Proximity to a destination influences a cyclist's choice of where to park, so cycle parking should be convenient and well located. As a general rule, and bearing in mind the need to integrate with other user needs, cycle parking should be provided:

- As close as possible to the final destination
- Within 15 metres for short-stay parking serving a single destination
- Within 25 metres for short-stay parking serving multiple sites
- Within 50 metres for longer-stay parking
- In convenient locations for entrances to and exits from the destination
- Where there is step-free and comfortable access – eg through use of dropped kerbs, cycle routes and crossings
- In such a way as to allow for parking larger cycles

### 8.4.2 Cycle parking in the carriageway

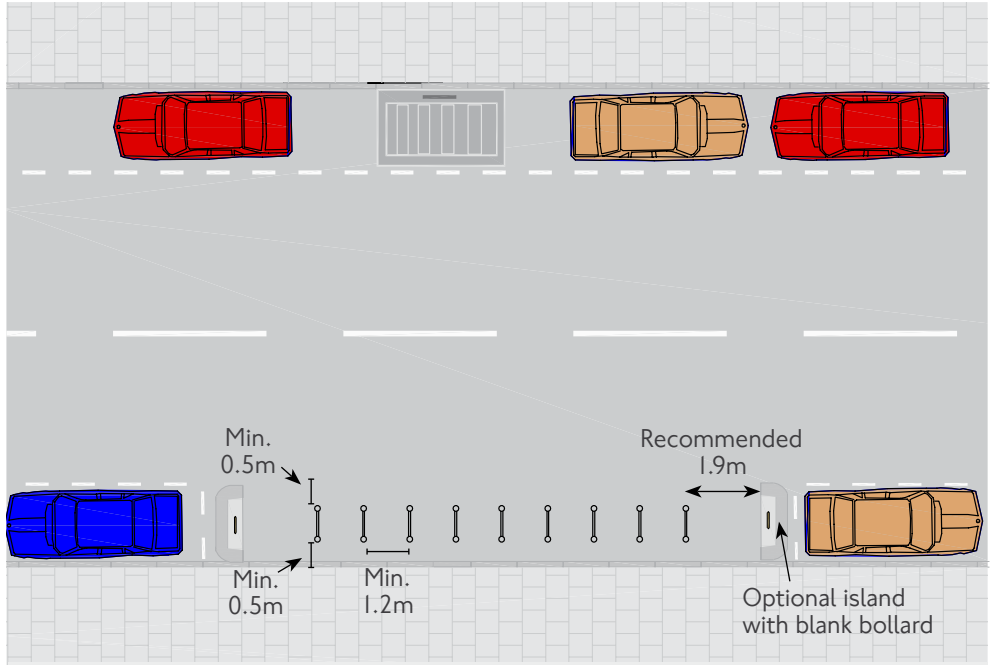
In a street environment, cycle stands should be located in space taken from the carriageway wherever possible, inset or with island protection as necessary. This requires a Traffic Order and needs careful planning and consultation in relation to potential loss of car parking or carriageway space, but it is the best way to avoid taking up footway space and creating conditions that require mitigation for visually impaired people. It can work well in streets where access is closed or restricted for motorised vehicles.

Footway build-outs can serve a similar function without reducing footway space, although impacts on users of the carriageway need to be assessed (see chapter 3 for further details). Cycle parking on, or inset into, segregating islands for cycle infrastructure is also recommended.

On-street cycle parking in Hackney

Considerations for cycle parking in the carriageway, on build-outs or on segregating islands include:

- Impact on kerbside access to properties, particularly for deliveries and disabled parking (although the issues are similar for footway cycle parking)
- Impact on informal pedestrian crossing desire lines
- Provision of a buffer space to moving traffic, to allow cycle users safe access and allow for cycles protruding well beyond the stand
- Maintaining access to utilities
- Potential obstruction of drivers' view at junctions or near pedestrian crossings




Indicative layout 8/01: Cycle parking stands in the carriageway

## 8.4.3 Cycle parking on the footway

Where there are no other alternatives, footway cycle parking should be located in an identified street furniture zone adjacent to the carriageway, in order to leave clear space for pedestrians – 2 metres is recommended wherever possible.

Design considerations are similar to those for on-carriageway cycle parking. An emphasis is needed on not obstructing pedestrian desire lines and movement, or access for deliveries from shops and other premises. Care should also be taken to allow for car doors to open, if there is parking at the kerbside, and to avoid obstructing access or egress onto buses. Provision also needs to be made for visually impaired people to identify the potential obstruction that cycle parking stands on the footway represent.

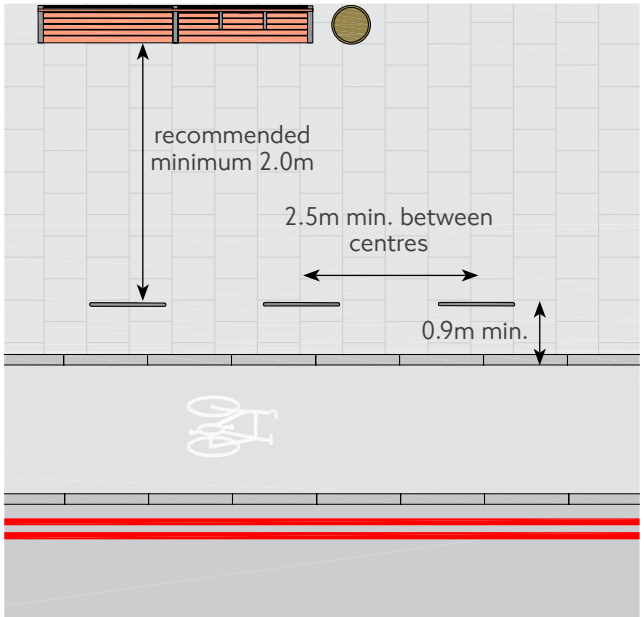
Cycle parking products fitted to lamp columns and other street furniture can, if well sited, help minimise clutter although they cannot facilitate double locking and may not be suitable for all types of cycle. They must meet guidance in this document on minimum clearance from the kerb edge and they should integrate well with existing street furniture (ie be the same colour as the post or column). They must avoid reducing pedestrian comfort levels or creating new obstacles to pedestrian movement, particularly for visually impaired people.

## 8.4.4 Layout of stands

On-street cycle parking should be highly visible, well-lit and clear of pedestrian and vehicle sight lines. Recommended practice for design of layouts is provided by TfL's Streetscape Guidance and this must be followed on TLRN. Separate guidance on cycle parking may be provided by individual boroughs and will apply to borough roads. TfL's recommendations are as follows:

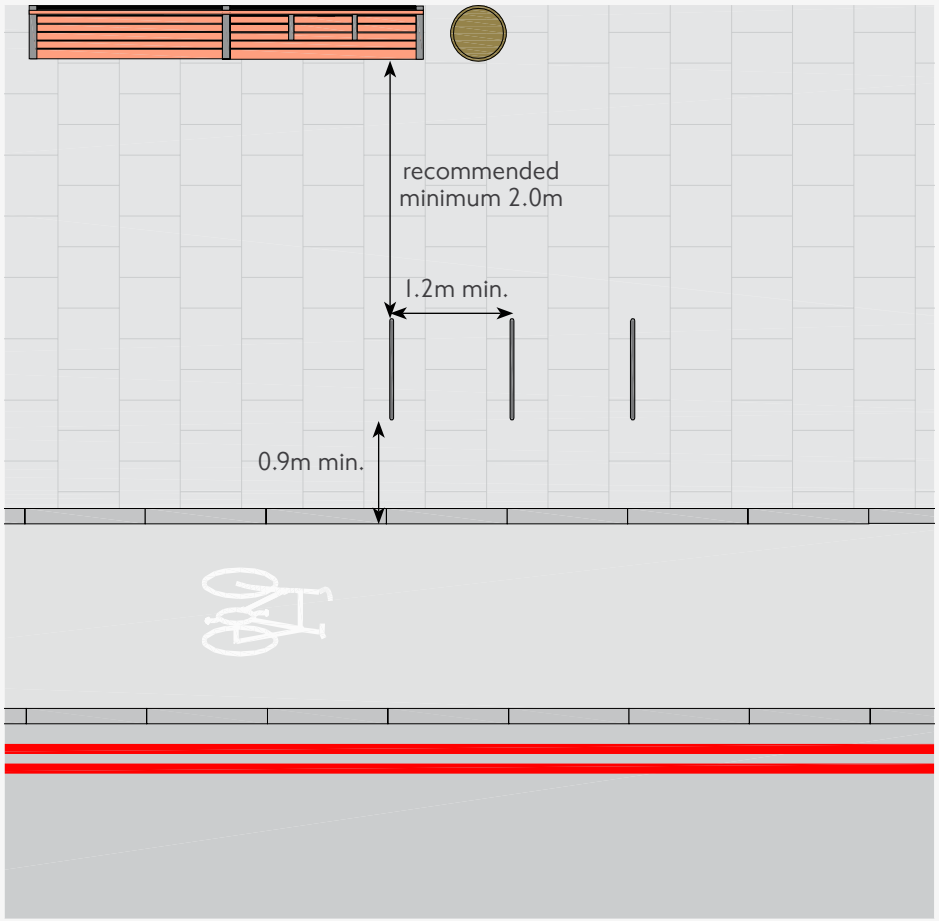
- Sheffield-type cycle stands on the footway should be placed in the furniture zone adjacent to the kerb, not at the back of the footway
- Stands should be placed so that the clearance between the kerb edge and any cycle parked on any stand is at least 450mm to the carriageway or cycle track (layouts in this section give indicative dimensions to help achieve this)
- Placement of cycle stands on the footway should not lead to a reduction in pedestrian amenity below Pedestrian Comfort Level C – in most cases, this means retaining a minimum of 2 metres clear width for pedestrians
- When cycle stands are grouped together, a minimum spacing of 1000mm should be provided between stands to allow access – 1200mm is preferred
- Cycle stands should be set at either 45 or 90 degrees to the kerb – in this arrangement they occupy a smaller area for a greater number of stands (note that, where stands are angled, spacing is measured using the perpendicular distance between stands)
- In some locations, cycle stands can acceptably be provided parallel to the carriageway – this is a less efficient use of space and consideration of the impact on pedestrian crossing movements is needed
- The visual impact of cycle stands can be reduced if they are placed between other items of street furniture, especially tree planting within an organised street furniture zone on-footway
- De-mountable stands might be considered to aid maintenance at locations where cycles and stands are subject to vandalism
- There should be at least 600mm clearance between a stand and any another object higher than the kerb face
- At least one stand in any group should be placed to allow for a larger cycle to be parked – this is usually a matter of leaving enough clear space at the end of the run

While the advice on layout given in TfL and borough guidance represents good practice, innovative approaches to overcoming space constraints are often required and should be considered on a case-by-case basis.

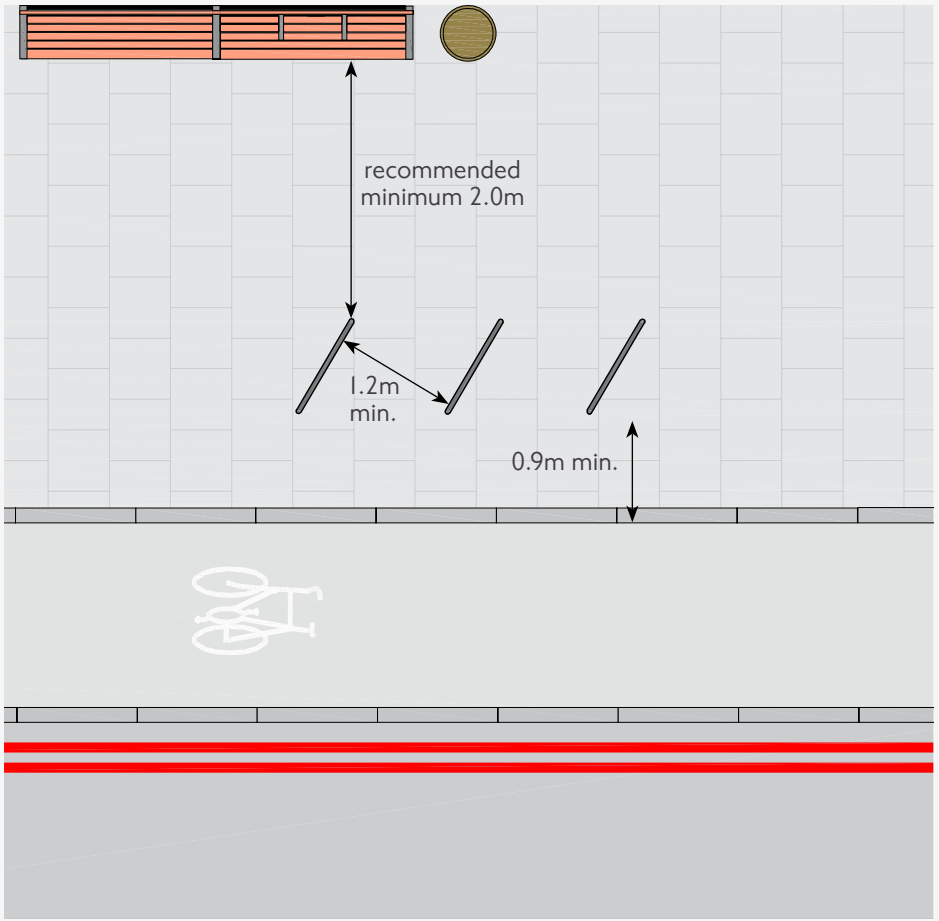



Indicative layout 8/02: Parallel cycle parking stand layout

Sheffield stands parallel to the carriageway




Indicative layout 8/03a: Perpendicular cycling parking stand layout




Indicative layout 8/03b: Echelon cycle parking stand layout

## 8.4.5 Integration with street design

Cycle parking should be considered as an integral part of street design. Where an area has particular characteristics that are reinforced by street furniture, cycle parking should complement the approach adopted.

Cycle parking located poorly on narrow sections of footway not only creates hazards for pedestrians but also contributes to the cluttering of the street. In situations where footway space is limited, under-used areas of carriageway on the edges of squares may offer better opportunities for cycle parking.

Stands in the middle of the carriageway on median strips or adjoining traffic light and pedestrian crossing facilities can work well as part of an overall streetscape design. Care should be taken when proposing this kind of solution. While centrally located stands have advantages in being able to serve destinations on both sides of a street, if traffic conditions make it difficult to cross or to leave or re-enter the carriageway from the cycle parking area, or the distance to destinations is too great, then they may not be well used.

Informal, moveable cycle parking can add to the qualities of an area, provide facilities while works are taking place and serve local businesses

Echelon cycle parking on the footway

A fit-for-purpose stand is also one that is appropriate for its context, and alternative types may be needed for sensitive areas. By using bespoke types, cycle parking can also serve a place-making function as part of an integrated approach to public realm improvement.

Cycle stands for DLR stations

## 8.5 Supporting different uses

### 8.5.1 Public transport interchanges

The Mayor's Vision for Cycling promises more cycle parking at central London termini and suburban stations, which will enable better integration between transport modes and help embed types of travel behaviour that support trip-chaining. The Vision also introduces the idea of cycle hubs and superhubs, which will provide extensive and secure parking and include related facilities and services.

The type and location of cycle parking at stations varies greatly across London. Space constraints at stations in central London are often addressed through use of freely available, high capacity stands, while outer London stations more often feature stands in covered, secure locations. Cycle hire also plays an increasingly important role in facilitating choice in access to and onward journeys from a transport interchange.

There is increasing evidence of the link between cycling and rail use, and increasing demand for cycle parking at stations in London. Generous cycle parking provision at stations, including secure, longer-stay parking, is essential to allow stations to act as hubs for interchange and to cope with the projected increase in numbers of cyclists resulting from investment in cycling infrastructure.

Covered cycle parking at Shoreditch High Street station

At larger stations, the projected demand for cycle parking is likely to be so high that it will be difficult to accommodate stands in the public realm or in existing buildings. In many cities in continental Europe, good quality cycle parking has been provided in bespoke new buildings, or in underground facilities.

#### Principles

Cycle parking at stations and public transport interchanges should be:

- Located within footprint of the station, with convenient access to all entrances and exits
- Accessed via a step-free route, particularly for stands capable of accommodating larger cycles (with spaces reserved for disabled users)
- Served by lifts to platforms large enough to accommodate types of cycle used by people with physical, sensory and cognitive impairments (who will need to take their cycle onto the train)
- Provided through different types of stand (ie not all two-tier)
- Well managed and maintained
- Overlooked, with high levels of natural surveillance and CCTV coverage
- Well integrated with pedestrian facilities (ie not an obstruction)
- Clearly signed, in and outside of the station, and shown on station maps and websites
- Compliant with security standards for National Rail (eg Transec compliant)
- Included in travel information provided to passengers

Further information and guidance about cycle parking at railway stations may be found in Association of Train Operating Companies (ATOC), Cycle-Rail Toolkit (2012).

Entrance to underground cycle parking at s'Hertogenbosch station, Netherlands

Cycle parking at Houten station, Netherlands

Cycle parking at Malmo station, Sweden

Bus stop cycle parking, Nantes, France

## Making the case for cycle parking

A study of existing cycle parking at London railway stations by Mott MacDonald on behalf of TfL (Cycle Parking Standards at Rail Stations Report, 2010) found that demand either exceeded supply or cycle parking was close to capacity at central London termini, zone 1 and strategic interchanges. With the increase in cycling since this report was produced, pressures will have grown further. Provision at stations therefore needs to be made that significantly exceeds current demand, enabling greater modal choice and freeing up capacity on other forms of transport.

Commercial relationships between train operating companies and third parties may complicate the installation of cycle parking facilities at some stations. In these instances local authorities should work in partnership with train operating companies to make the case for cycle parking. They should demonstrate what the future is likely to hold in terms of an increasing mode share for cycling and rising demand for cycle parking, which will in turn have a role to play in supporting the various transport-related and commercial activities of the interchange.

### Security

The right balance needs to be struck between serving the demand for cycle hire, short-term/freely available cycle parking and secure, long-stay facilities. Where secure facilities are provided, consideration needs to be given to how access will be operated and whether there will be a charge or deposit requirement. The parking stands within a secure facility need to be capable of allowing the frame and at least one wheel to be secured. Parking stands outside of secure areas need to allow for the frame and both wheels to be secured.

Levels of staffing at railway stations vary across London. Open-access Sheffield stands can be provided at staffed stations but more security is needed at unstaffed stations. Where it is not possible to accommodate demand by using lockers or a secure compound, measures such as CCTV might be employed to prevent vandalism occurring and to ensure users feel confident to use the facilities provided.

## 8.5.2 Cycle parking hubs

A cycle parking hub provides not only stands but also a range of other, related facilities. It should be able to offer both a high quantity and quality of cycle parking to meet existing and future demand and to promote modal integration, helping to open up possibilities for people with long commutes who may wish to cycle for part of their journey.

Cycle repair and CCTV as part of station parking facility in s'Hertogenbosch, Netherlands

At a successful hub, a cluster of related businesses and facilities should be feasible: this could play an important role in making cycling even more attractive.

In addition to the issues for cycle parking at public transport interchanges listed above, further considerations for a cycle parking hub include:

- Appropriate tariff for the parking, to ensure the facility can attract users
- Monitoring the level of demand for paid cycle parking as well as open access facilities
- Type of cycle parking used within the hub, to ensure it is securable and easy to use
- Staffing levels required to maintain a security and good quality service
- Design and location that will allow access at all the hours required by users
- Collaboration with cycle retailers and other partners to provide additional services – this could include cycle sales, cycle repair and information on cycling in the area
- Incentivising integrated cycle and train journeys through ticketing and hub membership offers
- Allocation of space to expand future parking capacity
- High level of service for cyclists on streets around the station
- Good signage and publicity for the facility

## 8.5.3 Residential cycle parking

A lack of cycle parking in residential areas was identified by the London Assembly in its report Stand and deliver: cycle parking in London (2009) as a significant factor discouraging people from taking up cycling as a mode of transport. Parking serving all types of home should be designed to be:

- Secure, with access for residents only, and with stands/racks allowing both the frame and at least one wheel to be secured
- Well located: close to the entrance of the property and avoiding obstacles such as stairs, multiple doors, narrow doorways (less than 1.2 metres wide) and tight corners
- Covered
- Fully accessible, for parking all types of cycle
- Managed, where possible, in order for access to be administered and to provide ongoing maintenance

Where cycle parking is provided within buildings, guidance in section 8.2.1 above should be followed. This includes providing level access, and avoiding multiple and narrow doorways.

Individual or communal cycle storage outside the home should be secure, sheltered and adequately lit, with convenient access to the street. It is best arranged in clusters and run by established clubs with identified members. For each individual cluster, a small number of members thereby have secure access.

Options for long-stay, secure facilities for residents may include cycle compounds, shared garages or other indoor facilities and cycle lockers.

Requirements for visitors' parking are different, but it also needs to be convenient and secure. Visitor cycle parking is usually provided in the public realm, and must be convenient and visible, overlooked and close to the building entrance. It must be sufficient to meet visitor demand and stands/racks must allow for the frame and both wheels to be secured. Sheffield stands are usually fit for purpose for this use.

### New developments

New developments must take every opportunity to overcome barriers to cycling for their prospective residents and for visitors. Good quality cycle parking is a selling-point.

Planning obligations should be used not only to require enough cycle parking, but also to ensure that it is of high quality: well located, secure, visible, well overlooked and fit for purpose. Developers have much to gain from making cycling an integral part of their transport strategy and should be encouraged to approach the issue positively.

As a bare minimum, London Plan requirements must be met – preferably a level of cycle parking should be provided that meets projected future demand, plus 20 per cent.

Secure cycle parking should be managed to ensure it is utilised and that maintenance is included. There will be a cost to this but residents generally are willing to pay for it if it is a good quality service. Registered social landlords should be encouraged to implement and manage cycle parking for schemes they develop.

Additional guidance on providing cycle storage in new residential development is given in the London Housing Supplementary Planning Guidance, adopted in November 2012. Cycle storage inside the home can work well, if it is provided over and above the minimum gross internal floor area and minimum storage and circulation space requirements. Cycle storage identified in habitable rooms or on balconies is not considered acceptable.

## Existing houses

Where space for cycle parking can be found by using private gardens or forecourts, then this is a good option for individual owners. Possibilities also exist for groups of neighbours or formal residents' groups to negotiate collective solutions.

Careful management of access to facilities such as these is needed, as well as a means for all those involved to contribute financially, as required. The use of shelters on-street is a good example of how this can work in practice, and local authorities should endeavour to give support and advice to ideas such as these whenever possible, including help with Traffic Order procedures as necessary.

One issue may be determining which households should be prioritised for access to secure cycle storage, and it may take local authority leadership to determine this even if residents intend to manage the facility themselves. Criteria could include whether residents could use private outdoor or indoor space, whether they would have to negotiate stairs, how frequently they cycle and the number of cyclists in the household.

## Existing flats and housing estates

Constraints on private and shared space in communal blocks often lead to cycle parking being neglected. Residents have to resort to parking informally in places that may not be suitable or storing cycles within their homes, which can create security and safety hazards such as blocking sharing hallways and staircases.

Housing estates do, however, offer opportunities for developing good quality, secure and well-used communal cycle parking. Under-used internal spaces, such as garages, bin stores and pram sheds, can make good cycle parking facilities with relatively simple adjustments. In other instances, lockers and cages may be more suitable, as cyclists typically prefer using facilities that provide access to a small number of users.

Cycle lockers in Waltham Forest

When promoting the retrofitting of cycle parking into estates, local authorities should also engage with other key stakeholders who may provide support or need 'convincing'. This includes:

- Registered social landlords / housing associations
- Health and well-being boards, who may support cycle parking as a contribution to improving public health
- Police, who have a duty to provide crime prevention advice to residents and boroughs
- Local neighbourhood teams, responsible for management of streets, whose role is also likely to include maintaining cycle parking facilities on estates
- Residents' associations, who may be able to apply for funding and gain local support for new facilities
- Local cycling organisations

## 8.5.4 Places of work

Businesses operating from central London offices often struggle to provide enough secure cycle parking for staff and visitors. More people being encouraged to cycle in London will place further pressure on employers to find ways of meeting demand. Commuters often need to use on-street facilities that were designed for short-stay parking. Not only is this less secure than formal workplace cycle parking, but it removes capacity for short-term parking to support other uses in the area.

According to TfL's Travel in London survey 3 (2010), which included survey information from new users of Barclays Cycle Superhighways 3 and 7, a significant number of people who began cycling to work on the Superhighways cited improved cycle parking facilities at work as a contributory factor – 18 per cent for users of CS3.

Cycle parking at workplaces is often an outcome of development control obligations or Workplace Travel Plans that help promote sustainable transport for staff. Investment in workplace cycle parking helps promote a mode of transport that has health and productivity benefits as well as reducing the strain on the local transport infrastructure. TfL's Workplace Cycle Parking Guide (2006) provides more information on initiatives such as these.

In order for secure cycle parking facilities to be well used, employers will need to engage with employees to identify the level of demand for cycle parking as well as employee's needs and expectations. Setting up a cycle user group can be a useful contribution to ensuring quality of provision for staff.

Use of limited space for workspace cycle parking

### Principles

Well designed cycle parking for staff should be:

- Secure, with access for staff only
- Designed to allow the frame and at least one wheel to be secured
- Covered
- Conveniently located, with step-free access from outside and inside
- Fully accessible, for parking all types of cycle
- Introduced with complementary facilities: showering and changing facilities with accessible features, storage (lockers) and equipment for basic maintenance, such as pumps

Consideration should be given to storage within buildings, cycle compounds, areas with controlled access and cycle lockers, in order to help serve the need for long-stay cycle parking

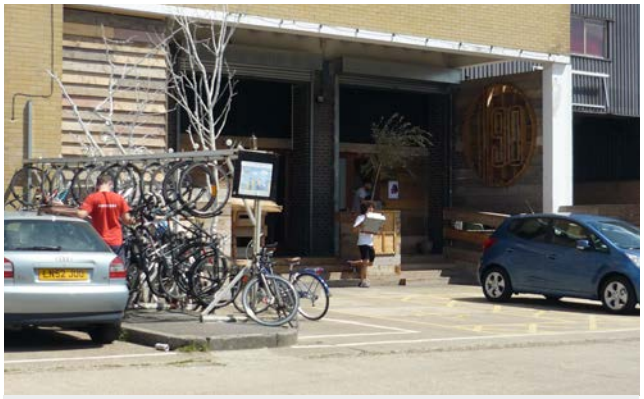
for staff. There may be opportunities within many buildings to convert part of under-used areas, such as basements and car parks, into cycle parking. As is the case with new residential developments, these parking areas need to be fully accessible.

Visitors also need to be catered for. Either their cycle parking needs could be accommodated within the staff cycle parking area, or they may need separate provision outside of the building. This must be convenient, close to the entrance, visible, overlooked and with stands that allow the frame and both wheels to be secured. Information about cycle parking facilities, as well as cycle routes to the building, should be included in correspondence with visitors.

## Shops and services

Most of these issues also apply to retailers. Staff should be offered good quality, long-stay cycle parking without having to use short-stay parking on-street. Customer cycle parking serving individual shops or retail parks needs to be accessible, conveniently located for building entrances and well-overlooked and secure during all opening times.

Particular attention needs to be paid to accommodating larger models, such as cargo cycles, and to how cyclists access parking areas safely, particularly where they must do so through a car park.



Cycle parking serving a restaurant and studio spaces in Hackney Wick

In many cities with high levels of cycling, retailers often provide their own temporary cycle parking for customers during opening hours, moving the stands back inside overnight. This is based on understanding that convenient cycle parking is vital for their businesses.

Moveable cycle parking stand outside a shop

## 8.5.5 Public buildings

Large, multi-access sites such as hospitals, universities and colleges tend to have large numbers of people working and visiting. Cycle parking provision is likely to cater for both long-stay demand for staff and students, but also for short to medium stays, given that they have a high daily turnover of users.

Such sites often have a number of entrances and exits. Cycle parking therefore needs to be carefully planned in clusters, convenient for users, and located near to the entrances and exits that have higher levels of natural surveillance and footfall. However, areas should be avoided where conflict is likely with motorised vehicle access to and from car parks or drop-off points.

At sites where access may be permitted for 24 hours or beyond the normal working day, particular consideration is required of lighting and levels of surveillance after dark, and how safe the user feels accessing the parking.

Schools and other educational establishments are usually open only during certain hours, are staffed and are on private land. It may therefore be that existing security in the school grounds is adequate and that a secure compound is not required. It may be advisable, however, to operate a system where staff lock and unlock facilities at the beginning and end of the school day so as to protect any cycles left overnight.

Good quality cycle parking facilities at schools plays an important role in influencing the travel choices of young people. The right provision will depend on the age group of the children, and the range in sizes of cycles to be parked, as well as the cycle parking needs of staff and of parents or carers accompanying children on cycles.

Good quality cycle parking at schools should be:

- Located within footprint of the facility
- Easily accessible – clustered close to entrances/exits
- Visible, open and overlooked – to serve staff, students and visitors
- Covered

## Bibliography


- ATOC
  Association of Train Operating Companies (ATOC), Cycle-Rail Toolkit (2012)
- Cambridge Cycling Campaign
  Cambridge cycle parking guide (2008)
- Transport Initiatives LLP and Cambridge City Council
  Cambridge cycle parking guide for new residential developments
- SKM Colin Buchanan
  Cycle parking standards supporting evidence report (2014)
- TfL
  Cycle Security Plan (2010)
- GLA
  The London Plan (2016)
- GLA
  London Housing Supplementary Planning Guidance (2012)
- GLA
  Mayor's Transport Strategy (2010)
- GLA
  Stand and Deliver: Cycle Parking in London (2009)
- TfL
  Streetscape Guidance (2009)
- GLA
  The Mayor's Vision for Cycling (2013)
- DfT
  Traffic Signs Regulations and General Directions (2016)
- TfL
  Travel in London survey 3 (2010)
- TfL
  Workplace Cycle Parking Guide (2006)