Guide to Inclusive Cycle Parking

1. Introduction

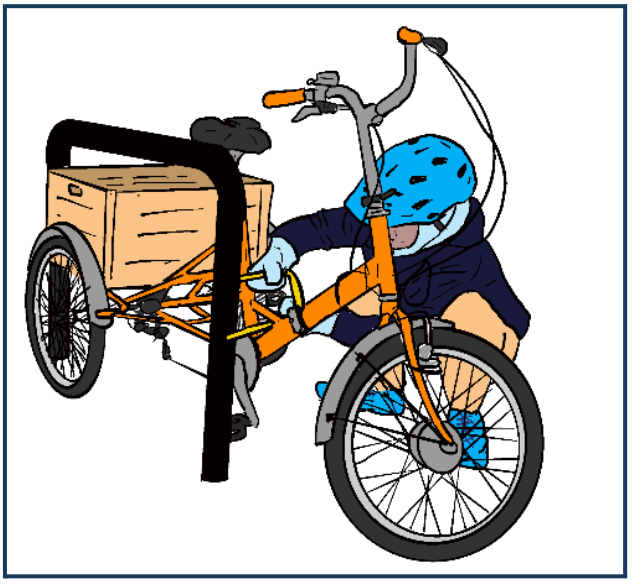
Wheels for Wellbeing's guides provide an overview of good-practice standards for accessible and inclusive cycling. We also provide consultancy and training services to help organisations develop their infrastructure and practice. Please contact us to discuss your needs.

This guide follows and extends on good practice elements from a range of cycle parking guidance and broader infrastructure guidance including:

Wheels for Wellbeing Resources
LTN 1/20 Cycle Infrastructure Design (2020)
Bicycle Association Standards for Public Cycle Parking (2021)
Edinburgh cycle parking design guide (2021)
London Cycle Design Standards Chapter 8 Cycle Parking (last updated 2016)
Inclusive Mobility (2021)
BS8300:2018 Design for an Accessible and Inclusive Built Environment
Building Regulations approved document M

Key point 1:
It is important to follow existing good practice accessibility guidance (including this guidance) and to actively seek feedback from users of non-standard cycles and Disabled cyclists: Users of non-standard cycles and Disabled cyclists will often travel as part of groups including more than one large mobility aid (each of which may have more than one rider), and will often need to park in ways you may not have considered.

For example, to get a secure locking section of a relatively common folding tricycle close enough to a Sheffield stand to lock it in line with insurance requirements with a D lock, the tricycle has to be positioned such that it is effectively using both sides of a stand. It requires a significant level of physical agility and strength to position and lock a trike in the way the one below has been.



Key point 2:
There's no single cycle parking option that will suit every person or every cycle in every location.

Much existing cycle parking has some good features – but almost all of it can and should still be made more accessible for inclusive provision, especially in public locations. The pictures below show cycle parking that will work for some Disabled people, but which won't work for others or may cause hazards. Design changes in line with this guidance would enable the parking options below to work for more Disabled people:

- Sheffield stands in well-lit area near main entrance
- But no marked Disabled bays or tapping rails.

- Secure on-street store sized for non-standard cycle;
- But not step free & door not automatic.

- Marked non-standard cycle bays with mid-bar Sheffield stands;
- But no tapping rails & poor contrast.

2. Location:

By default, on-street cycle parking should be placed on carriageways not footways. Cycle parking should only be considered on footways in locations where provision on carriageways is not feasible, such as in fully pedestrianised areas or at specific destinations, where its installation will not reduce pedestrian access (see TfL Pedestrian Comfort Guidance and associated tools) and where pedestrian desire lines will not be impinged upon by parked cycles, especially large cycles.

a) Cycle parking should be as close to accessible entrances as possible. Disabled cycle parking should be no further away from entrances than Disabled car parking. Where possible this should be within 50m of relevant entrances or destinations.

b) Cycle parking locations & access routes should be safe and feel safe at all times of day and night, with good lighting, sight lines, natural surveillance and cctv where appropriate.

c) Cycle parking locations must never obstruct footways, dropped kerbs, doorways or access to bus stops: Pedestrian movement always takes priority.

d) Cycle parking must be installed into and accessed from continuous all-weather, smooth, non-slip, hard surfaced routes.

3. Levels of provision:

Over 20% of the population are Disabled people.
With a growing older population and the increasing popularity of family and cargo cycles, provision for non-standard cycles and Disabled cyclists must accommodate increasing demand.
Disabled people often have Disabled friends and family members, and may have either Disabled or non-disabled friends and family members using larger cycle types for a range of reasons

unrelated to impairments, such as transporting children. If one person in a group is using a non-standard cycle or other comparable-sized mobility aid, it's reasonably likely that others will be, as well. Provision needs to be made for users of non-standard cycles and other large mobility aids travelling in groups and to visit each other. A single Disabled or larger-sized cycle parking bay will not meet this need.

a) There should be sufficient standard cycle parking spaces and sufficient Disabled cycle parking spaces that Disabled users never have a journey wasted or miss appointments due to being unable to lock up at their destination. This requires assessing volumes of people who live, work and visit a location now, and predicted demand into the future.

b) Monitor cycle parking use and provide additional spaces if parking is becoming crowded: Bicycle Association guidance recommends that if parking is "regularly" over 70% full, additional capacity should be provided to meet demand.

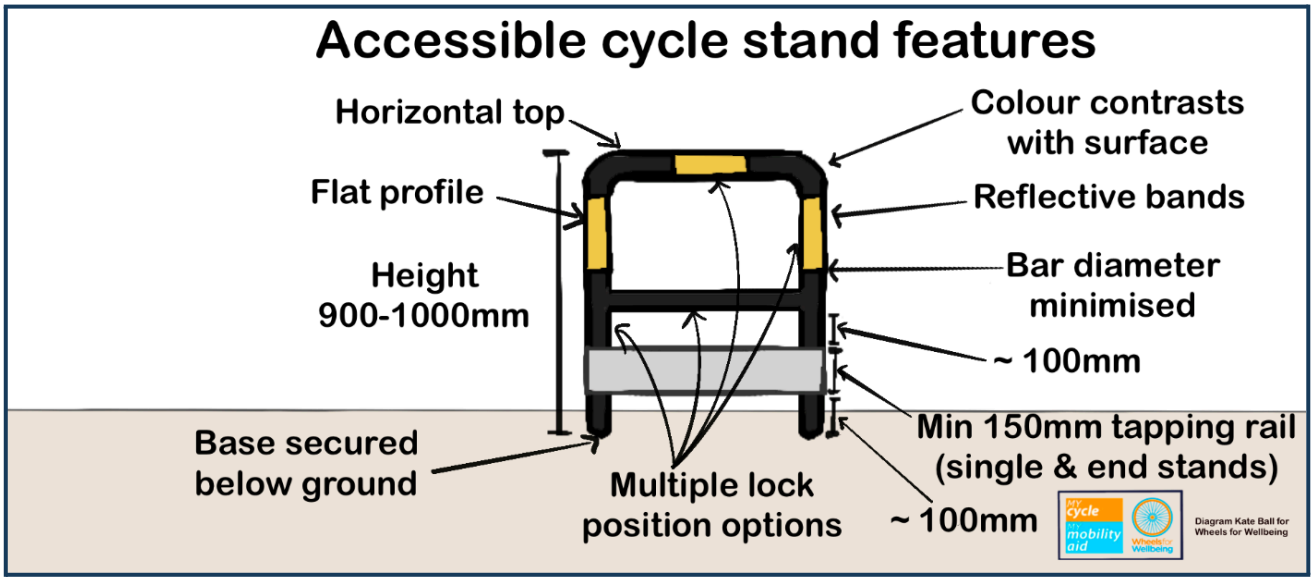
c) Provide a direct point of contact so people can request accessibility improvements with online, email, phone, textphone and postal addresses

d) At least 10% of cycle parking spaces should be designed and clearly designated for Disabled cyclists, with additional Disabled spaces at workplaces designated for each Disabled employee who needs one. If a single Disabled space is designated for visitor use, another should be added if the space is used more than very occasionally.

e) A high proportion of Disabled cyclists ride standard bicycles or e-bicycles. Many can and will use standard cycle parking if it is adequately accessible (see later sections). Adequately accessible standard cycle parking helps ensure designated Disabled bays are available for those who need the extra space they provide.

Disabled people of all ages use cycles and other larger mobility aids. We call on designers and decision-makers to ensure that sufficient accessible parking and storage is provided at all locations where Disabled people live, learn, work and use services.
This must include residential homes, sheltered/supported accommodation and accommodation designated for older people, recognising that present cycle parking provision guidance of 0.05 spaces per bedroom in LTN 1/20 discriminates against Disabled users of cycles and comparable-sized mobility aids who live, work or visit in residential, supported and sheltered accommodation.
Disabled people are likely to need charging options for electrically powered mobility aids including e-assist pedal cycles – see section 15 charging and e-cycle storage facilities.

4. Stand versatility and accessibility:



a) See also section 9 security.

b) Cycle parking should be designed so that the majority of people can use most of the regular stands provided, including less strong people with larger or laden cycles, e.g. a parent with children or an older person with an e-bike.

c) Sheffield stands spaced 0.9m (min 0.6m) from all walls/kerbs with 1-1.2m between stands work well for most cycle users, except for larger cycle types and riders who need additional dismount/transfer space. See also stand spacing for accessible cycle parking.

d) Stand bars should preferably be round, with diameter minimised as far as is compatible with security: The wider a bar is, the harder it is to fit a D lock around both the bar and a section of cycle, especially where a person is unable to lift and manoeuvre the cycle or the cycle has non-standard design.

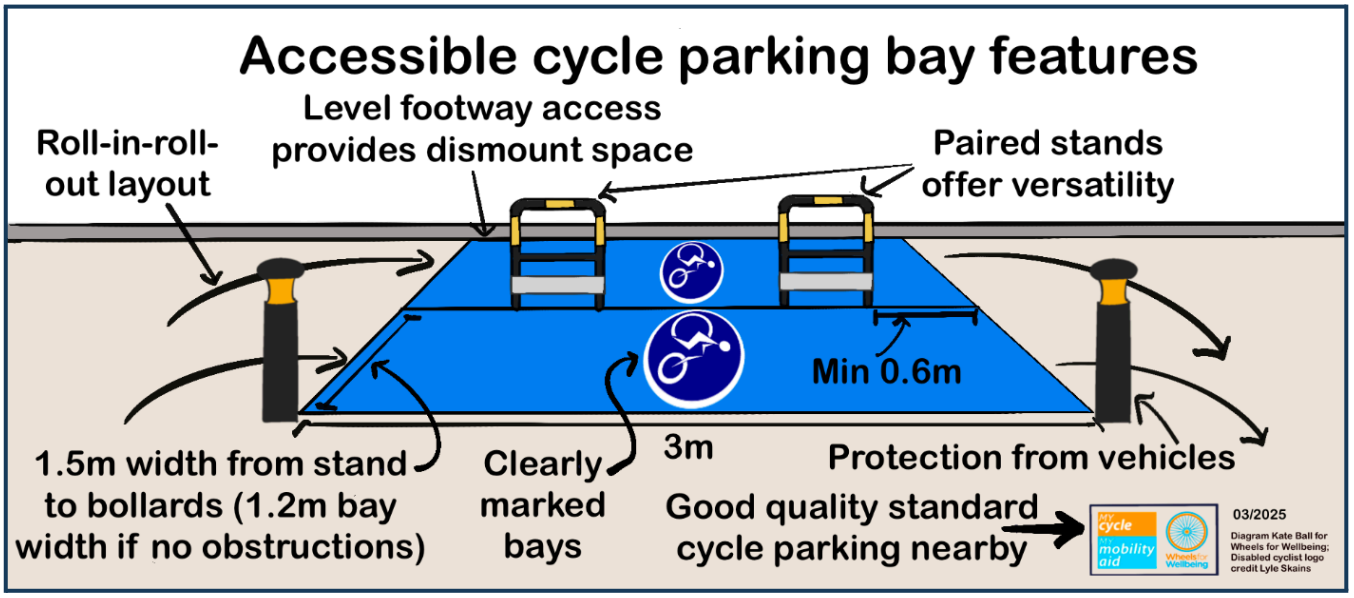
e) Reflective bands and a colour that contrasts with the surrounding surface improve detectability for everyone, especially for visually impaired people and at night.

f) Tapping rails on end stands allow long cane users to navigate safely around stands where stands are installed on space pedestrians might use. It is also essential to ensure stands are not placed on desire lines, including routes Blind and visually impaired people are likely to use to navigate: We recommend commissioning assessment of stand locations from visual impairment organisations if stands are being planned in pedestrian areas.

g) If too many stands are hard to use (e.g. 2-tier, vertical/lift-on, lockers) then designated Disabled bays will be taken by people who could otherwise use standard parking.

h) Monitor stand use and nearby cycle parking: If cyclists and especially users of non-standard cycles are locking to stands in ways that were not intended by the design, or are locking to posts, railings etc near to designated cycle parking, then the cycle parking is not adequately accessible. Assess what has gone wrong with reference to this guidance, and correct it.

5. Accessible cycle bays:



a) Disabled cycle parking bays should be:

(i) At least 3m long by 1.2m wide to accommodate the Cycle Design Vehicle, with 1.2m additional level transfer/dismount width. This is the same safe level transfer width given in Building Regulations approved document M for Disabled car parking to enable people to move from cycle – or car – to use other mobility aids.

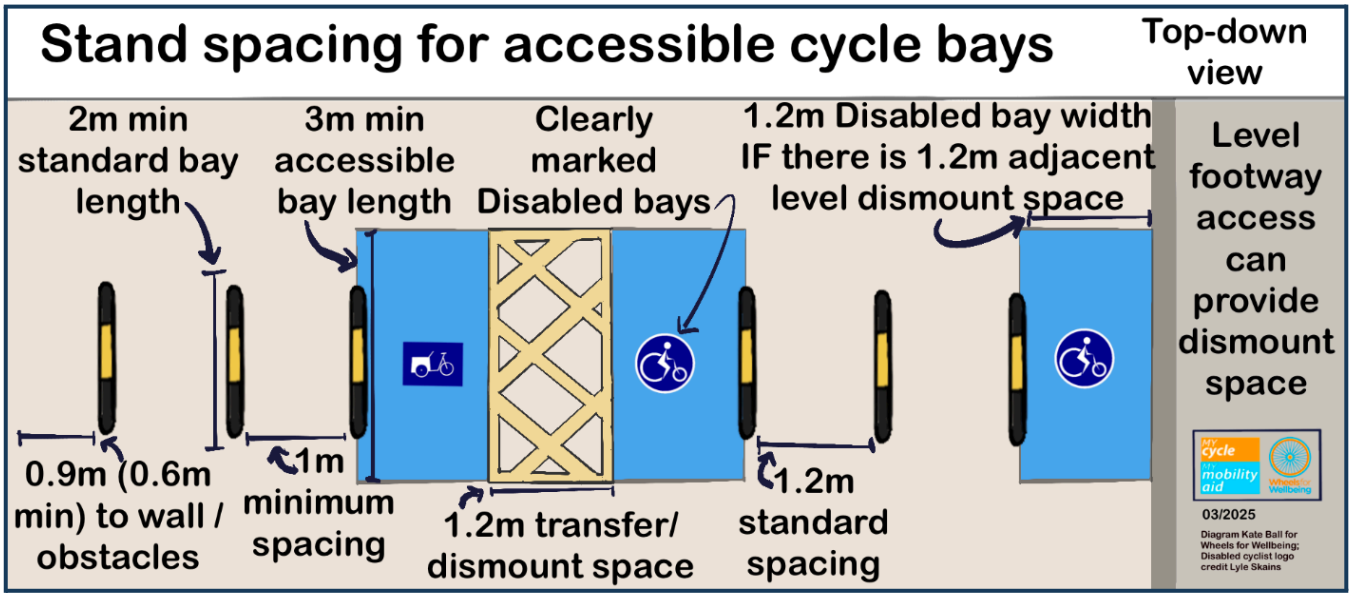
(ii) Where there are unavoidable features such as bollards, lamp posts, signs, bins or other items which do not block level transfer/dismount space but do affect manoeuvring space into/out of the bay, then the bay should be at least 1.5m wide.

(iii) Include versatile secure stands with multiple locking positions and horizontal top bar as support for people standing (e.g. Sheffield or modified Sheffield stands)

(iv) be clearly marked for Disabled users with larger cycles.

b) Additional large bays for cargo/family cycles should be installed and clearly marked.

6. Stand spacing for accessible cycle parking:



a) For all cycle parking, Bicycle Association guidance recommends 1.0m between Sheffield stands. London Cycle Design Standards recommend 1.2m between stands.

b) The wider spacing is between all stands, the more diverse a range of users will be able to use all the cycle parking. However, the wider the spacing, the fewer stands will fit in a given space, reducing the maximum parking capacity. Designers need to assess the constraints of their site, levels of provision required at present and likely demand in the future in order to decide how best to provide for non-standard cycle users and Disabled cyclists on the site.

c) Good practice especially in constrained sites will usually include reserving specific large spaces and/or banks of wider-spaced stands for Disabled cyclists or for non-standard cycle users, with closer stand spacing and sometimes high-density inaccessible cycle parking types for non-disabled users with standard cycles.

d) If high density parking is too inaccessible, a high proportion of non-disabled people will be forced to use accessible stands – for example, older people and women using heavier e-cycles and/or transporting luggage or children. This will make the accessible parking less usable for Disabled people.

e) Disabled designated cycle parking bays should have at least 1.2m width, with level transfer/ dismount space of at least 1.2m width. It is likely to be most reasonable to provide this additional width at the ends of rows of stands, next to footways/pavements or aisles, so that the dismount space is simply part of the footway or aisle – as long as high pedestrian flows are not expected at peak times, as trying to move between mobility aids in a high pedestrian flow location will create conflict, collision risk and a very stressful environment for a Disabled person.

7. Step-free access:

a) Where possible, cycle parking for Disabled cyclists should not require any level change.

b) If level change is unavoidable, good quality ramped access should be provided to and from all cycle stands.

c) Suitably located accessible dropped kerbs or equivalent provision must be provided near cycle stands.

d) Where cycle parking is provided on pavements and other pedestrian space, the route to and from the nearest convenient dropped kerbs (including crossing points) must be assessed, to ensure cyclists accessing the stands will not create a risk to pedestrians and to ensure that Disabled cyclists are clearly permitted to ride to the stands without dismounting.

e) Assessment of accessible surfaces and swept path analysis of cycle access routes is likely to be needed for any off-carriageway cycle parking and much on-carriageway cycle parking, to ensure the Cycle Design Vehicle can use the stands.

f) Stand types that require cycles to be lifted in any way or bumped over a bar such as Sheffield stands joined in a “toast-rack” are effectively stepped and are not inclusive or accessible.

g) Lifts are unreliable and create personal safety risks. Designs which are reliant on lifts to enable step-free access should be avoided where possible.

h) Where lifts must be used:

   (i) A roll-in-roll-out design with a 1.5m width door at either end is preferred, since most cycles cannot reverse and many Disabled people cannot dismount to push their cycle backwards.

   (ii) Minimum internal floor space should be 3m long by 1.5m wide, so the Cycle Design Vehicle can be transported.

   (iii) There should be accessible door/floor level controls approx. 60cm from each end of the lift internally to enable users of larger cycles to reach controls without dismounting.

   (iv) Robust maintenance and repair regimes are essential with signage to any alternative step-free routes: Paired lifts are desirable to ensure access is still possible when one lift is out of service.

8. Non-slip, bump-free sealed surfaces:

a) Surfaces must be low-maintenance & well-maintained, smooth and safe to walk, wheel and cycle on in all weathers and after years of wear, including when wet, frozen or oily.

b) For more details, see our guide to accessible surfaces and our more detailed guide to defining accessible surface areas

9. Security:

a) Stands should be securely installed in line with Bicycle Association guide 2.13.1 and chapter 6. This is required so that high-value non-standard cycles are covered by their insurance policies when locked to the stands using appropriate Secured by Design locks.

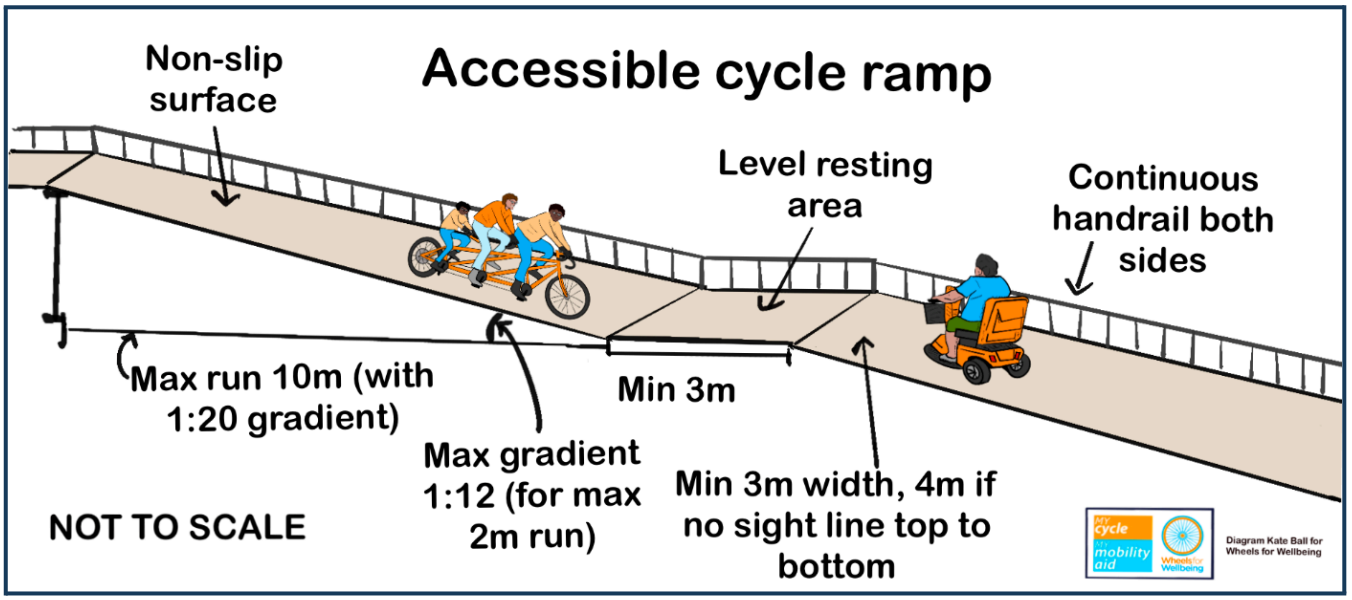
Low-quality or badly-installed cycle stands will fail to meet insurers' criteria for higher-value cycle theft cover.
Disabled people using cycles as their essential mobility aids will not usually be able to risk locking a cycle to an inadequate stand, as replacing a non-standard cycle is not only extremely expensive, it usually will take many months, too – during which time the person will be unable or less able to make essential journeys.

b) Long-term cycle parking should be behind a fully accessible automatic, secure, locking door - see accessible doors.

c) All cycle parking should be in a well-lit, well-overlooked place ensuring good natural surveillance.

d) Security cameras can be used to monitor spaces but cannot make secluded spaces safe enough for inclusive cycle parking.

10. Gradients:



Gradients including slopes in the line of travel and crossfall are critical to accessibility, especially in locations where people will be having to perform complex manoeuvres to access stands and transfer between mobility aids.

a) Stands should be installed on level ground, and must never be installed on a ramp (gradient 1:20 and above). Where installation on a slope of 1:60-1:20 is unavoidable, stands should be installed perpendicular to the gradient. This will help prevent cycles from rolling backwards or forwards during parking.

b) Ramps to access any cycle parking area must meet Building Regulations M part 2 gradient requirements. Level resting spaces on ramps should be 3m long to fit the Cycle Design Vehicle.

11. Turning space:

a) Accessible cycle parking bays need minimum external turning radius 4m for the access and exit. The closer to straight an access and exit are, the easier they will be for Disabled users to negotiate especially at low speeds:

   i) Assess complex areas using our guide to defining accessible surface areas;

   ii) Use our guide to swept path analysis for accessible active travel to ensure constrained areas will be accessible to as many people as possible.

b) Most cycles do not reverse. Many 3-wheeled cycles become unstable and can tip over when turning sharply, especially if there are any slopes or bumps to negotiate. Many Disabled people cannot lift and turn their cycle: Where possible, accessible bays should be roll-in, roll out so that lifting the cycle or reversing to exit the space is not necessary.

12. Lighting and contrast:

a) Surfaces should be low-reflectivity – do not use shiny materials.

b) Lighting should be sufficient at all times, meeting at least BS8300-1-2018 for outdoor spaces and BS8300-2-2018 for indoor or fully enclosed cycle parking. For safety and accessibility, care should be taken to use diffuse lighting types and avoid use of lighting which creates harsh glare and deep shadows either indoors or outdoors.

c) Both indoors and outdoors, stands, doors, vertical features etc should have colour contrast with floors and walls, in line with Building Regulations M part 2.

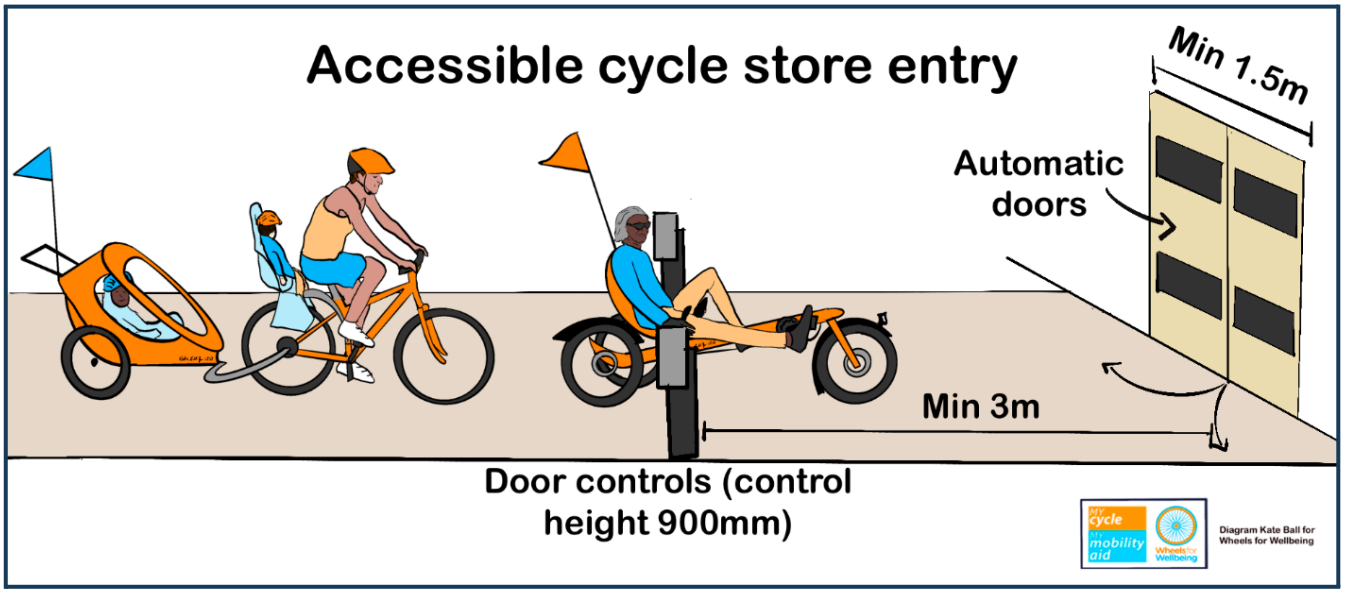
13. Signage:

a) Tapping rails should be installed on single and row-end stands which are in spaces pedestrians may use, as safety signage for visually impaired people.

b) Disabled bays and bays designated for other groups of users (e.g. unloading, family/cargo cycles) should be clearly marked to encourage appropriate use. Symbols, signs and clear colour demarcation (blue is often used) are good ways to designate provision for Disabled people.

c) When accessible cycle bays are located away from the main cycle parking area, signage at the main area should direct Disabled users to the accessible parking; signage at the accessible parking should direct non-Disabled users to the main cycle parking area.

14. Doors:



a) Any doors should be automatic, with a minimum straight-line access width 1.5m.

b) Opening controls should use movement sensors, contactless locks or large pressure-pads. Pressure pads and contactless locks should be positioned 3m back from the door swing, and at standing waist height to enable use by rear riders on cargo cycles, rear-steer tandems and front-load wheelchair carrier cycles and riders of low cycle types including recumbents, handcycles and people unable to dismount and push a cycle one-handed.

15. Charging and e-cycle storage facilities

Many Disabled people need to use e-cycles or other Li-ion battery powered mobility aids such as powered wheel chairs and mobility scooters to make essential journeys.

Government guidance indicates e-cycles with CE-marked electrical components which are not visibly damaged, modified, or being charged using an incompatible charger have low fire risk. Our briefing on e-cycles and fire safety provides more detail. We are continuing to work with a range of organisations to ensure that legal, undamaged e-cycles with low fire risk are clearly distinguished in policy and regulations from high fire risk e-cycles and e-motorcycles and that Disabled people's essential mobility is not curtailed by blanket restrictions of Li-ion batteries.

For most e-cycle parking:

a) E-cycles can be parked in general cycle parking with unpowered cycles, including in vehicle parking areas with suitable stands provided.

b) It is unlikely to be necessary to provide formal charging facilities with short-term cycle parking, but residential cycle parking provision will always need to provide an e-cycle charging option and charging provision with other longer-term parking may be useful, such as at workplaces and education venues.

c) Disabled people may not be able to remove their battery from their cycle or other battery-powered mobility aid, either due to integrated design, the weight of the battery or the dexterity required. Where charging options are needed, reasonable adjustments to

enable Disabled people to charge their e-cycle or other mobility aid without removing the battery from the aid are likely to be necessary.

d) Charging facilities for e-cycle and other Li-ion powered mobility aids need to be warm enough that batteries can charge without risk of damage. Li-ion batteries cannot be charged when cold (below about 5^0C). EVs have heating circuits so cars can stay outside and charge all year. E-cycles and other small Li-ion powered mobility devices do not, so must be charged in warm places.

e) In locations where informal charging (e.g. using domestic sockets) is not considered appropriate, secure charging lockers can be installed – but see points above, many Disabled people will not be able to use these lockers to charge their device.

16. Additional facilities:

Disabled people frequently need a range of facilities nearby in order to use a route or destination. The more of these facilities that can be provided near to cycle parking, the more accessible the location will be. Facilities which may be essential to different people include:

a) Seating and shelter – see our guide to accessible seating for public spaces;

b) Toilets, including accessible & Changing Places toilets;

c) Nearby public transport stops & information, to facilitate multi-modal journeys;

d) Motor vehicle parking, including Disabled parking bays;

e) Warm indoor spaces that are free to access, e.g. community spaces, information centres, libraries, shopping centres etc;

f) Commercial facilities, such as food and drink purchasing locations.

17. Shelter and extreme weather mitigations:

a) Shelter is desirable on short-term use stands and essential for longer-term use stands. Depending on stand types, constructed shelter and/or tree planting for shelter may be most appropriate.

b) Ensure personal safety and sight lines are maintained with any shelter design:

   (i) Outdoor shelters should have open mesh or transparent wall construction which enables all areas inside the shelter to be seen from outside.

   (ii) For indoor shared storage, improve personal safety by providing external and internal windows (including windows in the door), clear sight lines throughout the space, good lighting and considering CCTV.

c) Include sustainable drainage measures (SuDS) to mitigate both flooding and extreme heat around cycle parking and routes. See Susdrain for more information.

18. Listen to users to create cycle parking that suits everyone!

a) Different locations, different people and different cycle types require different solutions – there is no single option that works for everyone, everywhere. Bespoke design for each context will enable the highest accessibility.

b) Inclusive consultation together with careful use of guidance can ensure everyone has access to cycle parking that suits their needs.

c) Improve accessibility by:

(i) Monitoring use, checking that individuals from a wide range of demographics are able to use the stands as and when they wish. Ask users if there are any changes that could help them use the stands more easily.

(ii) Providing well-published contact details near stands and online so users and potential users can request reasonable adjustments or report problems.