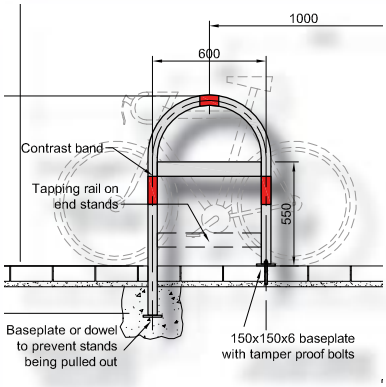
Cambridge Cycle Parking Guide

How to provide Cycle Parking: a step-by-step guide for planners and providers



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Cambridge CYCLING Campaign

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Cambridge CYCLING Campaign

1 Introduction

1.1 Why provide cycle parking?

British society is facing unprecedented challenges, a key one of which is our dependence on the car. We need to break that cycle of dependence, to embrace and encourage simpler, less demanding modes of transport like cycling.

Cambridge is one of the few British cities with cycling levels approaching those of continental Europe. One in four people in Cambridge cycle to work and the overall modal share is ten times the national average. Yet there is an acute shortage of cycle parking in the city. We need to address this to:

- Provide a convenient facility for the many people who already cycle for their everyday transport needs.
- Reduce cycle theft - the most common crime in Cambridge - and its deterrent effect on cycling.
- Encourage more people to cycle for the good of their health, for the good of our city, and for the good of the environment.
- Reduce the nuisance resulting from ad-hoc cycle parking on the street.
- Encourage people to use local businesses rather than driving out to peripheral developments with sprawling car parks.

There is an acute shortage of secure cycle parking in Cambridge

Bikes vulnerable to theft

Providing enough convenient and secure cycle parking at people's homes and other locations for both residents and visitors is critical to increasing use of cycles.

In residential developments, designers should aim to make access to cycle storage at least as convenient as access to car parking.

Manual for Streets 8.2.1

The architecturally striking canopy of the cycle park at the computer laboratory provides model facilities for a larger development: adjacent, illuminated, weatherproof and welcoming

2 Planning it out

2.1 What are the basic requirements for cycle parking?

The overriding need is for the facility to be attractive. To attract customers, people must feel welcome and wanted. They must want to use your business or development, and they must want to come by cycle. To make cycle parking attractive it needs to be:

- **Visible, accessible** and **convenient**. **As close** as possible to the destination entrance and prominently located.
- **Open, airy** and **well overlooked**. People will not use a facility where they feel unsafe.
- **Secure**, against theft and vandalism.
- **Well laid out** and easy to use. Plenty of locking points for different sizes and shapes of bikes. Plenty of space to get bikes in and out without snagging on their neigbours or getting oil on clothing.
- Have **sufficient capacity**. Aim to have around 20% more spaces than the general peak number of users.
- **Clean** and well maintained.

Cycles are the original mass transit, bringing far more custom into city centres than could ever be accommodated by car

Convenient, attractive, accessible, easy to use and secure

2.2 What am I obliged to do?

All new developments have to provide cycle parking levels stipulated in the planning guidance documents issued by the relevant Local Authority. Current standards can be found in the appendices.

Compounds or enclosures to contain cycle parking will often require planning permission. Planning permission for cycle parking may be required if:

- It is in or near a conservation area or listed building
- It is enclosed and within 20m of the highway or more than 3m high.
- More than half the area of land around the original building would be enclosed in a new extension or out-building, or it will increase the volume of the original building by more than 15%.

You will not usually need planning permission for open stands. If in doubt contact the Planning Authority.

Stands in the highway must be agreed by the County Council. Contact the Engineering Manager at the Highways and Access team (currently Graham Lowe).

2.3 Who is it catering for?

People sometimes have a narrow, stereotyped image of what a "cyclist" looks like. The reality is that people of all shapes, sizes and ages ride bikes.

Any cycle facility must be usable and attractive to the whole spectrum of likely users.

Typical User	Particular needs
Residents	Secure (at least a proportion of cycle parking in a locked compound), close to entrance, covered, overlooked.
Commuters	Secure (ideally a locked compound), covered, overlooked. Convenient (<50m from entrance). Must not risk getting oil on clothing.
Shoppers	Secure (open stands). Good support for bike. Convenient (<25m from entrance, ideally next to it). Room for loading, trailerbikes etc. Safe from traffic. Easy to use
Children	Well overlooked. Child sized stands. Easy to use. Safe from traffic.
Families	Plenty of room for trailerbikes and luggage. Safe from traffic.
Frail or elderly	Well overlooked. Plenty of room. Easy to use. Safe from traffic.

2.4 How much cycle parking do I need?

There are two ways of assessing need. You can consult the planning guidelines in the Appendix or you can count bikes parked in the area. Bear in mind that:

- Good quality parking will encourage more people to use it. Allow 20-50% extra spaces.
- Current users may park some distance away if existing provision is poor or, more likely, go by car.
- Workplace, school and personal travel plans will help predict the potential for growth.

It is important to arrive at a realistic assessment of cycle parking capacity requirements and cater for expansion

2.5 How much land area do I need?

The area needed depends on the type of user, how the stands will be accessed (straight off the street or dedicated access), and the physical constraints of the site.

Situation	Dimensions	Area per bike
Stands only, access off street	2.0 x 0.5m space	1.0 m^2
Minimum spacing	Two 1.8m x 0.5m spaces plus 1.8m aisle	1.35 m^2
Generous spacing	Two 2.0m x 0.75m spaces plus 3-4m aisle	2-3 m^2

2.6 Where do I put it?

It is in everybody's interests that more people cycle and fewer people drive. Cycle parking should therefore be positioned where it gives people an incentive to use it. It should be:

- At ground level. Never more than one storey from ground.
- As close as possible to the entrance. 25m max for short stay (shopping) or 50m for long stay (commuters).
- No further from the entrance than the nearest car parking space.
- In a prominent and well-overlooked location.

Residential cycle parking should be located within the individual property, as near as possible to the main entrance, in an area controlled by the owner or their family. In old residential areas and high density housing it can be difficult to balance the need for overnight security with the need for convenience. For terraced housing without rear access we recommend 75% in conveniently positioned open racks, 25% in secure compounds.

In many cases, different users have different needs and use different entrances. It will often be appropriate to split cycle parking accordingly. For example in a retail development, staff would want to use a covered, secure compound possibly to the rear of the store, while open racks at the front of the store would suit shoppers.

Access paths should be light, open and attractive

Provision according to need, and situated for users' convenience

3 Detailed design

3.1 How do users get to it?

People should be able to cycle right to their parking space. Walking should be kept to a minimum. 10m is reasonable, over 20m is not, and people are likely to park bicycles insecurely and inconsiderately against the nearest lamp post, fence etc.

Paths leading to the cycle parking should be light, open and attractive, and designed to TA 90/05* (see Appendix A2).

Cycle parking should be located at ground level. Many people find ramps difficult to negotiate and manhandling bikes up stairs impossible. Ramps should be wide (4m), gradients shallow (3% max), and free from sharp changes in direction.

Lifts must be suitable for non-standard bikes, trailer bikes etc.

3.2 How do users find it?

Cycle parking should always be in a obvious, prominent location, close to the entrance. Where the cycle parking is not immediately obvious it should be clearly signed. Using contrasting materials or surfacing for the path to the cycle park also helps.

3.3 What kind of parking?

There are many styles of proprietary "cycle storage" systems available. Few perform as well as the simple Sheffield (inverted U) stand. Sheffield stands give good support, good security and multiple locking points. They are cheap, flexible, and work for all different styles of bikes.

A number of common variations on the basic inverted U are available. Rounded A frame stands are very popular (see figure 1). In conservation areas stainless steel stands or timber and cast iron "hitching rails" look more in keeping than galvanised or painted hoops. Stainless steel stands do not deteriorate over time. In contrast galvanised and painted stands often become rusty after a few years' use.

Stands that support the cycle by gripping the wheels alone, sometimes known as "butterfly stands", should not **under any circumstances** be used.

Unless there are very good reasons for doing otherwise always specify Sheffield or rounded A frame stands.

3.4 Size matters

A correctly proportioned stand provides support to the front and rear wheels, and just below the saddle. Unfortunately many stands are incorrectly sized, and give poor support as a result. Small bikes may fall straight through an oversized stand. An appropriate proportion of stands adapted for smaller bikes should always be provided.

Dimensions for a Sheffield Stand	
Height to horizontal tube	750 mm
Leg spacing	750 mm

For drawings of other types of stand see Figure 1 on page 9

CYCLE PARKING SHOULD ALWAYS BE CLOSE TO THE ENTRANCE

USER PREFERENCES ARE CLEAR. SHEFFIELD STANDS AT THE BACK ARE FULL, PROPRIETARY STANDS AND WHEEL GRIPPERS REMAIN UNUSED

NEVER BUY OR INSTALL BUTTERFLY STANDS - THEY ARE TOTALLY INSECURE AND OFTEN RESULT IN BENT WHEELS AND STOLEN BIKES

THE SHEFFIELD STAND IS ALMOST ALWAYS THE PREFERRED OPTION

*** Traffic Advisory Leaflet 90/05 "THE GEOMETRIC DESIGN OF PEDESTRIAN, CYCLE AND EQUESTRIAN ROUTES"**

3.5 Solutions for limited space

Sometimes there just isn't any space, and you only need parking for a couple of bikes. If you don't have any space on which to put stands but you have a spare wall or shop front then wall loops or locking rails can provide a useful facility. They are no substitute for Sheffield stands but can provide parking where all other options would be impossible, and will dissuade people from leaning bikes against shop windows.

Wall loops may be considered when space is very limited

3.6 Secure lockers, compounds and supervised parking

Open stands do not provide sufficient security where cycles are to be parked overnight, or for long periods of time, or in locations that are poorly overlooked where there is a higher risk of theft and vandalism. For terraced housing without rear access we recommend 75% in conveniently positioned open racks, 25% in secure compounds - users of lower value bikes will tend to opt for convenience over security.

Providing secure bicycle parking in well illuminated and easy to monitor spaces. Note that two tier cycle parking is unpopular and should be avoided

3.7 How is it laid out?

Cycle parking should be laid out in precisely the same way as a car park is laid out.

Individual parking **BAYS** are grouped in pairs either side of a shared **STAND**.

The bays are accessed from an **AISLE** with parking bays on one or both sides.

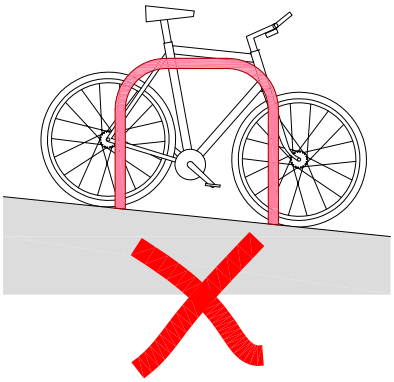
Dimensions are given below, see figures 1 to 4 on pages 9-11.

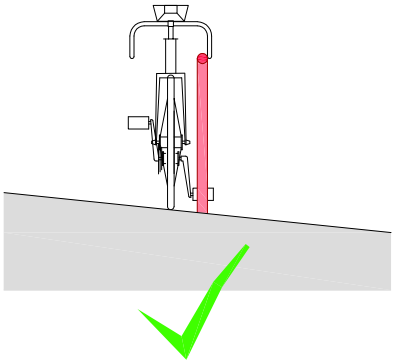
Cycle Parking Basic Dimensions (metres)	Cycle Parking		Car Parking equivalent
	Desirable	Minimum	
Bay width per bike	**0.6m**	0.5m	2.4m
Spacing between stands	**1.2m**	1m	-
Wider bay for people with heavy shopping or young children	**0.65 - 0.8m**		3.6m
Bay Length	**2m**	1.8m	4.8m
Access aisle width	**3 – 4m**	1.8m	7m
Aisle to accommodate trailer bikes	**4m**	3m	-
Total width – parking one side	**5 – 6m**	3.6m	11.8m
Total width – parking both sides	**7 - 8m**	5.4m	16.6m

3.8 Other considerations

- Lighting – essential for personal security and for parking after dark.
- Weather protection – essential for commuters and overnight parking.
- Partially sighted pedestrians. Poorly designed cycle parking can be a hazard.
  - Place cycle parking in buildouts in the roadway or align with planting and street furniture.
  - Fit a tapping rail to the first and last stand. Use strongly contrasting colours as a visual warning. Stainless steel stands should have a brushed finish.
  - Use contrasting coloured and textured paving. This could be formal hazard warning (corduroy) paving or a more subtle use of material such as introducing cobbles or setts.
- Linked "toastrack" stands should have flat, not round, linking bars. These should be no more than 500mm apart to prevent interference with the wheels.
- Cycle parking should always be placed on level ground. Where this cannot be achieved, the racks should be aligned parallel to the contours so that bikes do not tend to roll down the slope.
- Cycle parking areas should be clean and well maintained to deter anti-social behaviour, and to make users feel safe and welcome.

Stands should best be placed on buildouts so that they do not represent a hazard to pedestrians

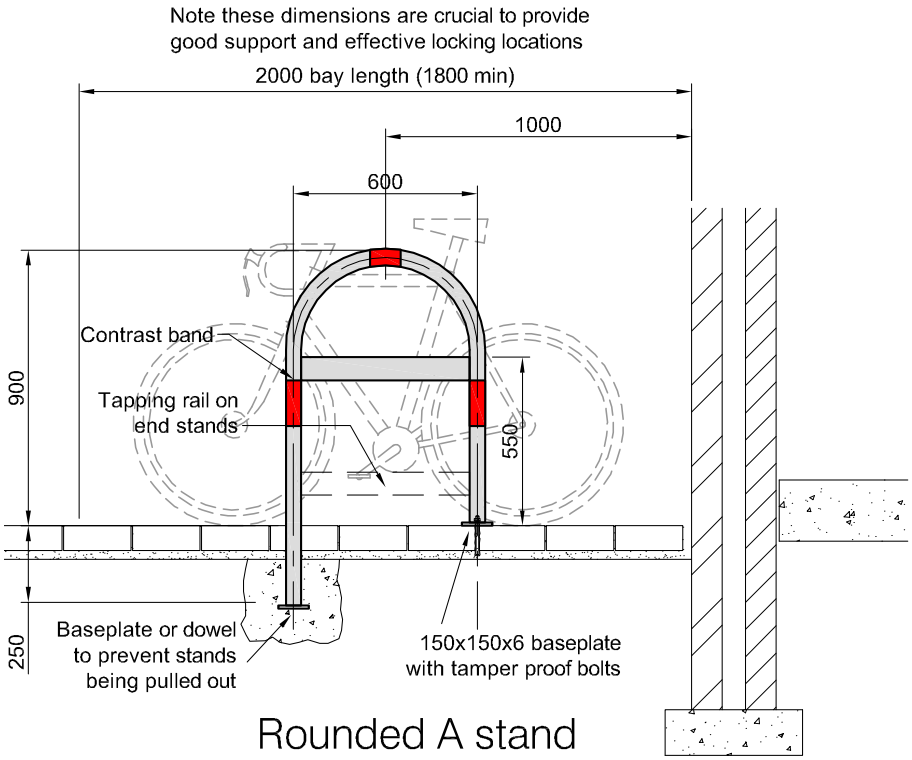




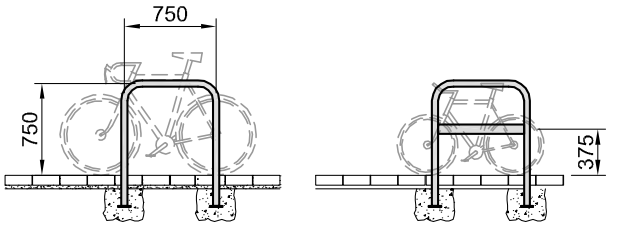
Always align stands across the slope, not down it

Covered parking is a minimum requirement for commuters and overnight parking - and it encourages shoppers too

Figure 1 - Dimensions of Stands

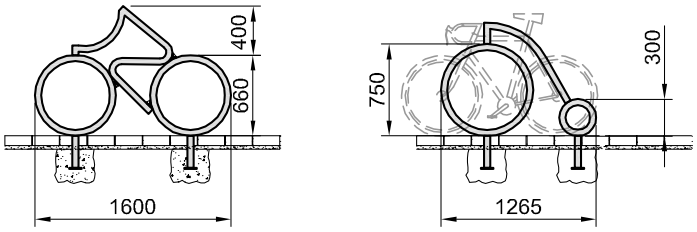


Rounded A stand
One of the most popular designs



Standard
Sheffield rack

Adaption for
children's bikes



Novelty stands

Figures 2 & 3 illustrate a number of possible provision options in different circumstances and the combinations shown are not recommended to be used in conjunction with each other.

Figure 2 - Typical Stand Layouts

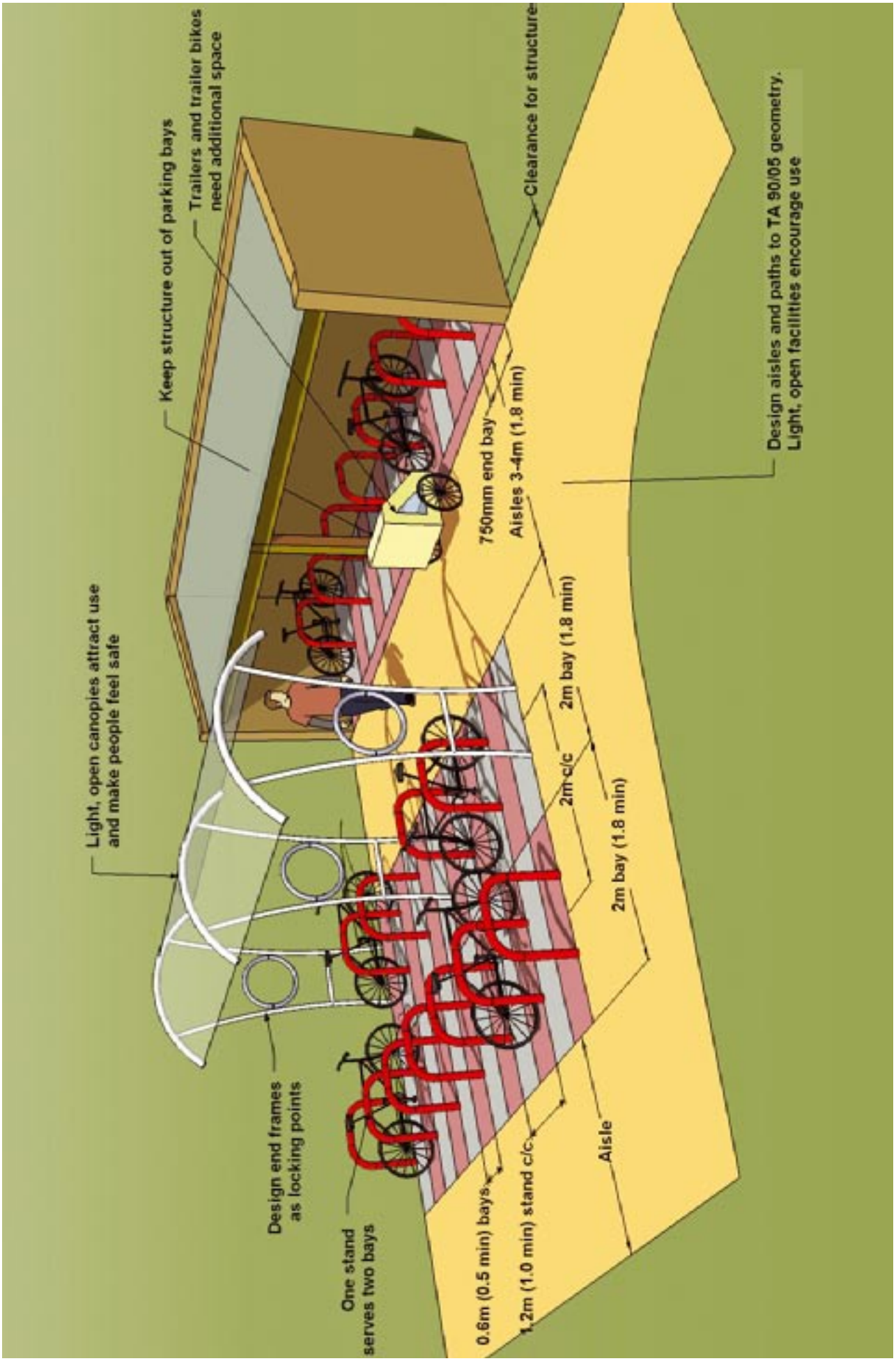


Figure 3 - Cycle Parking in the Footway

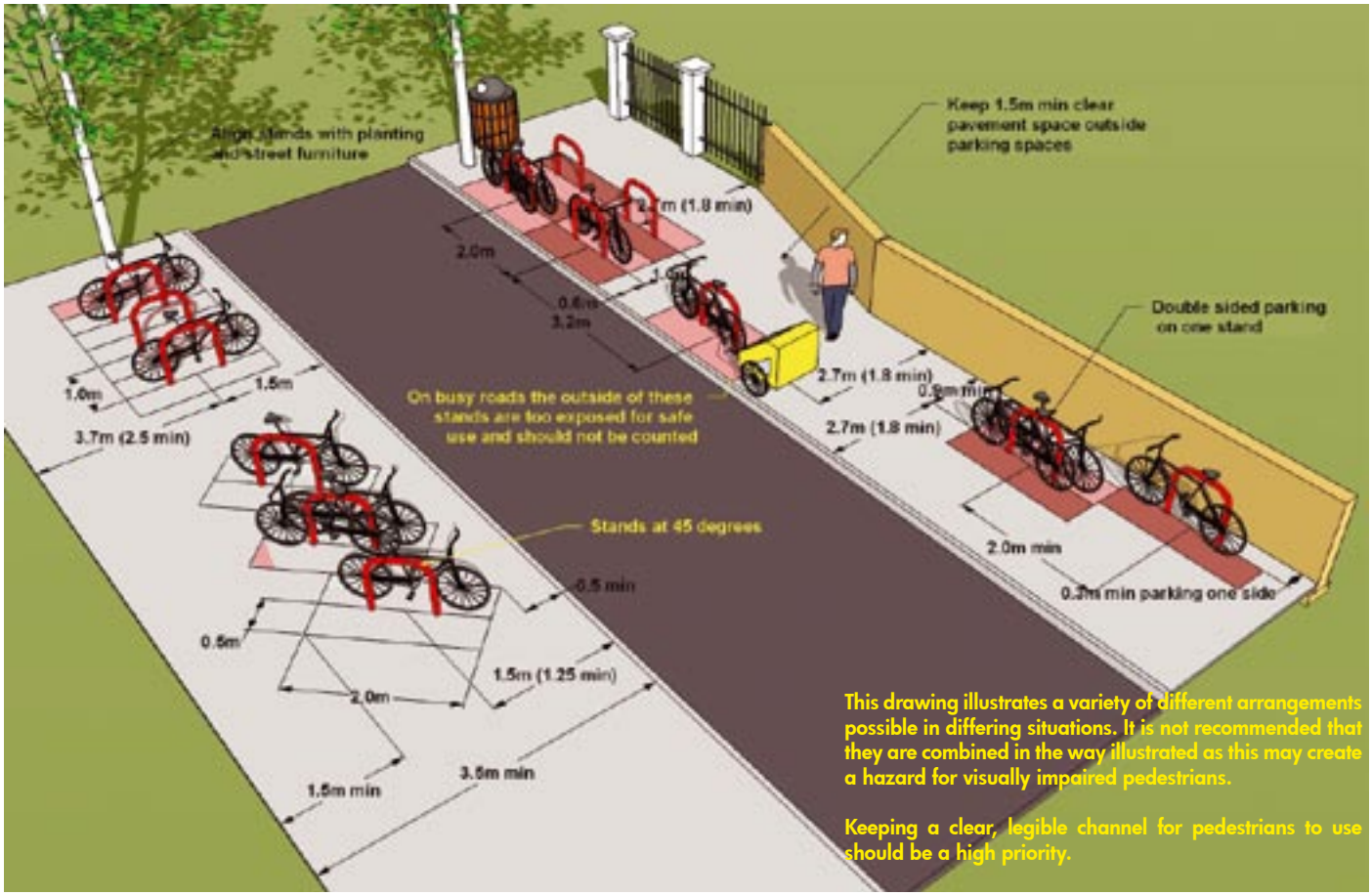
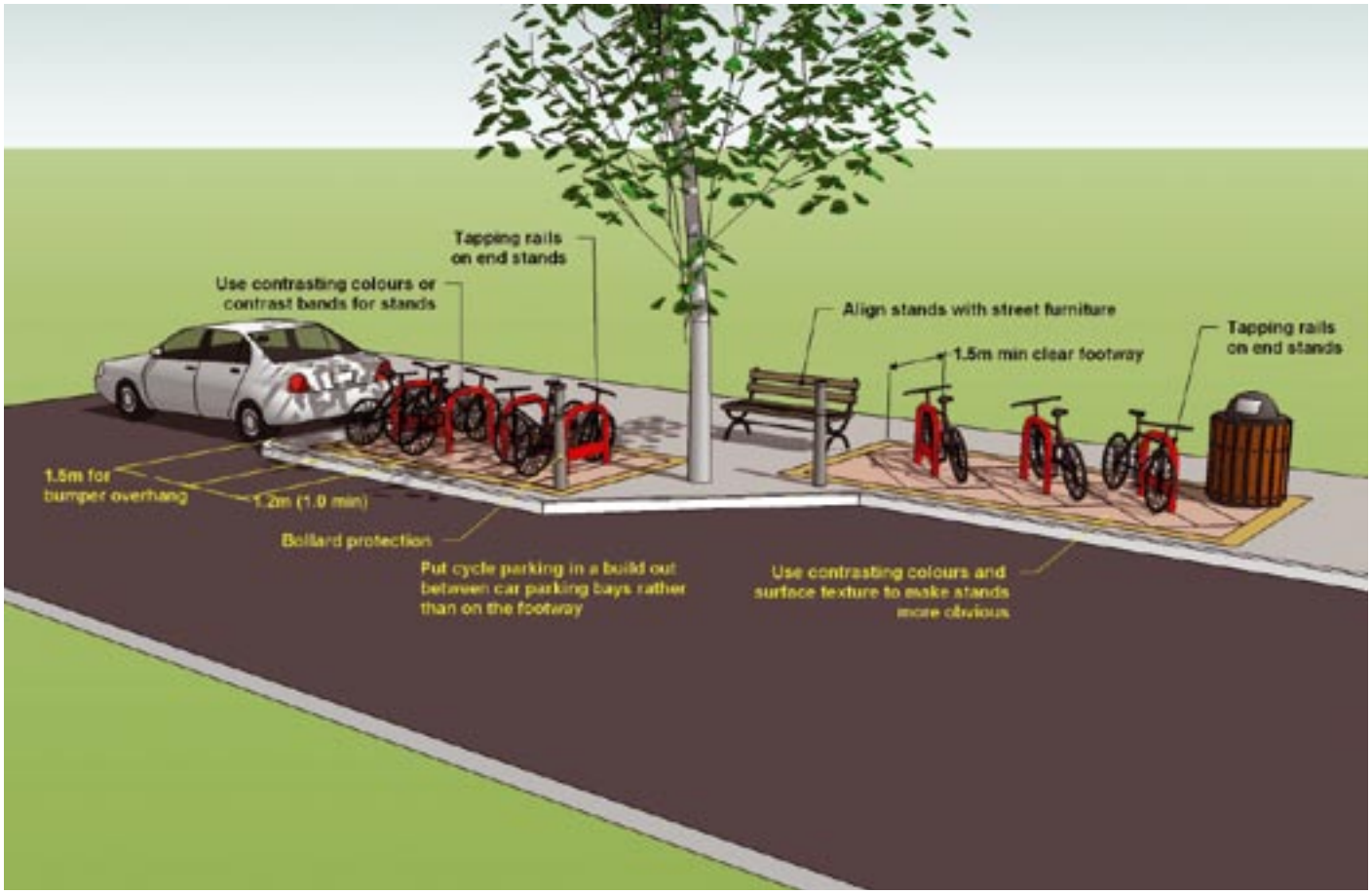


Figure 4 - Good practice towards visually impaired pedestrians



4 Making it a reality

4.1 Where do I get it from?

A list of suppliers is included with this guide and available on our website at:
www.camcycle.org.uk/resources/cycleparking/

4.2 How much will it cost?

The cost of providing cycle parking varies enormously depending on the quality of provision. Most of the cost goes into the enclosure. Simple, open stands are very cheap.

Element	**Approx cost £/bike** *Excludes VAT*	
	Materials	**Installation**
Open Sheffield stands	£15 - £65	£50
Wall loop (domestic)	£12	Self fix
Linked "toast rack" stands	£50	£15
Cycle Lockers	£600 - £800	£225
Proprietary open cycle shelter (excluding racks, including foundations)	£100 - £350	£120 - £175
Proprietary lockable cycle shelter (excluding racks, including foundations)	£250 - £1000	£220
Bespoke shelter	Seek expert advice	
Cost of re-paving	£75 - £150	
Cycle track access. 3m wide	£100 - £200 per metre of track	

Prices are based on estimates made in September 2008

4.3 Can I get a grant?

Cambridge Travel for Work offer grants of up to 50% of the value of new cycle parking facilities for Cambridgeshire employers. See: **www.tfw.org.uk.** Other grant schemes may exist.