

Designing for walking

We want walking to be the most convenient form of transport. The council has a duty to provide for the needs of the city's population by encouraging activity and reducing air pollution. Along with other factors, physical inactivity – caused by increasing urbanisation, sedentary jobs, and passive modes of transport – is contributing to chronic disease.

Walking is an effective form of exercise and can lead to health benefits, improve community cohesion and reduce the impact of air pollution. [Bristol Walking Strategy](#) aims to make walking in Bristol easier, safer and more pleasant for everyone.

Studies have shown that good pedestrian infrastructure and walkability can have a significant beneficial impact on property values in both the short and long term. Getting pedestrian infrastructure and good place planning right in the first place is therefore also economically beneficial.

The layout and design of development should aim to provide safe, continuous, direct, secure, legible and visually attractive routes for pedestrians. Slower vehicle speeds are therefore required to ensure safe environments for pedestrians.

The Equality Act 2010 requires public sector authorities to comply with the Public Sector Equality Duty in carrying out their functions. This includes making reasonable adjustments to the existing built environment to ensure the design of infrastructure is accessible to all. It is therefore important that gradients and footway widths allow for accessibility.

Consideration is also needed of a wide range of disabled users, including people in wheelchairs, people with visual or mobility impairments, as well as people with learning difficulties or dementia.



Provision is needed to allow all users – be they able bodied or mobility impaired, elderly or young, to use streets to walk alongside each other, pass one another, overtake and stop to interact with one another.

The West of England's [Local Walking and Cycling Infrastructure Plan](#) sets out designated and proposed routes and infrastructure required to improve Bristol's local pedestrian networks. Developments would be expected to integrate with and link to these networks, and provide facilities within sites to allow for better access to high quality active travel facilities for all.

Footway widths must accommodate passing pedestrians and additional buffer area to accommodate highway features, such as street furniture and trees. Additional buffer space is also recommended alongside busier roads or where there are higher levels of larger vehicles, especially where there is no on-street parking. What remains of the footway after these considerations is the 'effective' footway width, which is the available width for users.

To reduce conflict between pedestrians and vehicles, shared surface streets will not be encouraged where the presence of traffic is likely to intimidate pedestrians. In view of this, we recommend that shared space streets are not used as the sole design solution throughout larger developments, but can be incorporated as part of a coherent hierarchy of street types. Traditional roads with pavements are preferred for most developments, unless traffic flows and speed are very low, and conflict can be minimised.

We would expect wider footways to be provided in busier areas such as the city centre, outside hospitals and public buildings, or where there are lots of children with parents.

TfL's [Healthy Streets toolkit](#) provides further information on what creates an attractive and convenient street environment.

Detailed design considerations – pedestrian infrastructure

Accessible for all:

- Footway widths should be defined by the degree of movement and activity supported by the street in question. The table below provides design guidance based on levels of comfort for users. The Street Design Matrix shows the absolute minimum footway widths for the different street types in red.
- Manual for Streets states that the absolute minimum width for footways with low flows should be 2m. 2m allows two people to pass in relative comfort, and should be treated as the minimum effective width. However, this is where there is no street furniture present.
- We therefore require minimum of 2.5m footway width for more active residential streets, to ensure a high quality, sociable and safe pedestrian environment.
- Greater widths will be required where more significant pedestrian movements are anticipated. The table below sets out guidance for widths on busier streets such as high streets, where there are more than 600 people per hour. TfL's [Pedestrian Comfort Guidance](#) gives advice on the provision of suitable footway widths and considerations in very busy situations (more than 1,000 people per hour).
- Footways should not exceed 1:20 gradient at any time to ensure that all users, particularly those in wheelchairs, are able to use them.

Free of obstruction:

- Footways should include a 'clear zone' – a consistent and continuous section of the footway kept clear of obstructions. This is the 'effective width'. All street furniture and other obstacles should be located outside the clear zone. The table below sets out appropriate effective widths where street furniture is present.

- Additional width is required when a footway has a large footfall, is adjacent to a heavily used road, carriageway in an industrial zone, or is next to a gathering place such as at the front of schools and shops.
- Obstructions arising from refuse containers should be designed out, designs should ensure storage and collection facilities are incorporated into the site.
- Highway features such as cycle parking, street trees, and parking meters could be incorporated into carriageway build outs to reduce obstruction to pedestrians
- Parking on pedestrian routes creates obstruction. The provision of well-designed and integrated car parking facilities will be a significant factor in discouraging indiscriminate parking on pedestrian routes.
- In areas with very low volumes of pedestrians and low traffic speeds and volumes, localised pinch points of below 2m may be unavoidable. In such circumstances, very short lengths (6m max) of 1.2m width may be considered on existing footways, where there are no alternative options available.

Convenient and comfortable

- Footpaths linking cul-de-sacs and no through routes are essential to allow for permeability. However, these must be carefully designed so that the security of the users of the paths and adjacent dwellings is not adversely affected. Suitable lighting will need to be considered and provided where appropriate.
- Such footpaths shall be well overlooked to improve users' security, and routes must be clear and legible.

Maintenance and adoption

Footways (or cycleways) located adjacent to a carriageway that is to be adopted will also be adopted provided they are designed and constructed in accordance with our adoption standards.

Other pedestrian routes will be considered for adoption provided they are designed and constructed to our adoption standards, link to other adopted roads, and serve a strategic purpose, such as providing a more direct link to employment areas, bus stops/public transport or schools/community facilities.

We will **not** adopt the following pedestrian routes:

- Those that serve only private properties, public open spaces, and play areas, etc.
- Where they are proposed to link into existing routes which are not adopted, or are of a poor standard; or
- Routes which are not accessible by virtue of their gradient.

Dropped kerbs for pedestrian crossings

- Flush dropped kerb crossings are required to assist wheelchair users and those with prams or pushchairs at pedestrian crossing points.
- They must be installed to achieve positive drainage and avoid puddling at the crossing point.
- Dropped kerbs should be installed in pairs or groups to enable comfortable and convenient continuation of footway journeys for all users
- The gradient should be no more than 1:12 within the crossing point and the dropped kerb should be flush with the carriageway.
- Tactile paving is required at flush dropped kerbs to alert blind and partially sighted people of the transition into live carriageway. Refer to [Guidance on the Use of Tactile Paving Surfaces](#) for detailed advice.

Footway widths

Table 1: Design guidance for effective footway width – The Street Design Matrix shows the absolute minimum footway widths for the different street types in red.

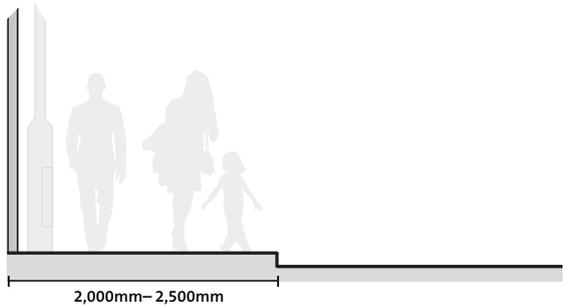
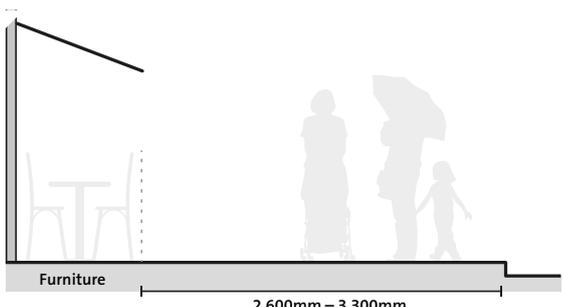
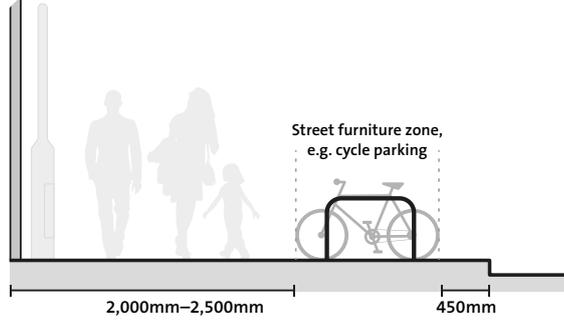
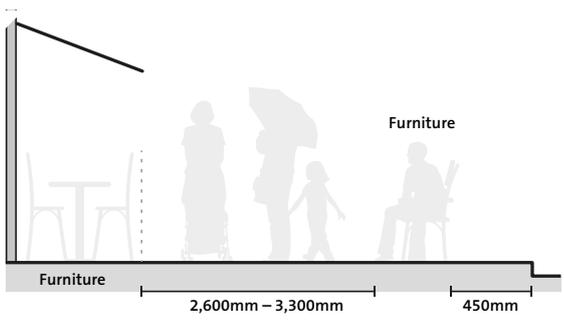
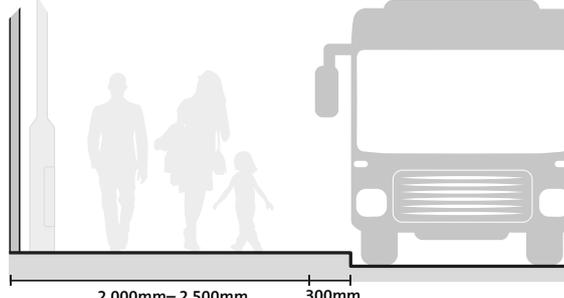
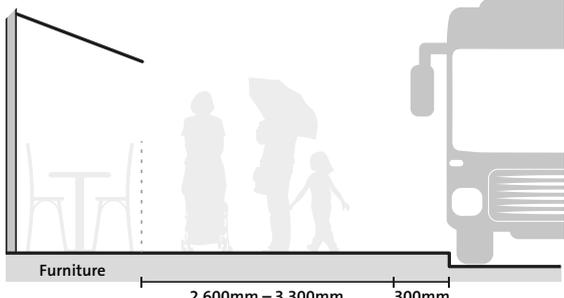
Consideration	Residential	High-use activity e.g. outside of schools/ high streets – more space may be required depending on the volumes, type of users and function of the street
Without street furniture	 <p>2,000mm–2,500mm</p>	 <p>2,600mm – 3,300mm</p>
With street furniture	 <p>2,000mm–2,500mm 450mm</p>	 <p>2,600mm – 3,300mm 450mm</p>
Bus/HGV routes or narrow carriageways	 <p>2,000mm–2,500mm 300mm</p>	 <p>2,600mm – 3,300mm 300mm</p>



Fig1: Consolidated street furniture and clear zone



Fig 2: Tactile paving