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7. **Footway amenities**

7.1. **Vision**

7.1.1. The immediate impression and character of any modern city is often determined by the quality and aesthetic appeal of its street furniture design. This can help to animate the public realm and signals to users what and where certain behaviour is desirable and appropriate. A specific location can often be recognised by simply referring to its street furniture design. However, poorly placed or excessive street furniture can create a cluttered environment resulting in obstructions, reduced legibility and a blighted character. Successful public spaces have had every piece of street furniture rationalised and creatively placed to achieve multiple aims.

7.1.2. There is no ‘one solution fits all’ when selecting and applying street furniture. Material selection and layout must be contextually appropriate. Some settings may require street furniture that quietly compliments the character of the area, provides structure, or adds surprise and delight.

7.1.3. We value exceptional detailing to ensure that street furniture is beautiful, robust and maintainable, complementing the surrounding streetscape with ‘the right product in the right place, done right.’

**General principles**

7.1.4. The term ‘street furniture’ applies to any vertical piece of equipment placed within the highway, to provide a practical function. Most components are located on the footway and provide functions relating to traffic management, safety and amenity. Products include signposts, signals and enforcement equipment to inform motorists, as well as pedestrian oriented elements such as seating, wayfinding signage and kiosks.

7.1.5. The palette of materials selected for the TLRN reflects our ambition to provide a consistent high quality streetscape. The street furniture components shown in this section emphasise design intent rather than prescribing specific products. Dimensional requirements are mandatory and have been specified based on advice from best practice.

7.1.6. Design teams should check specifications with manufacturers and select products that satisfy the criteria. Options are given where there may be an opportunity to reflect local character be it stylish and contemporary or historic. Design teams may recommend alternatives to the standard palette that are in keeping with the spirit of this guidance. Alternative street furniture will require SRG approval for any TLRN route.
7.1.7. Streetscape Guidance advocates using a coordinated approach for designing and maintaining the layout of street furniture to:

- Minimise cluttering footways with unnecessary furniture
- Maximise unobstructed widths for comfortable pedestrian movement
- Satisfy network operational requirements
- Ensure that the product is appropriate for the location in function and style
- Merge or combine street furniture components on a single post where practicable to further reduce clutter

7.1.8. In identifying locations for street furniture within the footway, a number of related factors should be considered which will impact on appropriate placement. These factors determine how to integrate street furniture.

7.1.9. Designers should consider:

- **Footway and verge widths** – location, orientation and quantity
- **Vehicle speeds** – speed limits will govern minimum set backs from the kerb line
- **Pedestrian flows** – refer to London Pedestrian Comfort Guidance (2015) to determine these
- **Parking and loading requirements** – street furniture should not be located where it is at risk of damage from vehicle movement or where access to the street furniture poses a safety risk to pedestrians except where street furniture has been placed to discourage vehicle movement
- **Street-types** – the material and layout of furniture should contribute to the function, performance and character of the street
- **Adjacent land uses** – furniture should satisfy a need as well as reflect the character of the setting without causing an obstruction or reducing the functionality of the surrounding buildings or land uses
• **Street furniture size and location requirements** – individual components should satisfy designated criteria to ensure a minimum standard is attained
• **Security** – furniture must not create a situation which compromises the safety or security of any user
• **Maintenance** – street furniture placement does not restrict standard cleansing regimes

7.2. **Footway zones**

7.2.1. The area between the kerb line and the highway boundary can be divided into four zones, which serve distinct functions within the streetscape:

- Kerb zone
- Furniture and planting zone
- Footway clear zone
- Frontage zone

7.2.2. The relative importance, scale and treatment for each of the zones will vary according to the context.

---

**Kerb zone**

7.2.3. A kerb zone should be kept completely free of street furniture to prevent damage from vehicles overhanging the carriageway edge. Each piece of street furniture and equipment has a minimum distance for which it must be placed away from the kerb edge. Please refer to each streetscape element to determine the specified distance from kerb edge.
7.2.4. It is essential to consider the camber of the road to allow for high-sided vehicles leaning over the footway.

Furniture and planting zone

7.2.5. The furniture zone is provided adjacent to the kerb zone to coordinate street furniture in a consistent arrangement which maximises the unobstructed width of the footway for pedestrian use. Features such as lighting and signage should be located in this zone, along with cycle parking, seating and other amenity elements.

7.2.6. Furniture should only be provided where it serves a specific function and is appropriate for the location. A furniture zone should therefore not exist where there is no need for street furniture.

7.2.7. Design teams should acknowledge that the requirements for the footway clear zone will ultimately determine how much space can be afforded to street furniture.

7.2.8. A furniture zone should only be provided where suitable clear footway widths and kerb zone widths are deliverable. The width of the furniture zone should be selected based on the footway constraints, which in turn will impact on the street furniture that can be used:

**Furniture zone design standards**

<table>
<thead>
<tr>
<th>Furniture zone width</th>
<th>Street furniture that can be accommodated</th>
</tr>
</thead>
<tbody>
<tr>
<td>500-1,000mm wide</td>
<td>• Barriers • Bollards • Street lights • Control boxes • Seats • Bins • Cantilevered bus shelters with perch seats, but no end panels • Cycle stands parallel to the kerb • Wayfinding signs</td>
</tr>
<tr>
<td>1,000-1,600mm wide</td>
<td>The above plus: • Telephone boxes and other larger items • Cycle stands angled at greater than 45 degrees to the kerb line (echelon cycle parking) • Street trees</td>
</tr>
</tbody>
</table>
1,600-2,000mm wide

The above plus:

- Cycle stands can be provided at 90 degrees to the kerb line, although echelon parking remains the preference
- Kiosks and other large structures
- Bus shelters with half and full end panels
- Larger street trees

Footway clear zone

7.2.9. The clear zone should be entirely free of permanent and temporary street furniture, to allow for unhindered pedestrian movement along the footway. The width of the clear zone provided should relate directly to the character and use of the street, and in particular the volume of pedestrians. The footway clear zone should be designed to comfortably accommodate peak pedestrian demand and satisfy acceptable levels of service (see Pedestrian Comfort Guidance, 2010).

Footway clear zone design standards

<table>
<thead>
<tr>
<th>Unobstructed width</th>
<th>Design criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000mm wide</td>
<td>Absolute minimum unobstructed width</td>
</tr>
<tr>
<td></td>
<td>Where a minimum width is provided, it should not be continued for more than 6,000mm along the length of footway</td>
</tr>
</tbody>
</table>
1,500mm wide
- Minimum acceptable unobstructed width in most locations
- Allows for a wheelchair user and person walking to pass one another

2,000mm wide
Preferred minimum unobstructed width.
Allows for two wheelchair users to comfortably pass one another

**Frontage zone**

7.2.10. The frontage zone is the area adjacent to the property line and highway boundary. Wherever possible this zone should be kept free of street furniture to:
• Enable visually impaired people who use canes to navigate the street using the building line
• Minimise obstructing retail frontages to encourage window browsing

7.2.11. Where footway widths are narrow, essential street furniture may be located tight against the property boundary, to minimise street clutter within the kerb zone. The maximum recommended distance is 275mm away from the building line for positioning street furniture within the frontage zone. Building overhangs, shop signs, awnings, banners, planters, and drain pipes may encroach upon this zone and require statutory approval from the highway authority.

7.2.12. Approval for extension beyond the frontage zone into the footway zone must only occur where minimum clear headroom of 2,300mm is maintained. A 2,100mm clearance below suspended signs is allowed where cyclists are not permitted on the footway.

7.2.13. In certain areas, the frontage zone may be occupied by café seating. In these instances it is important to ensure that clear boundaries are defined so that café furniture does not obstruct the footway clear zone.

Alternative solutions

7.2.14. If the existing situation and/or the scope of the project makes it difficult to create a furniture zone, larger furniture objects will be difficult to incorporate within the streetscape.

7.2.15. Alternative solutions may be to:
• Locate street furniture on side roads, with due consideration for operational requirements
• Locate service boxes, signal controllers or telephone kiosks in building recesses
• Integrate post boxes and cabinets, where practical, into the building structure with appropriate access (way-leaves required)
• Negotiate with adjacent landowners the location of street furniture beyond the highway boundary
• Consider locating specific furniture on the central median or carriageway, such as cycle parking. This requires road safety auditing
Figure 7.0: Street Furniture placement
7.3. **Colour of street furniture**

7.3.1. The colour of metal components for any piece of street furniture should comply with the following colour criteria:

- Black street furniture is preferred as a default for the TLRN with the exception of higher speed routes that do not provide for pedestrian movement.
- Signal grey is the standard colour for higher speed non-pedestrian roads.
- A stainless steel finish should be considered as non-standard and requires SRG approval.
- Contrasting band.

<table>
<thead>
<tr>
<th>Colour of metal street furniture</th>
<th>Application</th>
<th>Finish</th>
<th>Contrasting visibility band</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAL 9005 Black</td>
<td>TLRN in most boroughs, town centres and low speed roads</td>
<td>Matt micaceous iron oxide</td>
<td>Signal grey (RAL7004)</td>
</tr>
<tr>
<td>RAL 7004 Signal grey</td>
<td>High speed non-pedestrian roads and by exception as approved by the SRG</td>
<td>Matt micaceous iron oxide</td>
<td>Black (RAL9005)</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>By exception as approved by the SRG</td>
<td>Stainless steel or aluminium finish</td>
<td>Black (RAL9005) if required</td>
</tr>
</tbody>
</table>

**Visibility**

7.3.2. Black furniture can provide better colour contrast for visually impaired pedestrians. Visibility bands are required on all street furniture in areas of high pedestrian flows, with the exception of guardrails and seats.
7.3.3. Bands should be provided to contrast with the colour of the main body of the stand: signal grey or white reflective banding on black furniture; black banding on stainless steel (an exception to the standard colour palette).

Special finishes and coatings

7.3.4. Requests to use alternative colours to black, to match borough, town centre or historic palettes will be treated as exceptions and should be submitted for approval by the SRG. Special coatings for flyposting and graffiti prone areas can be applied up to a height of 3,000mm on lighting columns.

Additional information

Legislation:

The Equality Act 2010

Department for Transport:

Inclusive mobility – a guide to best practice on access to pedestrian and transport infrastructure, 2002

7.4. Cycle parking

7.4.1. We are supporting the Mayor’s Vision for Cycling, published in March 2013, by planning for growth in cycling and making safer and better streets for all. The provision of fit-for-purpose, well-located and secure formal cycle parking facilities is vital for supporting the cycling growth targets for London. A lack of appropriate parking is often cited as a barrier to cycling and cycle ownership.

7.4.2. The number and the quality of cycle parking spaces must not only keep pace with the growing use of cycles, but allow for the substantial future growth set out in the
Mayor’s vision. It must also allow for all types of cycle to be securely parked, ensuring that any cycle user with a physical, sensory or cognitive impairment should enjoy access to good quality cycle parking.

**Location, demand and security**

7.4.3. Cycle parking facilities on the TLRN are generally located on the footway within the furniture zone. London Cycling Design Standards (2014) (LCDS) should be referred to for further information on assessing demand for cycle parking and ensuring that provision:

- Meets current and likely future demand
- Supports different uses
- Is appropriately located
- Has step-free access
- Is secure and well overlooked
- Is well integrated with the public realm
- Includes some provision for larger models, such as cargo cycles and tricycles

**Placement**

7.4.4. Cycle parking is best positioned where it is not visually or physically intrusive, yet is sufficiently overlooked for security purposes. The visual impact of cycle stands can be reduced if placed between other street furniture, such as tree planting, bus stops and seating, as part of a coordinated furniture zone. Cycle parking may also be useful in discouraging pedestrians from crossing at certain points (refer to London Pedestrian Design Guidance, 2015).

7.4.5. Echelon arrangements provide the most efficient use of space. Echelon and perpendicular arrangements and offer greater capacity than parallel layouts. In addition, echelon arrangements take up less width of the footway than perpendicular arrangements. Please be aware of the following when selecting locations for cycle parking:

- Cycle parking facilities may be provided on the carriageway alongside the kerb but require a traffic order
- Locations under overhanging deciduous trees may require additional maintenance
- A minimum clearance of 450mm between any part of the cycle and the carriageway should be retained when a cycle is parked on the stand
- Leaving a large gap (1,500mm or more) after the last stand in each run is a good way of ensuring that spaces for larger cycles are available
- Cycle parking placed on the median strip can help to reduce clutter on the footways, but should be carefully considered with regards to access, safety and pedestrian crossing visibility
- Tactile paving should not be provided around the base of cycle parking stands on the TLRN

7.4.6. To consolidate furniture placement and facilitate integrated transport, cycle parking should be considered at bus stops, particularly outside central London.

7.4.7. Easy, step-free access to the facility should be provided through the use of dropped kerbs, crossings and sufficient space to manoeuvre.
### Standard TLRN cycle stand placement

| Distance from kerb edge regardless of orientation | 600mm |
| Spacing between cycle stands | 1,200mm preferred |
| | 1,000mm minimum |

**Alignment options**

#### PLAN - CYCLE RACKS ARRANGED AT ECHELONS TO KERB EDGE

- 450mm
- 600mm
- 1800mm MIN TO BE KEPT CLEAR OF STREET FURNITURE

#### PLAN - CYCLE RACKS ARRANGED PARALLEL TO KERB EDGE

- 2500mm
- 450mm
- 750mm
- 1800mm MIN TO BE KEPT CLEAR OF STREET FURNITURE

#### PLAN - CYCLE RACKS ARRANGED PERPENDICULAR TO KERB EDGE FOR FOOTWAYS WIDER THAN 4M

- 500mm
- 750mm
- 600mm
- 2600mm MIN TO BE KEPT CLEAR OF STREET FURNITURE
Figure 7.1: On-carriageway cycle parking
Figure 7.2: Median strip with furniture

**MEDIAN STRIP WITH FURNITURE**

- 450mm MIN
- 2400mm MIN
- 1000mm CENTERS MIN (PREFERRED 1200mm)
- 220mm MIN

**NOTES**
1. Granite kerbs to comply with BS 438
2. Precast kerbs to comply with BS 7263: Part 1
3. Refer to Drg. ATK3 for section details
4. Refer to Drg. ATK3 for kerb details
5. Signal poles must be positioned to provide a minimum lateral clearance of 450mm from all signal equipment to kerb face.
6. Where a pedestrian crossing phase is limited to permit pedestrians to cross a whole carriageway in one movement, the width of the refuge in the carriageway shall be a minimum of 1.5m. However a width of 2.0m is recommended to permit a pedestrian with a pram or wheelchair to walk in safely.
7. All street furniture to be installed using retention sockets.
8. If a lighting column is required (subject to lighting levels) they should be combined with the signal posts/push buttons where possible.
Figure 7.3 Sheffield Stand

Product specification

7.4.8. Short-stay parking in the form of footway-mounted cycle parking stands is the standard facility for the TLRN.

7.4.9. The Sheffield (or inverted U) stand offers a simple, durable and cost effective tubular design, enabling the frame of the bicycle and both wheels to be secured. These stands are the default option for the TLRN, assuming the following criteria are satisfied:

**Cycle parking stand design criteria**

<table>
<thead>
<tr>
<th>Distance between legs</th>
<th>650-900mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crossbeam height</td>
<td>700-800mm</td>
</tr>
<tr>
<td>Tube diameter</td>
<td>35-50mm</td>
</tr>
<tr>
<td>Tapping rail height above footway</td>
<td>100mm±25mm</td>
</tr>
<tr>
<td>Tapping rail width</td>
<td>Equal to the tube diameter of the stand up to a maximum of 75mm</td>
</tr>
</tbody>
</table>

7.4.10. M-profile stands are also now accepted for use on the TLRN, but should not be considered the default option as they have a more intrusive presence within the public realm than the Sheffield style.
7.4.11. The colour of the cycle stand should generally match the street furniture standards: black nylon-coated stands are standard on the TLRN, and stainless steel may be used following approval from the SRG. However, there is some flexibility with regards to selecting cycle stands that are deemed appropriate for the context, such that stainless steel may be considered for areas adjacent to stations or new developments.

7.4.12. Visibility bands should contrast with the colour of the main body of the stand: signal grey reflective banding on black stands; black banding on stainless steel.

**Accessibility features**

7.4.13. A tapping rail should be provided on the end stand where stands are placed in a row perpendicular to the kerb or building, but are to be omitted for intermediate units. Stands placed at 45 degrees or parallel to a kerb or building require a tapping rail.

- Parking symbols on the tapping rail are not required to reduce visual clutter
- Stands should be root fixed within the footway and surface materials carefully cut or drilled to provide a round hole that minimises the visibility of concrete infill
- At locations where vandalism is anticipated, demountable bolt-down fixings may be used

**Public bicycle pumps**

7.4.14. Public bicycle pumps may be provided following SRG approval in situations where there are high on-street cycle flows, adjacent to Cycle Superhighway routes or on other designated major cycle routes, or at larger cycle parking facilities.

7.4.15. Bicycle pumps should be located within the furniture zone and positioned 1,000mm from other street furniture to allow sufficient space for operation. A single pump at any given location is sufficient and should be integrated with cycle parking. The colour of the public bicycle pump should match the adjacent street furniture palette.

**What if I want to do something different?**

7.4.16. Tubular stands other than the Sheffield model, which fulfil the design criteria, may be considered for use on the TLRN but require SRG approval.

7.4.17. TfL-branded cycle stands recently introduced at stations require SRG approval for use on the TLRN.
7.4.18. Long-stay facilities such as lockers, cycle hubs or two-tiered racks should be provided at transport interchanges, but again require SRG approval when considered for the TLRN. Covered structures require planning approval from the local authority.

<table>
<thead>
<tr>
<th>Cycle racks that speak to urban context</th>
<th>Paperclip Cycle Rack Minneapolis, USA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunity</strong></td>
<td>Customised street furniture can enhance the character of a local area, emphasise a unique local history, or speak to the purpose of neighbouring businesses.</td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td>The innovative design of the cycle racks combines utility and style; alterations to basic bike racks were made to improve their appearance while preserving their functionality.</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td>The Minneapolis Art Institute’s implemented customised bike racks on its campus added a surprising twist to a necessary element of the public realm.</td>
</tr>
<tr>
<td><strong>Applying in London</strong></td>
<td>Customised designs can reinforce an element of the local context. For occasions where there is a particular need for bespoke bicycle parking, such an approach can work well. At other locations, Sheffield stands are best.</td>
</tr>
</tbody>
</table>

**Key functions:**
## Automatic underground cycle parking system

### ECO cycle system

**Tokyo, Japan**

<table>
<thead>
<tr>
<th>Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ECO cycle system is a space-saving and secure solution for bicycle storage in cities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>By removing ground level storage and placing bikes underground, station entrances can become obstacle free and increase pedestrian capacity in and out of the entrances and exits.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>It takes 15 seconds to insert or retrieve a bike from 11 metres underground. Each unit can hold up to 144 bicycles, thereby freeing up space in the public realm. The underground garage protects bikes from theft and bad weather. Like all Japanese structure, it is designed to withstand earthquakes.</td>
</tr>
</tbody>
</table>

These subterranean cycle parks have been successful and have been rolled out across Tokyo and currently hold 800 of Tokyo’s bicycles.

The system owes its success to the speed and ease at which it operates. The units are also located in areas adjacent to metro stations for commuter convenience.

<table>
<thead>
<tr>
<th>Applying in London</th>
</tr>
</thead>
<tbody>
<tr>
<td>High demand for cycle parking in London gives this system significant potential.</td>
</tr>
</tbody>
</table>

Key functions:
Additional information
Transport for London:
  London Cycling Design Standards, 2014. Chapter 8: Cycle parking
  Cycle Security Plan, 2010
Department for Transport:
  Traffic Advisory Leaflet (TAL) 5/03: Key elements of cycle parking provision

7.5. Cycle hire docking stations

Vision and purpose

7.5.1. Barclays Cycle Hire is a public bicycle hire scheme for London, launched in July 2010 as a standalone mode. It was the first TfL mode to be sponsored and it provides more than 10,000 bicycles for hire from more than 725 docking stations and 19,000 docking points within a central London area of 100km2. The scheme was expanded to east London in March 2012 and launched in southwest London in December 2013.

7.5.2. The scheme has become synonymous with London’s streetscape since its inception in 2010, with its distinct look and stylised bicycles and docking stations. It is a self-service, bike-sharing scheme, designed as an affordable, alternative option to conventional public transport for short journeys.

7.5.3. We are keen to see that the network continues to serve our customers and will be looking for new opportunities for intensification of the existing network where appropriate. Where new docking stations are proposed, the design and layout of the station should be carefully considered to complement the overall composition of the streetscape.

Cycle hire scheme
7.5.4. The scheme comprises of physical on-street assets, namely bicycles which can be hired from, and returned to, docking stations placed around various locations within central and Inner London. Each docking stations comprises of at least one terminal that customers interact with for setting up access to hire. Each terminal is connected to docking points where the bicycles are physically docked for hire and return. Supporting the scheme are back office and on-street systems and operations.

7.5.5. Barclays Cycle Hire provides an effective way to add transport capacity to the network and help relieve congestion for peak trips in central London. As an active, self-powered, emissions free and almost silent mode of transport, the scheme delivers important health benefits and contributes towards reducing carbon dioxide (CO2), harmful local air pollutants and urban traffic noise.

7.5.6. The Mayor’s Vision for Cycling commits to future enhancements of the scheme. It recognises the hire scheme as one of the world’s most successful, playing an important role in normalising cycling in London by enabling customers to try cycling for a minimal outlay and encouraging them to adopt cycling as a lifestyle choice. This commitment is reflected in the cycle hire vision as stated below:

7.5.7. ‘To deliver a service fit for the future, enabling Cycle Hire to adapt and grow.’

Docking station layouts

7.5.8. There are three common types of docking stations that occur within London, detailed below:

<table>
<thead>
<tr>
<th>Layout name</th>
<th>Layout</th>
<th>Docking point formula</th>
<th>Example picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear docking station</td>
<td><img src="image" alt="Linear docking station" /></td>
<td>(DPS=\frac{[\text{length} (x) - 2.0\text{m}]}{0.75\text{m}})</td>
<td><img src="image" alt="Example picture" /></td>
</tr>
<tr>
<td>Double row</td>
<td><img src="image" alt="Double row" /></td>
<td>(DPS=\frac{[\text{length} (y) - 2.0\text{m}] + [\text{length} (y)]}{0.75\text{m}})</td>
<td><img src="image" alt="Example picture" /></td>
</tr>
</tbody>
</table>
DPS= [length (z)- 2.0m - 1.4m]/1.06m

**Detailed layout considerations**

7.5.9. The following is an indicative checklist of things to consider when identifying a potential docking station location. Please note consultation with, and agreement by ourselves and the local planning authority will be required prior to final station location.

<table>
<thead>
<tr>
<th>Consideration</th>
<th>Detailed information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space</td>
<td>A rough guide is 25 metres by two metres as the minimum space required for a viable docking station of 27 docking points (see above indicative layouts).</td>
</tr>
<tr>
<td>Operational access</td>
<td>Redistribution vehicles must be able to legally stop within 15 metres of the station to maintain the station and distribute bicycles. Line on site must be maintained between station and vehicle. Loading and parking bays are the preferred location for stopping.</td>
</tr>
<tr>
<td>Footway width</td>
<td>A minimum clear footway of 1.8 metres in width must be maintained. Clearance of 0.45 metres must be maintained from the carriageway.</td>
</tr>
<tr>
<td>Utility covers</td>
<td>Docking points or terminals cannot be installed over utility covers however bicycles can be docked over stats covers.</td>
</tr>
<tr>
<td>Drainage</td>
<td>Site footprint is required to have sufficient drainage to prevent ponding.</td>
</tr>
<tr>
<td>Vertical clearance</td>
<td>A vertical height clearance of 2.8 metres is required for terminal and installation.</td>
</tr>
<tr>
<td>Existing vegetation</td>
<td>No loss of trees or grassed areas.</td>
</tr>
<tr>
<td>Existing street</td>
<td>Minimal relocation of existing street furniture, including existing cycle stands.</td>
</tr>
<tr>
<td>Pedestrian/vehicular</td>
<td>Sufficient space to maintain clear pedestrian/vehicular paths.</td>
</tr>
<tr>
<td>flows</td>
<td></td>
</tr>
<tr>
<td>User safety</td>
<td>Safe and secure areas with good natural surveillance and street lighting.</td>
</tr>
<tr>
<td>Existing usage</td>
<td>Avoidance of areas of high pedestrian congestion and areas known to be unsuitable for cyclists.</td>
</tr>
<tr>
<td>Public access</td>
<td>Docking stations must be accessible to the public 24 hours a day,</td>
</tr>
</tbody>
</table>
365-days-a-year, ie they must be on public highway or land where the public have a right to unfettered access.

| Terminal power | Terminal power is obtained from UK Power Networks (UKPN) via a feeder pillar located near the docking station. Typically feeder pillars are installed on the public highway and trenched to the terminal. |
| Foundations | The maximum foundation depth required for a docking station is 320mm and maximum width is 700mm. See additional information. |
| Road safety audits | All sites will be subject to a full road safety audit. |
| Lease | A lease/agreement is required between TfL and the landowner, ideally at nil cost. |
| London Cycling Design Standards | Complementary aspects of the LCDS should be considered when locating a docking station. For example, existing cycle routes for users to continue their journey. |

Infrastructure

7.5.10. Each docking station consists of at least one terminal and should have a minimum of 27 docking points, although this can be provided in a number of layouts to fit the local circumstances. Based on our four years of experience operating Barclay’s Cycle Hire in London, it has been found that 27 docking points is the best operational number at the majority of locations. Stations of this size require much less redistribution and have higher bike and space availability for users’ convenience.

7.5.11. Please note there is a six-month lead time for all infrastructure to be manufactured and delivered.

Terminal

7.5.12. Each docking station has a payment and registration terminal which allows users to:

- Print a record of their journey
- Print cycle release code
- Find other docking stations if one is full or empty
- See a local street map, costs and code of conduct
- Buy 24-hour access for up to four cycles
- Get extra time if user needs to return their cycle to another docking station should the docking station be full

7.5.13. The terminal displays Legible London style mapping to assist wayfinding for cyclists and pedestrians. Legible London mapping is the only mapping used to ensure uniformity across the scheme and maintain ease of use.

Docking points

- Docking points release and secure bikes
- Members insert key to release bikes
- Non-members must retrieve a code and enter the digits into the keypad
7.5.14. There are three standard foundations used on the network. These foundations are described below:

**Standard**

7.5.15. One foundation per docking point set into a concrete base. This is our preferred method of reinstatement as it is adaptable, allowing docking stations to be constructed on slopes or in a curved arrangement. In addition reinstatement around the docking points can aesthetically match existing, surrounding material. This foundation type requires 350mm depth and can be used on either the carriageway or footway.

**Inset**

7.5.16. Steel plate set into a concrete base, shallower dig required. Inset foundations can be used in circumstances where there are shallow utilities running underneath the docking station footprint. These are to be used on the footway only and require 150mm depth.

**Surface mounted**

7.5.17. No excavation required. Surface mounted foundations are used when there is significantly limited depth. However, the surface must be completely level and straight.

**Procedures**

7.5.18. There are various consents and approvals required as part of the delivery process. Such as:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-planning consent:</td>
<td>• Archaeological impact assessment (where relevant)</td>
</tr>
<tr>
<td></td>
<td>• Arboricultural assessment (where relevant)</td>
</tr>
<tr>
<td></td>
<td>• Ground radar survey</td>
</tr>
<tr>
<td></td>
<td>• Topographical survey</td>
</tr>
</tbody>
</table>
- Planning permission
- Stage 1/2 Road Safety Audit
- Submit planning application to relevant authority

**Prior to construction:**
- Traffic Regulation Order (for carriageway sites)
- Permit for construction works
- Parking suspension (where relevant)
- UKPN install feeder pillar for electricity supply
- Watching briefs arranged (where relevant)
- S8 agreement/private lease completed
- Area reinstated around foundations
- Install appropriate TSRGD traffic signs and line marking

**Prior to Installation:**
- Permit for works
- Parking suspension (where relevant)
- Mapping updated on local docking stations

**Post-installation:**
- CAT/LAT test completed
- Health and safety documentation completed
- Stage 3 Road Safety Audit three months after the site is live

**Additional information**

Transport Trading Limited:

**London Cycle Hire Scheme Agreement, 2009:**

Schedule 2 – On-Street Infrastructure Statement of Requirements Lot 1

Schedule 37 – Docking Station Implementation and Traffic Management

### 7.6. Seats
7.6.1. Functionality, comfort and accessibility are key requirements of seating, but equally it provides the opportunity to delight users through creative designs and thoughtful placement. The material choice, composition and form offer a multitude of opportunities to select or design a seat that improves the user experience.

7.6.2. We are eager to raise the ambition of seating choice and placement within the streetscape. Functionality is no longer considered the only criteria to satisfy.

7.6.3. Seating can perform many functions within the streetscape besides providing a place for people to rest. Designers should consider how seating can: reflect the character of the space; create a sense of whimsy; provide social cues about the purpose of the space; reinforce the design intent; or encourage socialisation. Whatever the intention, seating provides one of the most effective ways to enhance or reflect the character of an area and add to the vibrancy of the space.

Placement considerations

7.6.4. Formal seating should be provided according to the following criteria:

- Adjacent to or visible from a pedestrian route
- Where pedestrian flows will not be impaired
- With seatbacks against a wall to reduce the likelihood of damage from skateboards
- In an open aspect that enables approaching pedestrians to be seen
- In areas of natural surveillance to minimise antisocial behaviour
- So as to avoid impeding access to buildings
- In public spaces that are attractive and in sunlit areas where possible, as these areas are more likely to be used
- Away from wind tunnels, for example between tall buildings, which could make use uncomfortable
- Where possible a continuous run of seats should be provided where high use is anticipated. However, seating should not be placed directly opposite to one another

7.6.5. The following placement standards should be implemented to ensure consistent and comfortable access to seating:

<table>
<thead>
<tr>
<th>Seat placement standards</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended set back from kerb for inward facing seat</td>
<td>1,000mm</td>
</tr>
<tr>
<td>Recommended set back from kerb for outward facing seat</td>
<td>2,000mm</td>
</tr>
<tr>
<td>Maximum recommended spacing interval for seating on high streets, city places and steep inclines</td>
<td>50 metres</td>
</tr>
</tbody>
</table>

Product design standards

7.6.6. Seating should be selected which combines comfort, ease of maintenance, durability and resistance to vandalism.
7.6.7. The following design criteria should be used to assist in selecting an appropriate product:

**Seat dimension standards**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended height from floor</td>
<td>450-475mm</td>
</tr>
<tr>
<td>Minimum width of seat</td>
<td>500mm</td>
</tr>
</tbody>
</table>

**Seat design standards**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arms</td>
<td>Should be provided on slats to assist older and disabled people</td>
</tr>
<tr>
<td></td>
<td>May be omitted on some seats to allow better access for wheelchairs or parents with pushchairs</td>
</tr>
<tr>
<td>Back rests</td>
<td>Should be provided in all instances to assist older and disabled people, except where located within visual proximity to other seats with a back rest</td>
</tr>
<tr>
<td>Leg supports</td>
<td>May vary but should not extend beyond the profile of the seat to avoid creating a trip hazard</td>
</tr>
<tr>
<td></td>
<td>The base plate should not be visible</td>
</tr>
<tr>
<td>Free drainage of water</td>
<td>To ensure longevity and overall functionality</td>
</tr>
</tbody>
</table>

**Seat material standards**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber</td>
<td>Preferred material for where people may wish to sit for longer periods</td>
</tr>
<tr>
<td></td>
<td>To be compliant with GLA’s responsible procurement policy and accredited to Forest Stewardship Council (FSC) standards or equivalent</td>
</tr>
</tbody>
</table>
Streetscape Guidance

Is preferred where the seat will be well maintained and vandalism is rare

<table>
<thead>
<tr>
<th>Material</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless steel</td>
<td>May be considered for areas where vandalism is anticipated</td>
</tr>
<tr>
<td>Natural stone</td>
<td>Non-standard. May be used as an alternative to security bollards, large natural stone blocks may be used upon approval by the SRG</td>
</tr>
</tbody>
</table>

Authorisation

| Seats may be provided by the local authority or adjacent landowner subject to the approval of the highway authority. High quality Streetscape Guidance compliant bench planter | Swindon Wharf Green
|                                                                                                      | Swindon, UK |

Opportunity

This project took place in Wharf Green, central Swindon. Traditionally a commercial area, this was a catalyst project aimed at regenerating the local area as well as reinforcing a sense of place.

Benefits

Wharf Green has subsequently transformed into a popular space that hosts regular events.

Implementation

This seating planter was built from durable hardwood with stainless steel corner edge detailing and feature lighting. It was designed as an innovative piece of street furniture. It was designed to enhance the newly created events space.

Applying in London

Beautifully detailed and durable street furniture should be encouraged everywhere in London.

Key functions:
### A family of benches as a unifying element

**The High Line**  
New York, USA

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Benefits</th>
<th>Implementation</th>
<th>Applying in London</th>
</tr>
</thead>
</table>
| New York’s High Line is a world-famous redevelopment of a disused heavy rail viaduct as a public park, with high quality materials throughout. | The ‘peel-up’ bench is an integral repeating element in High Line Park. These benches create a ‘family’ of design elements which are used not just for seating but feature as play elements and picnic areas.  
The family of benches acts as a unifying element that ties disparate spaces together and is reflective of the historic use of the High Line. | A family of benches have been created through the use of a similar form and a consistent palette of materials, ie wood, stainless steel and natural stone. | Street furniture families should be used in London to enhance local character. |

**Images courtesy of Aleksandra Grabowska**
7.7. **Art**

7.7.1. The use of public art on the TLRN may be considered for an area where a special or decorative design feature or landmark will help to define a particular place and enhance people’s daily experiences. We will prioritise designs in which the promoter can demonstrate that the installation will make a positive impact on the quality and distinctiveness of the local setting.

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**Design considerations**

7.7.2. Public art is often designed to provide a landmark which people can identify and use to navigate. Artwork may therefore be appropriate in areas which lack other recognisable features.

7.7.3. Public art should not be limited to single objects or expensive finishes. The best design response is often the most simple: a repeated single element across a wider area, or a well-conceived adjustment to the ‘standard’.

7.7.4. Public art should be delivered in accordance with the Equality Act 2010 and should not pose a health and safety risk, restrict sightlines or pose a trip hazard.

7.7.5. Temporary art installations may be considered for certain situations, such as during the construction of wider street improvement works, or as part of a
temporary wayfinding strategy and, in exceptional circumstances, to promote major events.

7.7.6. The maintenance and management of public art must always be taken into account as part of the design process.

7.7.7. Designers should aim to support local artistic talent. In some cases, it may be appropriate to involve the local community in judging a design competition through the local authority’s arts coordinator.

7.7.8. Public art does not necessarily need to be expensive or complex. A simple transformation of everyday objects can be just as effective, such as this painted utility cabinet on Borough High Street.

**Location**

7.7.9. Design teams should ensure that the placement of the artwork complies with our Streetscape Guidance general location principles and that any structure does not overly impinge on footway space and impede pedestrian movement.

7.7.10. Public art may be considered across a wide range of settings including, but not restricted to: public areas where people gather, such as transport interchanges or public squares; highly visible traffic corridors and routes, for example on roundabouts; and distinct urban structures, such as bridges or subways.

**Delivery**

- Design teams or external promoters of public art should forward their recommendations to the SRG
- Planning consent may be required from the local planning authority

7.7.11. Design teams wishing to commission art for the TLRN should liaise with one or more of the following contacts:
- The relevant local authority’s arts coordinator – for any art project on the TLRN
- Our Art on the Underground team – for projects relating to London Underground station forecourts
- Art in the Open support organisation – for additional public realm art commissioning guidance

**Maintenance**

7.7.12. Any proposed intervention should not require significant changes to the existing maintenance regime. The standard of maintenance depends on many factors including the location, condition and function of the area or feature.

**Additional information**

Greater London Authority:
- All London Green Grid SPG, 2012
- The London Plan, 2011

**7.8. Bins**

7.8.1. The regular and convenient provision of bins on footways provide an important contribution towards supporting a litter free environment, but can also impact on the general appearance and quality of the streetscape.
7.8.2. Limited provision of bins in litter hotspots, where people congregate or near tourist attractions, can help to manage the problem, assuming bins have sufficient capacity and are regularly serviced.

7.8.3. We acknowledge the distinct character of different areas on the road network and so a single style of bin cannot be used across all environments. Streetscape Guidance recommends a restricted range of styles which relate to the surrounding context and the anticipated level of use, while ensuring that efficient cleansing regime standards are maintainable.

7.8.4. There are three types of bins that typically occur on the road network: the litter bin, recycling bins and trade refuse bins. This section details the types of bins, their placement, appearance and coordination with the local authority who generally provides and maintains them.

### Litter bins

7.8.5. Litter bins should have a simple aesthetic which is robust and functional. Conservation and special areas require heritage bin designs which better reflect the character of the area and should be finished in black.

7.8.6. Bins should be freestanding, however, wall-mounted bins may be considered in exceptional circumstances where there are footway constraints. Bins should be bolted down to discourage antisocial behaviour. The use of integrated cigarette disposal units may be considered.

7.8.7. The capacity of the bin needs to take account of the intensity of use to avoid contents spilling on to the surrounding footways.

7.8.8. Litter bins on the TLRN should be covered and have open-sided access, sufficiently wide for convenient disposal of litter. Bins should not have an open top, as they allow rainwater to collect and litter can blow away when full. Fully closing lid designs should also not be used as these can discourage use by being less sanitary and have additional maintenance issues.

### Location

7.8.9. Bins should be placed according to the following standards:
Litter bins should be placed a minimum of 450mm from the kerb edge
Bins should be positioned so as not to cause an obstruction on the footway
Access to adjacent properties should not be constrained
Visibility should not be obstructed
Maintenance and access requirements should be considered

7.8.10. Care should be taken when considering bin placement on narrow footways, to avoid reducing the footway width to less than 1.8 metres.

7.8.11. Bin placement should be coordinated with other street furniture, such that bins may be positioned adjacent to seating. Bus Infrastructure should be consulted regarding any proposal for bins near to bus stops.

7.8.12. Bins may be attached but not mounted on to lamp columns as they are prone to leaking and can pose a hazard for white cane users who cannot detect them.

Materials

7.8.13. The colour and finish should be consistent with other street furniture on the TLRN; black as standard.

- Cast iron or plastic bins are the preference on the TLRN
- Stainless steel should be treated as an exception to the palette. Designers should note that stainless steel bins with solid sides can stain and deteriorate quickly and are prone to flyposting
- Timber may be used in exceptional circumstances, adjacent to parklands or in rural areas, but requires SRG approval
- Plaques and ornate labelling are acceptable where approved by the borough
- Where graffiti and flyposting are a problem, a chemical-resistant low adhesion anti-graffiti finish should be applied to the surface of the unit
- Litter bins on the TLRN which enable advertising space require SRG approval

Planning

7.8.14. The placement of litter bins needs to be carefully considered, so that any provision is aligned to demand where there is a proven issue of littering. This is especially related to surrounding land use; for example, shops such as takeaway restaurants will likely require additional litter bin facilities.

7.8.15. Local authorities have borough specific policies regarding the provision of bins and the standards that are acceptable within the borough. Bins on the TLRN should be provided which align with both the borough standard and Streetscape Guidance. Design teams need to liaise with the relevant local authority to ensure that the design of the bin allows the local authority to carry out standard cleansing regimes.

Security

7.8.16. In high security areas, the use of blast-resistant litter bins with concealed ground fixings will be required. Alternatively no litter bins will be provided. Advice should be sought from our transport community safety managers within the Enforcement and On-Street Operations team.

Trials

7.8.17. Where routine monitoring of the TLRN identifies a lower level of cleansing standards than normal, the introduction of litter bins may be considered as part of a trial.
7.8.18. During the trial period the condition of each bin and the remaining capacity should be noted regularly to establish how the bin is being used and whether permanent provision would make a long-term contribution towards enhancing the quality of the streetscape.

**Additional information**

British Standards:
Publicly Available Specification (PAS) 68 and 69, 2005

**Recycling bins**

Image courtesy of Lambeth Council

7.8.19. Recycling bins are provided to encourage Londoners to recycle waste. Recycling bins can be combined with litter bins, however, when they are not the design should be of the same family yet distinctive to differentiate its purpose from other litter bins.

7.8.20. Recycling bins do not offer disposal facilities for commercial or retail establishments. The provision and management of recycling bins is the responsibility of the local authority, and governed by local policy. The demand for recycling bins is likely to increase in line with sustainability policies, the United Nations’ Agenda 21 and growing public awareness.

**Location**

7.8.21. Recycling bins should be located to provide convenient, safe access for residents, as well as adequate space for collection and emptying. Representatives from the local authority and TfL must agree a suitable location.

7.8.22. Recycling bins are most often positioned on wide footways but in some locations there may be an opportunity to position bins on-carriageway, replacing a car parking space. Recycling bins should not be installed where the footway width would be reduced to less than 3.0 metres. Bins should conform to Streetscape...
Guidance’s furniture zones and not be placed in special areas or where they detract from listed buildings or heritage features.

7.8.23. Care is required to ensure that traffic flows are not impeded by collection vehicles. Access to adjoining properties should be maintained.

7.8.24. Where collection vehicles are anticipated on the footway, the structural strength of the surface materials must be reinforced to avoid damage.

**Best practice**

7.8.25. The functional design of each bin is generally related to the type of material being recycled.

7.8.26. Recycling bins should be robust, fire-resistant and contain explanatory graphics where required. Bins should be leak-proof to avoid the staining of surface materials. Recycling bins should be secure to deter antisocial behaviour.

<table>
<thead>
<tr>
<th>Recycling bins with liquid crystal display (LCD) screens for information, advertising and data collection</th>
<th>Smart recycling bin London, UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity</td>
<td>Recycling bins are an essential item of street furniture; however, they are inherently large and can be obstructive. The smart bin uses its bulk to provide useful information via a large screen.</td>
</tr>
<tr>
<td>Benefits</td>
<td>This design was an attempt to get more out of the infrastructure of street furniture. This recycling bin also doubles up as public billboard displaying everything from the weather and news to transport information, adverts and stock prices.</td>
</tr>
<tr>
<td>Implementation</td>
<td>A trial of 8 bins have been placed in the City of London, however, their implementation has been stopped after the design was criticised for collecting footfall information and data from the smart phones of passers-by.</td>
</tr>
<tr>
<td>Applying in London</td>
<td>Image courtesy of Control Group</td>
</tr>
</tbody>
</table>
Trade refuse containers

7.8.27. Trade refuse containers are high capacity bins which ensure the safe storage of large quantities of waste from commercial properties. They are required by a wide range of commercial properties and so should be carefully arranged and managed to minimise their visual impact. Bins should preferably be located away from the TLRN, in servicing alleys and back streets.

7.8.28. The provision and management of trade refuse bins is the responsibility of the local authority and/or private contractors.

Location

7.8.29. Where unavoidable and upon agreement with ourselves, trade refuse bins may be located on the TLRN, assuming safe access can be ensured. They should be positioned where parking for collection and delivery vehicles can be provided and traffic flows are not impeded. The following criteria must be met:

- They should only be placed on footways if the width is to remain 3.0 metres or more
- Visibility sightlines must be maintained
- Metal refuse corrals may be used where a number of moveable bins are located together and need to be aligned and contained for safety and aesthetic reasons
- Bins should be located where access to adjacent properties will not be hindered
- Where collection vehicles are anticipated on the footway, the structural strength of the surface materials must be reinforced to avoid damage
Product specifications:

7.8.30. Trade refuse bins should be robust and fire-resistant, and contain explanatory graphics where required. Integrated discreet graphics are preferred to stick-on labels which tend to peel off.

7.8.31. Bins should have wheels to manoeuvre the bin to collection vehicles and incorporate a facility to enable them to be lifted using modern lifting equipment. Bins should be of a uniform style and colour where possible and coordinated with other street furniture.

7.8.32. Consideration should be given to the use of higher quality bins or screening when located in or near special or historic areas.

7.8.33. In high security areas, the use of lockable or sealed bins will be required. Advice should be sought from our transport community safety managers within the Enforcement and On-Street Operations team.

Implementation and maintenance

7.8.34. A licence from the local authority may be required before installation. Installation is the responsibility of the local authority or a private contractor. Regular collection and maintenance is required to ensure that overflow waste does not pile up next to the refuse container.
### Large underground containers to store household waste | Subterranean bins
---|---
**Location** | London, UK

#### Opportunity
This system is designed to meet the waste disposal need of a highly populated city in an efficient manner.

#### Benefits
By placing a street's rubbish in a large bin, refuse agencies need to make far fewer trips. Sensors in the bin alert the waste company when the bin is getting full. Rubbish collectors can plan the most efficient way of collecting; minimising the use of dustcarts, noise pollution and traffic build-up from the process. Placing the bins underground removes large bins from the streetscape, which are an eyesore and take up room in the public realm.

#### Implementation
The containers take up minimal space on surface level and store waste in a large container below ground. The system uses wi-fi, radio and radio frequencies to transmit information on the waste levels from the sensor.

#### Applying in London
These are already being used in the London Borough of Lambeth and could be rolled out elsewhere in London.

**Key functions:**

---

Image courtesy of Justine Ancheta
7.9. **Post and pouch boxes**

### Post boxes

7.9.1. Post boxes are a distinct and recognisable feature within the streetscape: the pillar box, a free-standing cast iron pillar; lamp post boxes which are smaller units mounted on a pole or column; and wall-mounted boxes, built directly into the structure of a building.

**Design**
- Wall-mounted boxes reduce street clutter and are the preference where practicable
- Pillar boxes have greatest capacity and have preference over multiple smaller lamp boxes
- Some heritage post box designs are listed

**Location**
- Post boxes should not be installed where the footway is less than 2,000mm wide
- They should preferably be placed within the furniture zone and should not obstruct sightlines to crossing facilities
- Post boxes should be placed on a hard surface to allow for easy emptying

### Responsibility

7.9.2. Post and pouch boxes are the responsibility of the Royal Mail.

### Authorisation

7.9.3. Planning consent is not normally required for a post box or self-service stamp machine. Consent must be obtained from the highway authority for installation of post boxes on the public highway. Listed building consent is required where there are proposals to alter or remove a listed post box, or those set in or adjacent to a listed building. Refer to Planning (Listed Buildings and Conservation Areas) Act 1990.

### Pouch boxes

7.9.4. Pouch boxes are used to store mail for onward delivery and are not accessible to the general public. The standard pole mounted design is functional but unsightly and creates significant additional street clutter.

7.9.5. There is a national rolling refurbishment programme removing linked post pouches.

7.9.6. When streetscape improvement projects are being undertaken, the Royal Mail should be contacted with a view to removing any linked post pouches within the scheme.

**Design**
- Typically 0.4 metres deep and 0.45 metres wide, pouch boxes are usually pole mounted
- Integrated pouch boxes within post boxes are preferable
The colour should match the surrounding street furniture palette

**Location**

- Where pouch boxes are to be located on the TLRN, they should be at the back of footway in recesses, ensuring that there is sufficient space to allow for cleaning
- Where approved within a conservation area, additional care should be taken to minimise the visual impact

**Authorisation**

7.9.7. Planning consent is required for the installation of new pouch boxes. Consent must be obtained from the highway authority for installation on the public highway.

### 7.10. Telephone boxes

**7.10.1.** Telephone boxes are a common and recognisable feature across the London streetscape, with several distinct styles in operation on the TLRN.

**Relocation or removal**

7.10.2. Where more telephone boxes exist than deemed necessary, or where a unit or units adversely impact on the quality and functionality of the streetscape, we should work with the operator to reach an agreement to relocate or remove the structure, while retaining adequate service coverage.

7.10.3. A telephone box may be removed when it has been disconnected from the network. This means that the operator is no longer satisfying the requirements of the electronic communication code and the unit can be construed as an obstruction.

**Application for new boxes**

7.10.4. Approvals should consider the impact of any new telephone box on the coherence and quality of the streetscape. Locations need to be assessed on their own merits, with due consideration for available footway widths, the impact on pedestrian and cycle desire lines and sightlines, existing footway demand from surrounding activities and buildings, availability of ATMs, and an analysis of local antisocial behavioural issues.

7.10.5. Telecommunication companies should provide details on location and placement so that we can make a robust and informed decision on the application. Under the Highways Act 1980, any shopfront affected by the unit should be consulted and their views taken into consideration.

**Location**

- Telephone boxes should not be installed where the footway is less than 2,000mm wide
- They should be located away from loading bays, service access points and crossovers and preferably located in recesses at the back of footways
- The doors should not open into the path of pedestrians
- If located close to the kerb, the box should be no less than 450mm from the kerb face
- Boxes should be positioned to ensure that there is sufficient space to allow mechanised cleaning
- Design teams should ensure that there is sufficient space around telephone boxes (1,850x2,100mm) for wheelchair access

**Products**

7.10.6. Telecommunication operators may use their own telephone box style and branding where deemed appropriate, but should be encouraged by the highway authority to coordinate the colour and placement of the box with other street furniture in the local area. The most common units in operation include:

**K2 and K6**

7.10.7. Traditional red telephone boxes are retained in many central and conservation areas of London. A large proportion of these are heritage-listed structures. They are no longer in production but can be moved to locations to replace other models as they are preferred by TfL to the KX or ST6 series in central areas.

**KX series**

7.10.8. The KX series was rolled out across London in the 1980s and 1990s. A small proportion of these have listed status. They allow for advertisements and are designed to be easier to maintain and better protect against vandalism than older structures. Multiple units may be considered for replacement with an ST6 in specific approved locations.

**ST6**

7.10.9. New open-sided units, such as the ST6, are now in use and include a 1.36-metre wide illuminated advert on one side. ST6 units should be fitted so that the advertisement faces the flow of traffic. The width of the unit can significantly impinge on footway space and so should not be fitted on streets where footway unobstructed widths would be reduced to below 2,000mm. A footway width of minimum 4,200mm is required but designers should also consider pedestrian flows to determine appropriate placement. They are not appropriate for conservation areas and require planning consent for illuminated advertisements.

**Advertisements**

7.10.10. Class 16 of Schedule 3 of the Town and Country Planning (Control of Advertisements) (England) Regulations 2007 (as amended by the Town and Country Planning (Control of Advertisements) (England) (Amendment)
Regulations 2011) gives deemed advertisement consent for an advertisement displayed on the glazed surface of a call box, other than a kiosk of type K2 or K6.

7.10.11. The following types of display of advertisements do not receive deemed consent:

- Illuminated advertisements
- Advertisements in conservation areas or where special advertisement controls are enforced
- Advertisements placed on more than one face of a single telephone box (other than the operator branding)
- Where three units or more are located next to each other, advertisements can only be provided on a maximum of two faces

Responsibility

7.10.12. Telephone boxes are the responsibility of the telecommunication operators. Service providers have a duty to provide an appropriate number of working phone boxes where most needed, under the Universal Service Obligation (USO). The Electronic Telecommunications Code (Schedule 2 of the Telecommunications Act 1984) gives operator companies the power to install and retain electronic communications equipment on the public highway. They should be adequately maintained by the operator to ensure good working order and cleanliness.

Authorisation

7.10.13. Telecommunication operators have to seek approval from the relevant local planning authority to determine whether prior approval is required for the siting and appearance of a new unit.

7.10.14. Listed building consent is required where there are proposals to alter or remove a listed telephone box, or those set in or adjacent to a listed building. Refer to Planning (Listed Buildings and Conservation Areas) Act 1990.

<table>
<thead>
<tr>
<th>Replacement of payphones with internet pylons</th>
<th>LinkNYC internet pylons</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City, USA</td>
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Opportunity

With an ever increasing use of smart phones and reliance on the internet, free public wi-fi is an increasing priority for New York.

Benefits

The LinkNYC programme aims to replace old payphones with a free public wi-fi infrastructure, available across New York. The kiosks will also have a touch screen interface where members of the public can use it to research locations and public amenities and it will also provide...
7.11. Pedestrian wayfinding

Vision and purpose

7.11.1. Walking is a great way of getting around London; it is free, healthy, environmentally friendly, and often the quickest option. Yet many people are put off by inconsistent signage and confusion about distances between areas.

7.11.2. We have developed ‘Legible London’ to tackle these issues and help residents and visitors walk to their destination quickly and easily. This award-winning map-based system is integrated with other transport modes so when people are leaving the Underground, for example, they can quickly identify the route to their destination.

Location

7.11.3. Design teams should provide wayfinding guidance to aid navigation and encourage people to walk rather than seek out public transport, while aiming to minimise the total number of pedestrian signs used to reduce additional street clutter.

7.11.4. Signs should be located where users start their journey as a pedestrian, at key decision points and landmark destinations.

7.11.5. Signage should be located to minimise physical intrusion within the streetscape, but should be sufficiently visible so as to serve its intended purpose.

7.11.6. All pedestrian signs on the TLRN should comply with TSRGD standards.
7.11.7. Where pedestrian routes cross the TLRN and are signposted using local authority signs, the signage strategy may be continued on the TLRN subject to compliance with TSRGD.

7.11.8. Wayfinding signs do not need to be illuminated by internal or external lighting, or retroreflective materials.

**Legible London**

7.11.9. Since its introduction in 2007, the Legible London signage system has become the TLRN standard for pedestrian directional signage.

7.11.10. The system provides a consistent and connected approach to the design and layout of pedestrian wayfinding across London.

7.11.11. Scheme designers should follow a systematic approach to locating Legible London signs in the urban realm by drafting a placement strategy based on the Legible London Design Standards (2010).

7.11.12. A range of approved signage products are available including free-standing map-based totems and fingerposts. Selecting an appropriate product from the family of wayfinding signs available will depend on the scheme objectives and footway space available.
Wayfinding ‘liths’/map-based totems

7.11.13. On-street ‘liths’ include finder maps (a five-minute walk) and planner maps (a 15-minute walk) taken from the Legible London basemap, complete with 3D buildings, walking circle, ‘you are here’ marker and off-map tabs along with a panel for directional information.

7.11.14. ‘Liths’ should typically be located within the furniture zone, with the map face oriented down the street. Placement should be a minimum 450mm from the kerb edge, and increased to 800mm on flush surfaces or where road speeds are 40mph or greater. Designers should avoid locating signage where vehicle overrun is likely, such as near inset loading bays or on tight street corners.

7.11.15. Sufficient space should be provided on both sides of the sign for pedestrians to view the ‘lith’ from either side. ‘Liths’ should not be placed facing a wall, and this placement will only be approved in exceptional circumstances.

7.11.16. A temporary on-street cover should be provided once the placement has been agreed and the foundation has been installed. Heads-up mapping artwork can then be produced from this location and the sign installed once manufactured.

Fingerposts
7.11.17. Fingerpost signs may be used in particularly complex urban environments at junctions, or as a simple route confirmation sign. However, map-based Legible London products are to be prioritised over fingerposts. Fingerslats can be installed on existing lamp columns where possible, or at low level on pedestrian guardrails.

7.11.18. Designers should ensure that the sign allows for a minimum clearance of 450mm away from the kerb edge for any part of the sign, including the fingers. This can mean that the pole for the sign needs to be mounted more than 1,000mm from the kerb edge, which will not be appropriate in many situations.

7.11.19. The use of fingerposts is limited to areas with a sufficiently wide footway such that the post does not impede the footway clear zone or the sign overhang the carriageway.

7.11.20. Blue TSRGD approved fingerposts exist on parts of the TLRN and should be maintained until replacement is required. When replacement is required, Legible London branded signage should be used to maintain consistency across the TLRN, unless it forms part of a wider borough route signage strategy.

**Information signage:**

- Any third party information signage proposed for the TLRN which does not follow the Legible London template, requires Legible London programme team consent
- Non-standard products may be considered in exceptional locations for heritage areas, landmark sites, or to fit with adjoining signage strategies
- All information boards must be in accordance with TSRGD, Schedule 4

**Authorisation**

7.11.21. Only TfL has the authority to erect pedestrian signs on the TLRN. Permission should be sought from the property owner for erecting signs on to building frontages.

**Additional information**

Legislation:

Traffic Signal Regulations and General Directions (TSRGD) 2002 and 2015

Transport for London:

Legible London Design Standards, 2010