

Cycle Hire Street Furniture Final Design Rev A

1. Purpose of this Note

This note provides information about final designs for the London Cycle Hire Scheme street furniture, namely the terminal and docking points.

It should be read in conjunction with drawings CHS-DP-03 Rev 2 and CHS_2_T Rev 3 and the updated Indicative Layout Drawings provided in the submission package.

2. Background

The Cycle Hire Scheme is being introduced within Central London, with launch in summer 2010. The Scheme will allow people to hire a bicycle from a docking station, use it as desired, and return it to either the same or another docking station. Within the Scheme area, approximately 400 docking station sites at a density of around nine sites per square kilometre are required.

Each docking station comprises a terminal and docking points (the 'street furniture'). The terminal will control the locking and release of Scheme bicycles, enable payment of subscription fees and user tariffs, and provide way-finding mapping and information about the local area and the location of other docking stations. The docking points will each secure one bicycle when docked.

It has always been understood that TfL would appoint a service provider to design, build, operate and maintain the LCHS and consequently the detailed design of the street furniture would be undertaken following their appointment.

To deliver the Scheme by summer 2010, it was necessary to submit planning applications for docking stations prior to appointing the service provider. The applications were prepared using the best information available at the time.

In August 2009 Transport for London (TfL) appointed Serco Group PLC (Serco) as the Scheme service provider. Serco are working with the Public Bike System Company (Montreal) to develop the LCHS based upon its 'BIXI' Public Bike System which successfully operates in Montreal. In December 2009, the final details of the street furniture were provided, including materials, finishes and livery.

This note has been prepared to accompany submissions to boroughs in relation to the final street furniture design.

3. Docking Point Design

a) The indicative design

As noted above, at the time the applications were submitted, the final design of the docking point was not known, as both the bicycles and docking points are supplied by the Scheme Operator. As described in the Planning, Design and Access Statement (PDAS), there are a number of alternative designs on the market. European procurement specifications prevented TfL from specifying a particular design because it would prejudice the procurement process by indicating a preferred supplier.

However a number of design principles were established for the London scheme, as set out in the PDAS (page 7). These were that each docking point would:

- have an Oyster or smart card reader;
- secure one bicycle;
- be designed to discourage use by non-Scheme bicycles;
- allow for 0.75 metres of width between the centre point of bicycles;
- be a maximum of 1.05 metres in height and minimum of 0.75 metres in height;
- match the terminal palette of colours and materials;
- have a foundation depth not exceeding 0.45 metres; and
- incorporate a miniature TfL roundel.

Indicative drawings and images in the PDAS provided an indication of a possible design.

b) The final design

The final design of the docking point is shown in Figure 1, with photographs of the prototype shown in Figure 2.

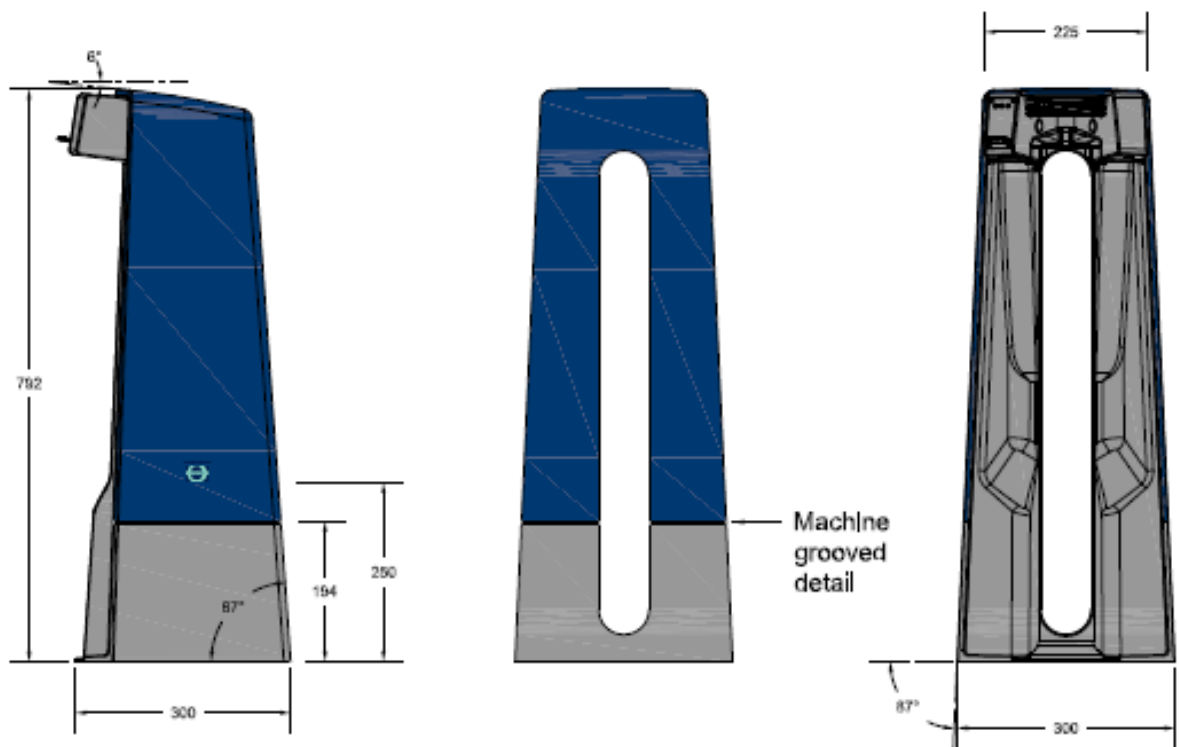


Figure 1: Final docking point design



Figure 2: Docking point with docked bicycle

As can be seen from the photos, the bicycle will be wheeled into the docking point where it will slot firmly into a secure locking cassette. The locking cassette of each docking point will incorporate a membership key reader to allow quick release of bicycles for registered users.

The docking points will be 0.792m tall, with a maximum footprint of 0.3m x 0.3m, as shown in Figures 1 and 3.

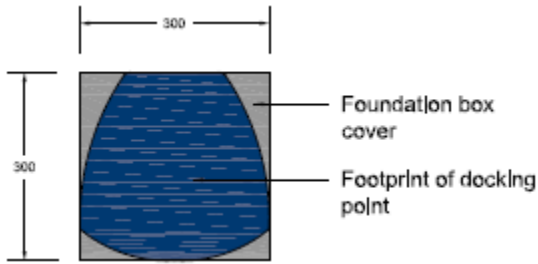


Figure 3: Footprint of docking point at base

c) Fixings and finish to paving

The docking points will be secured to a square foundation box, the cover of which will be finished to match the colour of the adjoining paving. The square foundation box has been designed having regard to townscape considerations and the importance of achieving a consistently neat finish of the surfacing around the docking points in particular, as shown in Figure 4.



Figure 4: Examples showing finish achievable with the foundation square box cover

As can be seen from the examples in Figure 5 it is difficult to achieve a consistent standard of finish when street furniture has curved shapes with a small radii. In streetscape terms it is important to achieve a consistent finish for each docking point because of the cumulative visual impact of a line of docking points. Hence for the docking stations the square foundation box is considered the most appropriate design.



Figure 5: Examples of paving finishes around curved street furniture

d) Docking station layout

As described in the PDAS, the docking points will each secure one bicycle and be laid out to provide 0.75 metres between the centre point of the bicycles once docked, as shown in the updated Indicative Layout drawings included in the submission package and shown in Figures 6 to 8.

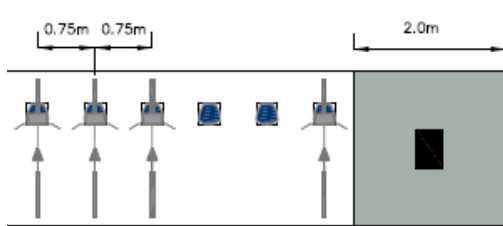


Figure 6: Linear docking station layout

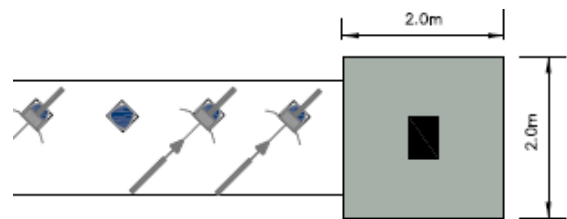


Figure 7: 45 degree angle layout

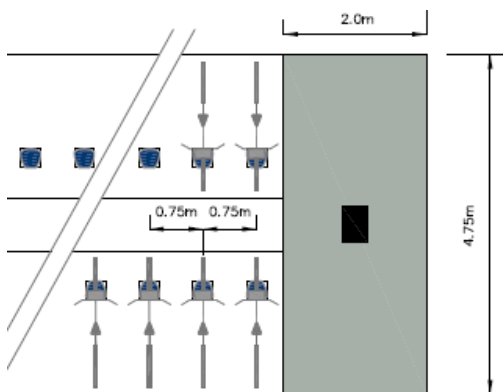


Figure 8: Double row docking station layout

4. Terminal Design

The design of the terminal was approved by the original planning consent for each docking station.

In finalising the functionality and operation of the terminal, there have been some minor changes to the layout of information on the terminal, many as a result of stakeholder comments, refer Figure 9. The changes include:

- Clarification of the docking station naming convention to provide the locality and street;
- Relocation of the directional information at the top of the blue panel to improve visibility;
- Relocation of the traffic regulation signage to a higher position on the terminal to improve visibility; and
- Clarification of the means by which the mapping panels will be illuminated (by push button).

These changes are considered *de minimis*.



Figure 9: Final terminal design

5. Materials, finishes and livery

The palette of materials and finishes for the street furniture was presented in the Planning Design and Access Statements submitted with the planning applications (at pages 5 and 7, for the terminal and docking points respectively). The colour palette proposed for the terminal was also shown on the Terminal drawing (CHS_2_T Rev 2) submitted as part of the applications.

The materials and finishes proposed and subsequently approved are:

- Base and trim - brushed stainless steel, steel or aluminium
- Main panels - stainless steel, steel or aluminium sheet with vitreous enamel finish
- Information panels (terminal) - toughened glass

Following the appointment of Serco as the service provider and development of the detailed street furniture designs the materials and finishes have now been confirmed and are summarised in Table 1.

Table 1: Final materials and finishes

	Terminal	Docking Points
Materials	<p>Cast aluminium base, frame and panels.</p> <p>Toughened glass mapping, information and roundel panels.</p> <p>Thermoplastic top cap.</p>	Cast aluminium
Finishes	<p>Powder coat (dark blue and silver grey) with clear graffiti resistant top coat.</p> <p>Plastics are self coloured (i.e. not coated or painted).</p>	Powder coat (dark blue and silver grey) with clear graffiti resistant coating.

Photos of the prototype docking point showing the final materials, finish and livery are provided at Figure 10.



Figure 10: Docking point prototype with final materials, finishes and livery

The main change from the materials originally proposed within the planning applications is the replacement of the vitreous enamel finish with a powder coated finish with graffiti resistant coating.

All aluminium components will have a clear surface pre-treatment to enhance the natural anti corrosion performance of the material and adhesion of the powder coat. Certain aluminium castings will be heat treated to give the required strength and resistance to surface damage from general wear and tear.

Further technical information on the finishes and materials can be provided if required.

The final colour palette is consistent with that submitted in the planning applications and there is a uniform livery for all street furniture, as summarised in Table 2. As shown in the figures above, the livery incorporates contrasting colours, to assist those with visual impairment.

Table 2: Final Colour Palette

	Terminal	Docking Points
Main body	Dark blue (Pantone 296c)	Dark blue (Pantone 296c)
Base and Trim	Silver grey (RAL 9007)	Silver grey (RAL 9007)
Roundel	Light green/ turquoise (Pantone 338)	N/A
Roundel Bar	Blue (Pantone 072)	N/A

Given their minor nature, the variations to the materials, livery and colour palette are considered non-material changes to the approved scheme.

6. Conclusion

The final design of the docking point accords with the design principles set out in the Planning, Design and Access Statement. Viewed in context as part of a docking station (refer Figures 11 and 12), the indicative and near final designs appear very similar and an updated artist's impression of the final design is currently under preparation and will be submitted once available.



Figure 11: Artist's impression of indicative design (submitted with original applications)



Figure 12: Artist's impression of near final design. The final design for the docking point has a silver locking cassette rather than an additional silver 'cap' and there are very minor changes to the layout of information on the terminal (refer section 4).

The final design, materials, finishes and livery of all of the Cycle Hire Scheme street furniture have been developed in close consultation with Transport for London's design standards team who have extensive experience in the development and maintenance of street furniture in the London street context.

The result is a high quality design, detailing and finish that will be robust and sustainable and which is suitable to the use of the furniture and its location within Central London's public realm. The differences between the approved and the final design are not considered material in the context of the approved scheme.

7. Further Information

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