

Bicycle Hangars Review

Summary:

Bicycle parking can be difficult in areas of high density housing, such as Victorian terraces, multiple occupancy accommodation, multi-storey flats or residential housing. Where bicycle storage space is limited they are likely to be kept indoors, in hallways or living rooms, and difficult to access, often having to negotiate stairs. Such challenges discouraging people from riding those everyday journeys.

On-street bicycle parking, in the form of 'bicycle hangars', provide a secure, accessible and convenient means of bicycle storage. Bicycle hangars are a robust steel structure that is typically secured to the road, in place of a car parking space. Each hangar can hold up to six traditional bicycles with access by key, card or app. Schemes have been installed in major cities around the country where they have proven extremely successful, with lengthy waiting lists and requests for more installations.

The installation of bicycle hangars on the streets will require local authority approval, including consultation and the relevant Traffic Regulation Order. Funding, specifying hangar locations and the appointment of contractor area also key stages involving the authorities.

"Bike parking at home is a crucially important factor in getting more people to ride. If an everyday parking option is not convenient, secure and low-cost, they will simply decide it's too much hassle." Said Chris Boardman when Greater Manchester Cycling and Walking Commissioner.

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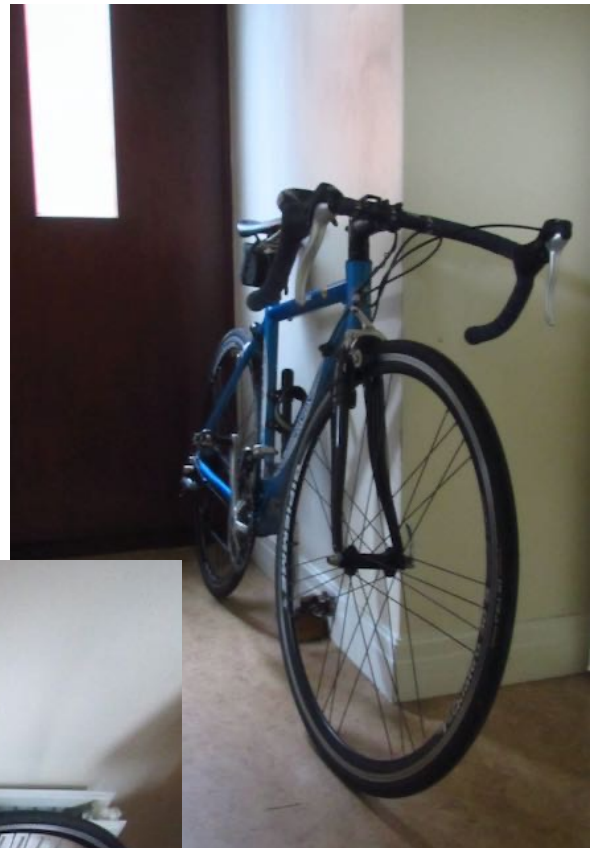
1. Problem

Residential bicycle storage can be defined as a place or facility for longer term or overnight storage of a bicycle; providing protection from the weather, is secure, accessible and convenient.

Bicycle storage can be a challenge for many people living in high density housing; apartments, high rise accommodation, traditional victorian terraces, residential accommodations, etc.

Having limited or no private outdoor space for sheds or garages where bikes can be stored, people living in such high density housing resort to either storing them inside of their accommodation or outside fastened to street furniture or drainpipes, with the risk of theft or damage and deterioration through exposure to all weathers. Those bikes stored inside may be in corridors, hallways, stairwells causing access difficulties, or in living accommodation taking up valuable space, but always making availability of the bike difficult for those daily journeys and frequently dangerous in carrying the bike up and down stairs.

"Bike parking at home is a crucially important factor in getting more people to ride" says Greater Manchester Cycling and Walking



Commissioner, Chris Boardman *"If an everyday parking option is not convenient, secure and low-cost, they will simply decide it's too much hassle"*

2. Solution

'On-street bicycle parking' addresses the problem of cycle storage in high density residential areas by providing a secure, enclosed container. Generically known as 'bike hangar' these storage facilities are metal containers, about half the length and less than the height of a family car. They are fastened to a solid surface, frequently to the road in place of a car parking space. A side of the container either lifts or slides to provide access to the internal bike racks,



usually accommodating six bicycles with features for chaining the cycle too. The hangars are usually locked by key but electronic token (fobs, smart cards) or smart phone apps can be used. Aesthetically bike hangars are generally finished in a silver/grey protection of the structure and green or grey steel sheet covering, however some have been supplied with other finishes including advertising.

Bike hangars can be provided without the internal racks for the storage of adapted bikes and small cargo bikes. Variations of the bike hangar are available from some manufacturers to accommodate larger adapted bikes and cargo bikes.

The latest iteration of bike hangars being tested and accredited to an industry standard; Sold Secure Bicycle Gold Accreditation. The respective product brochures indicating features that provide security, such as; tough sheet steel covering, high spec. bolts, double layered solid side panels, high security grinder resistant lock and anti-lever plates.

3. Background

The first 'bike hangars' started to appear on the streets in about 2010 and by 2015 many London boroughs were starting to install significant numbers. Transport for London currently claim there are more than 10,000 bike hangar spaces across London's boroughs. A further 10,000 bike hangar spaces in cities around the UK, including Edinburgh, Glasgow, Salford, Oxford, Bristol, Portsmouth and Brighton and Hove, yet there are claimed to be more than 51,000 people on the waiting lists¹ across the country. Bike hangars are not particularly well understood outside of the areas where the schemes operate, which makes the waiting lists surprisingly large. Notable cities that, so far, have

¹ <https://www.standard.co.uk/news/london/bike-storage-councils-parking-hangar-uk-b960966.html>

no bike hangars are Birmingham, Cardiff, Liverpool, Manchester and Newcastle, despite many endeavouring to increase active travel.

The take up of bike hangar parking schemes is invariably high, the Glasgow scheme implemented in August 2021 initially had an occupancy of 93%, rising to 98% in April 2022. As popularity of the scheme has grown so too has the waiting list, with 1500 now waiting for spaces. As the demand outstrips supply the authority is being encouraged to expand the scheme beyond the original planned geography, adding additional units to create more capacity, this is seen in most areas where on-street parking has been implemented.

A review of research papers investigating residential bicycle parking drew the following broad conclusions²;

- *High quality parking facilities (sheltered and secure) and convenient location were preferred by cyclists;*
- *Bicycle parking 'appeared to be a determinant of cycling for current and potential cyclists' while a lack of parking or inadequate parking discouraged bicycle use;*
- *Quality and convenience (ease of access and proximity) were associated with levels of bicycle use - more convenient and higher quality cycle parking facilities are associated with more bicycle use.*

Emphasising the need for high quality convenient bicycle parking in areas of high density residential housing, if people are to be encouraged to ride bicycles for utility journeys.



² Residential Cycle Storage - V1.4, Pettycur Consulting Ltd, 2022.
November 2022, V3

4. Supporting Evidence

European research has shown that cities with high cycle mode share tend to have a higher number of minimum bicycle parking spaces in apartment buildings and cities with lower car mode share tend to have fewer minimum car parking spaces per apartment³, see figure 1. Thus providing secure bicycle parking facilities would appear to encourage a greater mode share.

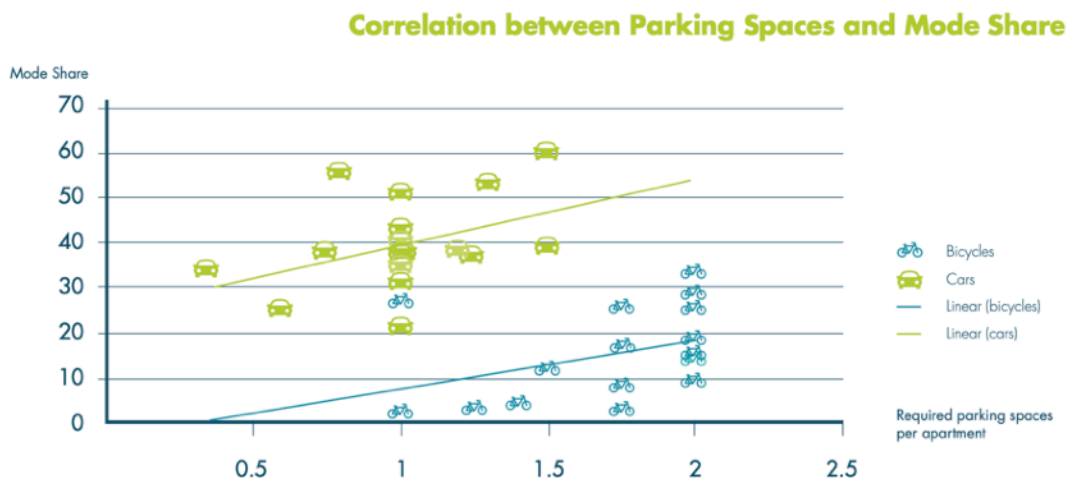


Figure 1 Correlation between Parking Spaces and Mode Share

There were a reported 77,000 bicycle thefts in the year up to April 2021, equivalent to more than eight thefts every hour. Official statistics indicate that 54% of the reported bicycle thefts are from the home, representing about 42,000. How many could have been prevented by using bike hangars? An insurance company report indicated that only 19% of bicycle thefts are reported to the police, which suggest around 400,000 bicycles are stolen each year. This level of disruption to peoples lives; upset, finding a replacement, more expensive locks, concern with parking locations, and financial loss will all lead to some finding alternative means of transport. The provision of secure bike parking facility convenient to domestic premises should prevent many thefts and allow people to continue riding their bikes.



³ Making Buildings Fit for Sustainable Mobility, European Cycle Federation. F Kuster, M Peters. November 2018

5. Implementation

Most schemes are implemented by local authorities who contract to the manufacturers, to supply and install, manage the scheme, customer relations, payments, security access, and equipment maintenance. The location of hangars being agreed between communities and the local authorities, with guidance from the suppliers. Customer enquiries are directed to the suppliers who manage all questions, allocation and access to hangars. The majority of schemes will closely follow these established formats but there is no reason why another group or organisation should not undertake such a scheme.

6. Consultation

The introduction of bike hangars in the streets requires the local authority to consult on the intended change. As with most changes to our living environment the introduction of bike hangars causes extremes of views to be voiced both for and against. There is now a wealth of information about their installations and how they are perceived in the environment, which helps inform the authorities of the relevance of complaints. Examples of the overall themes from the Hounslow bike hangar consultation comments are shown in Appendix A. There are many vested interests in keeping our streets available for free car parking but we must remember that each bicycle stored in every bike hangar potentially represents fewer car journeys, less congestion and less pollution.



7. Traffic Regulation Order

Traffic Regulation Orders (TRO) are a means by which the authority manage change to the streets which they manage. They can be used to change many aspects of the roads such as; parking restriction, speed, etc. Trials can be evaluated with Experimental Traffic Regulation Orders which can be implemented for a period of 18 months but decisions must be made within that period whether the change is to be made permanent or removed.

8. Financial

The cost of bike hangars are difficult to establish as most have been provided via contractual arrangements between authorities and manufacturers but the basic cost would appear to be in the region of £5000 per unit. Details of the Edinburgh, Secure On-Street Cycle Parking Project are available online⁴ and indicate a contract value of £576,000 for the installation of 180 units. There are other costs for the authorities, including managing the consultation and the TRO.

⁴ https://democracy.edinburgh.gov.uk/documents/s33314/7.3%20-%20Secure%20On-Street%20Parking%20Proj%20Further%20Ext%20220421_v3.1.pdf

The cost of renting a cycle hangar parking space varies considerably depending on the authorities perspective and desires to encourage people to ride bikes. A media report summarised the issues and the rental charges of the London boroughs⁵; the lowest in the order of £12 per year while the most expensive of £107.25 per year, most requiring a key deposit of about £25. The average rental charge in London is £59.90 while the charge for a space in Edinburgh and Glasgow is £72 per year and that in Portsmouth has been set at £30 per year. The rental charges generally cover the annual management and maintenance of hangars, usually provided by the manufacturers although some authorities take on these functions. The management includes operating the waiting list, allocation of spaces, dealing with customer enquiries, complaints and reports from users and the public. It is disappointing to find that car parking permits in these London boroughs are considerably cheaper than the bike parking spaces.

9. Way Forward

Residential bike storage on its own will not lead to an increase in cycling but the ability to store a bike where it is secure and protected from the weather is such a basic prerequisite for bike ownership that without it cycling will remain out of reach for a significant proportion of people⁶.

The provision of on-street bicycle parking in the form of 'Bike Hangars' addresses the difficulties of parking bicycles in areas of high density housing. Bike hangars are secure, readily accessible and, if considerately located, in close proximity to the users. Increasing the opportunities for people to ride their bikes for many more journeys; shopping, commuting and even for leisure.

Implementation of such schemes will rely on the demand being demonstrated, with community groups and cyclist coming together to show there is a need for such facilities and the benefit they would bring. The rising cost of living, especially fuel cost, will cause many people to reconsider their transport mode with the bicycle being an economic option for short journeys. Also, encouraging more people to ride bicycles will ease congestion, reduce air pollution and improve health.

10. Manufacturers

Cyclehoop bikehangar/	https://www.cyclehoop.com/product/shelters-canopies/
Cyclepods	https://www.cyclepods.co.uk/cycle-hangar/
Cycle-works	https://cycle-works.com/products/cycle-works-streetstore/
Falco falcopod-bike-hangar.html	https://www.falco.co.uk/products/cycle-parking/cycle-lockers/
Lockit-safe	https://www.lockit-safe.co.uk/product/bike-nest/
Streetdock solutions	https://www.bikedocksolutions.com/street-dock

⁵ <https://www.mylondon.news/news/north-london-news/londons-most-expensive-borough-store-23733471>

⁶ Residential Cycle Storage - V1.4, Pettycur Consulting Ltd, 2022.

Appendix A - Consultation Overall Themes

Comments (Number of responses in Brackets)	Officer response
Support for	
Can I be reserved a space within the hangar?	<p>Spaces are offered based on a 'first come first serve' basis from the council's contractor Cyclehoop. Cyclehoop manages the requests and more information can be found at: https://www.cyclehoop.rentals/types/bikehangars</p> <p>If residents expressed an interest during the consultation period, then their request has been noted. They will be contacted prior to installation. If there was an existing hangar in the same location that generated a waiting list, those on that list will be offered a space first.</p>
Can you install a second hangar on road X/Y?	Additional locations have been noted and will be considered in the near future, subject to funding
Opposed	
The bike hangars look ugly/is an eye sore	The hangar is designed to maximise bike parking space while minimising its visual intrusion. It is accepted that there is differing opinion on the aesthetics of the hangar, and the council communicates feedback to the supplier regarding future design changes.
This is proposed to be installed within a conservation area	The issue of installing bike hangars within a conservation area has been discussed further with the Council's Principal Conservation Officer, who has confirmed that the hangars do not detract from the architectural or historic character or appearance of a street. The hangars are designed specifically to sit within a row of parked vehicles and are less visually intrusive than a vehicle parked in the same location.
The rental price (per year) for a space within the hangar is too expensive	The hangar is not installed to generate revenue, rather to provide safe and secure cycle parking in areas of flats or housing where such options are limited within properties. The cost of the hangar covers the administration fee for registering users and supplying keys, alongside two annual maintenance inspections. The council's ambition is to make this as affordable as possible for residents. The council currently subsidises the cost of renting space.
This is a waste of funding	The council receives an annual grant allocation from Transport for London to deliver the aims set out in our Local Implementation Plan (https://www.hounslow.gov.uk/downloads/file/2159/hounslow_local_implementation_plan_lip), which focuses on transport schemes that deliver a number of key aims, including 'Healthy Streets and Healthy People'. A small proportion of this funding is allocated to improve cycle parking across the borough, of which this is one such scheme.

Comments (Number of responses in Brackets)	Officer response
<p>This is installed within a CPZ (Controlled Parking Zone). It will take up our car parking spaces</p>	<p>Local car parking pressures are recognised and are carefully considered before proposal. Most locations that were proposed within a parking bay were chosen due to the fact there was no other alternative locations that were either safe or fell within the design guidelines. The proposals aim to balance the needs of multiple residents, by providing secure and accessible bike parking for residents who either already use their bikes for local journeys or may wish to do so more in the future.</p> <p>The bike hangar equates to half a car parking space while storing 6 bikes - so it is an efficient use of space on a road where there is clear demand for improved cycle parking. This approach aligns with the council's priorities to encourage more sustainable forms of transport, as set out in our Local Implementation Plan (https://www.hounslow.gov.uk/downloads/file/2159/hounslow_local_implementation_plan_lip)</p>
<p>This will incite anti-social behaviour and people will vandalise the hangars</p>	<p>While there have been reports of vandalism for bike hangars installed away from the public highway, this is often due to their positioning and a lack of natural surveillance. No such issues have been reported to date with hangars located on roads within the borough, but this remains an issue that the council will monitor going forward.</p>
<p>Are the bike hangars safe/secure?</p>	<p>Hangars are secured by padded steel locks, which requires a substantial effort and noise to be broken into. The locations chosen always consider safety as one of the first measures and are chosen where they are well overlooked by one or more of the following factors: street lighting, CCTV and overlooked by neighbouring houses.</p> <p>Additionally, the council is always looking into more secure and advanced ways to minimise the threat of theft.</p>