

HomeBikePark

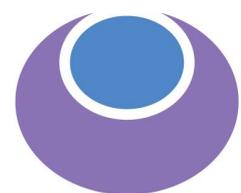
Hackney Residential Cycle Parking Project



Report on pilot project 2004-2006

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 **London Cycling
Campaign in Hackney**



Neighbourhood
Renewal Unit

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Introduction

HomeBikePark project

The Hackney Residential Cycle Parking Project, known as HomeBikePark, was set up by the London Cycling Campaign in Hackney to kick-start the provision of convenient and reasonably secure cycle parking for residents in the borough.

The project was granted funding of £20,000 in 2003/4 by the Transport Sub-Partnership of the Hackney Strategic Partnership. This funding was received at the very end of the financial year in question, and so effectively the installations associated with the project were largely conducted during the 2004/5 financial year, and have been monitored during 2005/6.

Aims:

- To research, devise and test a range of different cycle parking solutions
- To put residential cycle parking on the agenda for policy makers, housing providers, tenants and residents and their associations.

Targets and outcomes

	<i>Target</i>	<i>Actual</i>
Number of locations	6	9
Number of parking spaces	40	54

Case studies

NB All costs are inclusive of VAT

Ardleigh Road, N1

Description of premises

Housing association (Circle 33) two-bedroom maisonette (end of terrace) in Ardleigh Road, London N1.

Flat is accessed via two flights of stairs leading up from shared hallway. Stairwell is narrow making it very awkward to carry a bike upstairs. Shared hallway is cluttered with furniture belonging to neighbour, with whom the resident did not have a friendly relationship.

Resident has access to several square metres of grassed area down the side of the terrace, as well as to the front garden, which is hard standing.

Resident's requirement

Provision for two bicycles required.

Solutions considered

Option 1 (implemented)

Pulley system inside flat

Option 2

External locker

Resident seemed keener on internal storage, and external locker would have required the installation of hard standing or other anchoring solution, so we went for option 1.

Implemented solution

Two pulley systems were installed on ceiling above stairwell. Hardware used was purpose-designed Pro-Stor Hoist Monster bicycle hoists. These were bought from REI.com in the United States of America, because HomeBikePark was unable to locate supplies of suitable manual bicycle hoists either in the UK or Europe. The supply situation has since improved –see HomeBikePark Manual]. Extra-long pulley rope had to be sourced because of the higher than standard height of the 'pull'.

Installation procedure

Two installers were required because of ladder work. First job was to locate the position of the ceiling joists into which the hoists would be fixed. Careful measurements were then made so as to provide the maximum possible offset between the two bikes when both raised, within the limitation of the narrow stairwell. The hoists were then pre-mounted on board as per manufacturer's recommendations and the board then screwed into the joists. The hoists were threaded with the extra-long pulley ropes and tested with bikes. The extra-length pulley ropes were discovered to be susceptible to twisting, so had to be removed and replaced with a twist-resistant alternative bought from Rope & Marine. The re-installation resulted in a high labour cost for this job.

Cost of installation

Materials	£117.94
Labour	£360.00
Total	£477.94
Bikes parked	2
<i>Cost per bike</i>	<i>£238.97</i>

Outcome

The residents unfortunately found it too difficult to operate the hoists, which were effectively two floors above the bottom of the stairs where the 'pull' began. HomeBikePark removed the hoists and offered to install an external locker by the side of the building as an alternative, but the resident had by that time decided to move house.

Conclusion

On reflection, this was far too challenging a choice of location to test hoists. A standard hallway would be a better location, rather than a staircase in a conversion –see Foulden Road for a successful installation of hoists.

Banister House, E5

Description of premises

1930s estate operated by Hackney Housing. These flats are generously designed and are fortunate each to have a separate storage room or 'shed' on their landing, close by their front doors. However the residents had had cycles stolen from their shed because the only security was an easily exploitable night latch.

Residents' requirement

Parking for two bicycles belonging to one two-adult household.

Solutions considered

Option 1: implemented	Improve locks on existing storage sheds
Option 2	Install cycle parking compound under stairs
Option 3	Install external lockers in courtyard

Solution implemented

Option 1 chosen because least expensive and intrusive. A mortice lock could easily be installed on the sturdy existing doors. Discussions with the Chair of the TRA and with Hackney Trading Services touched on the option of installing replacement doors, but we considered that the existing timber doors, which are very thick and have chunky self-closing hinges, would be sufficient once the lock was improved, particularly because they open outwards and therefore can't be kicked in.

We considered providing two front-wheel holders and one trough inside the shed to hold the bikes up and offset from each other to avoid handlebar tangles, but in practice there was no problem with simply wheeling the bikes in and leaning them against each wall.

Installation procedure

Local locksmith supplied and installed a mortice lock, which took less than an hour. Resident kindly provided electricity for installer's power tools.

Cost of installation

Materials & labour	£141.00
Total	£141.00
Bikes parked	2
<i>Cost per bike</i>	<i>£70.50</i>

Outcome

Residents are very happy. "The lock has been great - we are using the shed most days - the bikes stay out there all the time and we feel confident with that. We have put a couple of shelves up so have made it in to a bit of a storage area - so it's been a great success."

Conclusion

Simple solution offering adequate security and adhering to the principle of re-using existing facilities where possible.

Foulden Road, N16

Description of premises

Mid-terrace late Victorian house in multiple occupation, with narrow hallway and shallow (2-3 metres) front garden. Run by housing co-op.

Residents' requirement

Provision for five bicycles, to clear the hallway so that it can be accessed easily especially by new parents with buggy.

Solutions considered

- Option 1** Ceiling hoists in hallway.
- Option 2** Wall fixings for horizontal storage on wall in hallway.
- Option 3** Bike bunker in front garden.

Solution implemented

Option 1 and option 3 combined to provide the required five spaces.



Before: hallway dominated by a jumble of bikes

Installation procedure

Ceiling hoists: Joists were located in the hallway, and suitable spacing measured and calculated to provide clearance for door and between bicycles on the two hoists. Hoists were installed according to the manufacturer's instructions and using provided fixings. Strength of hoists tested far beyond working tolerances. Installed by two installers, one paid and one volunteer (a handyman resident), working for two hours each.

Bike 'bunker': A Trimetals Bicycle Store was assembled according to the manufacturer's instructions by a lone installer, a job which took eight hours overall including transport from equipment store and purchase of fixings and drill bits. Next day a second installer joined the first for two hours to help insert ground anchors (by Terra-Lock Ltd) onto which the bicycle store was manoeuvred and bolted.



After: happy resident, uncluttered hallway



Convenient storage at the front of the house

Cost of installation

Materials	<i>Ceiling hoists</i>	<i>Bike bunker</i>
Labour	£59.07	£369.81
Total	£60.00 (pricing volunteer as if paid)	£150.00
Bikes parked	£119.07	£519.81
<i>Cost per bike</i>	2	3
	£59.35	£173.27
	<i>Combined cost</i>	£638.88
	<i>Bikes parked</i>	5
	<i>Cost per bike</i>	£127.78

Outcome

Residents are happy with the solutions and use them constantly.

Conclusion

'Challenging' solutions such as hoists can work well in well-motivated households such as this.

Glyn Road, E5

Description of premises

Mid-terrace late Victorian house in family occupation, with narrow hallway and shallow (2-3m) front garden. Owned and managed by housing association.

Residents' requirement

An alternative to the bike cluttering up the kitchen.

Solutions considered

Option 1	Bike bunker in front garden.
Option 2: implemented	Bike bunker in back garden.

Solution implemented

Option 2, bike bunker in back garden. HomeBikePark advised Option 1, installation in front garden, for much easier access to the bike, eliminating need to wheel it through the house. The cycling resident also favoured this, but was overruled by her parent on aesthetic grounds.

Installation procedure

A Trimetals Bicycle Store was assembled according to the manufacturer's instructions by two installers, a job which took six hours each including transport from equipment store and purchase of fixings and drill bits.

Cost of installation

Materials	£388.52
Labour	£180.00
Total (and cost for the single bike parked)	£568.52
Bikes parkable	3
<i>Cost per bike parkable</i>	<i>£189.50</i>

Outcome

Resident is happy with the solution, which has eliminated theft concerns and internal storage problem.

Conclusion

The choices for a small terraced house with a narrow hallway and low ceilings are quite limited. It is a pity that the front garden storage was ruled out, as this would certainly have made the decision to cycle more spontaneous. Also the cost of the chosen solution for a single bike is high, but there is little choice within the limiting circumstances.

Nisbet House Estate, E5

Description of premises

1930s housing estate, with small retro-fitted lifts and narrow corridors inside flats.

Resident's requirement

A more convenient and less strenuous alternative to taking the bike up into her third floor flat.

Solutions considered

- Option 1** Bikeaway lockers in courtyard.
- Option 2** Vertical parking hangers in common parts.

Solution implemented

There was arguably some room in the common parts near the lift for two or three bikes parked vertically (option 2), but this was thought to be a potential obstruction and not very secure.

Option 1 was chosen, a suitable site with hard standing having been identified. It was decided to install a 'decent minimum' of three lockers as a test. A rental system was set up, with user agreements signed before access granted to lockers. Residents renting a locker provide their own padlocks.



Nisbet House resident shows off her cycle locker

Installation procedure

Installation of the lockers was carried out by Bikeaway.

Cost of installation

Bikeaway lockers x3	£1815.38
Delivery and installation	£293.75
Total	£2109.13
Bikes parked	3
<i>Cost per bike parked</i>	<i>£703.04</i>

Outcome

Resident is happy with the solution, which has resulted in her cycling more often. The remaining two lockers have been rented successfully to other residents. Rental being charged is £25 per year. Management currently remains the responsibility of HomeBikePark, who are in discussion with the tenants and residents

association and the housing management about installing more lockers using estate committee environmental funding and other sources.

Conclusion

Individual secure cycle lockers are an optimal and robust solution for bike parking on housing estates. Bikeaway's product is particularly well designed, featuring a significantly smaller footprint than competitors' lockers, and an override key mechanism which allows the management access to inspect the lockers at any time and remove and replace the user's padlock. Maintenance requirements are extremely low –merely an annual sweep-out is advised.

The capital cost of lockers is high but, if amortised over their design life of 20 years, can be covered by a very modest rental with some to spare for management costs.

Old Gascoyne Estate, E9

Description of premises

1930s housing estate. Lifts recently retro-fitted but narrow corridors inside flats. An old ground-floor drying room was being informally used for cycle parking by several residents along with general storage of furniture, with lax key control and no support or internal security for the bikes.

Residents' requirement

Convert the former drying room to formal cycle parking use.

Solution implemented

The residents' suggestion of formalising and facilitating the use of this under-used ground-floor room was practical and the landlord, Sanctuary Housing, was persuaded to allow it and to manage the membership of the cycle parking 'club'. HomeBikePark invited a solution and quote from a London-based third-party bespoke cycle parking integrator, but the price was very high and technical information supplied was sparse. With the advice of our consultant Transportation Management Solutions we therefore researched a supplier of a vertical parking solution with an integrated locking ring. We discovered that Orion Bausysteme GmbH manufacture an ideal unit called the WEGA.



Former drying room during clearance for conversion

Installation procedure

The room was cleared, a concrete sink removed and the walls, ceiling and floor made good and decorated. The lighting was adjusted to be triggered by infra-red sensor to reduce electricity use and make life easy for users. The door entrance was narrowed to prevent storage of powered two-wheelers, and a very secure padlock was sourced together with a supply of restricted keys. The hasp and staple on the door entrance were adjusted by a metalworker who also supplied and

fitted a protecting box for the padlock. Bars were also fitted to the window of the room.

Orion WEGA vertical cycle parking hangers, incorporating locking rings, were mounted high-low at 150mm vertical offset and 400mm horizontal spacing, on runs of 41x21mm channel, secured to channel nuts using 10mm stud and anti-tamper shear nuts. Care was taken to ensure sufficient circulation and manoeuvring space within the awkwardly shaped room, while fitting in the maximum possible number of parking spaces. Two Sheffield stands were also fitted in strategic locations to provide three parking places (one stand is next

to wall) for those with particular back problems, although if the correct technique is used, very little effort is required to lift the bike onto and off the hanger.

Cost of installation

Clear, decorate room, electrical work - labour	£675.24
Orion WEGA hangers x24	£840.00
Sheffield stands x2	£108.57
Metalwork supply and fit	£415.00
Other equipment and supplies	£2062.67
Total	£4101.48
Bikes parked	27
<i>Cost per bike parked</i>	<i>£151.91</i>

Outcome

Users sign an annually renewable agreement with Sanctuary Housing governing terms of use, and meet a representative of the landlord for an induction in the use of the bikepark, before key is issued and one of the numbered hangers is assigned to them.

Conclusion

Users are generally happy with the solution, and all spaces in the bikepark are let. Continued support and co-operation by the estate bicycle user group and Sanctuary Housing are essential to the success of the bikepark.



Old Gascoyne estate bikepark in use

Victorian Grove, N16

Description of premises

Small 1950s LCC estate with no lifts. Two rows of pram sheds, one long (due for demolition to provide car parking space) and the other short (three sheds). Courtyard and garden space undergoing improvements with assistance of BTCV (formerly the British Trust for Conservation Volunteers).

Residents' requirement

Survey by TRA showed ten adults cycles in use among the 50 people in the 22 flats. Provision sought for as many of these 10 bikes as possible.

Solution implemented

Convert pram sheds for cycle storage. Replace flimsy timber doors and frames with steel security doors. Install internal fittings (two Broxap 'Crosskirk' front-wheel holders and one Broxap 'Wick' trough) to facilitate high-low parking of two bicycles in each, offset so as to avoid snagging of handlebars.

Installation procedure

Doors and frames installed by Gerda Security Ltd. Internal fittings supplied by Broxap and installed by local tradesperson.

Cost of installation

Security doors, supply & install	£2713.19
Front wheel holders and troughs	£305.50
Fitting of the above	£120.00
Total	£3138.69
Bikes parked	6
<i>Cost per bike</i>	<i>£523.12</i>

Outcome

Rental of cycle storage sheds is managed by HomeBikePark, with a renewable annual user agreement and a rental of £1 per week. Residents have the option of teaming up between two households but in practice each shed is hired by a single household with multiple bikes. Residents are very happy with easy-to-access secure storage.

Conclusion

This case study shows that re-purposed pram sheds can provide attractive and suitable cycle parking, but a cheaper solution needs to be found for providing new secure doors. This should be easily achieved by organisations with expertise in procurement. The locking solution should also ideally feature an override for management, such as is supplied as standard with the Bikeaway lockers.



This Victorian Grove resident can relax at home in confidence that her household's two bikes are safe in the former pram shed

Well Street, E9

Description of premises

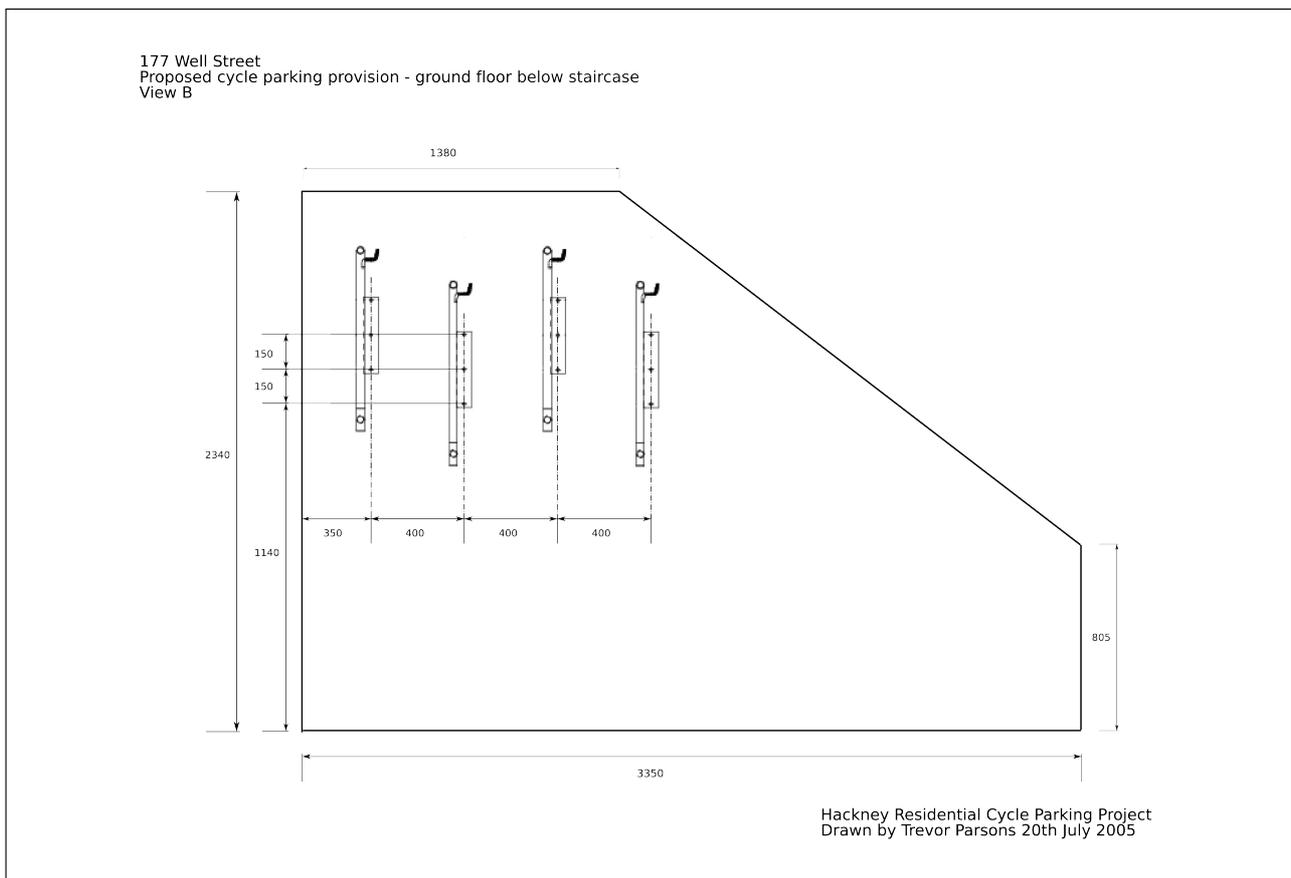
Late 1980s / early 1990s three-storey new build block comprising six two-bedroom flats.

Residents' requirement

Ground-floor cycle parking provision for at least three existing bicycle owners.

Solution implemented

Four Orion WEGA vertical cycle parking hangers incorporating locking rings, installed high-low on wall under first flight of stairs on ground floor. Care was taken during design stage that the projection of parked bikes would not encroach upon the space required in the common parts for means of escape.

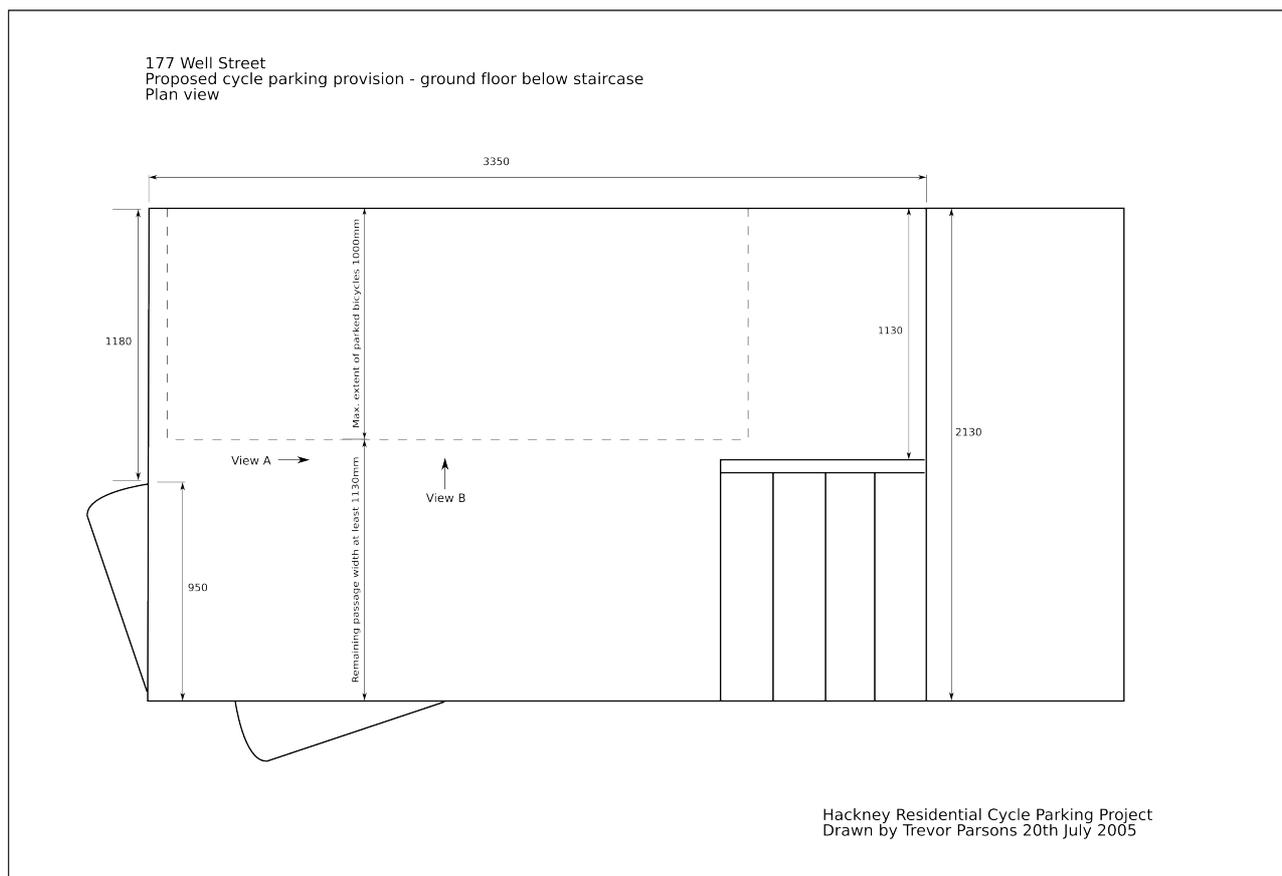


Installation procedure

WEGA hangers were installed directly into the masonry using sleeve anchors.

Cost of installation

Orion WEGA x4	£140.00
Labour	£30.00
Total	£170.00
Bikes parked	4
<i>Cost per bike</i>	<i>£42.50</i>



Outcome

Two to three hangers are regularly used. Front door was broken into during 2006 but no bike was stolen due to inconvenience for thief of bikes being locked to hangers.

Conclusion

This demonstrates that vertical cycle parking can often be safely, cheaply and effectively installed in common parts. The space under the first flight of stairs is the first place to look.

Whiston Estate E2

Description of premises

1950s four-storey block with no lifts. Residents have access to ground floor store rooms letting off shared staircase. Access to store rooms area is via a barred gate locked with a fire key, copies of which are widely circulated.

Residents' requirement

Provision for three adult bicycles and two children's bicycles from a single household. (Residents of the flat in question have had no fewer than five bikes stolen.)

Solutions considered

- Option 1** Improve security of existing store room door
- Option 2** Provide lockable vertical cycle parking in common parts



Resident is delighted with the improved security of her existing store room door

Solutions implemented

It was decided to implement both solutions in order to provide plenty of space and options for this multi-bike household. A mortice lock was fitted to the existing store room door, and three Orion WEGA vertical lockable hangers were installed in the common parts close to the store rooms but behind the barred gate.

Installation procedure

Local locksmith supplied and installed a mortice lock, which took less than an hour. HomeBikePark-hired tradesman installed Orion WEGA hangers directly onto wall using sleeve anchors.

Cost of installation

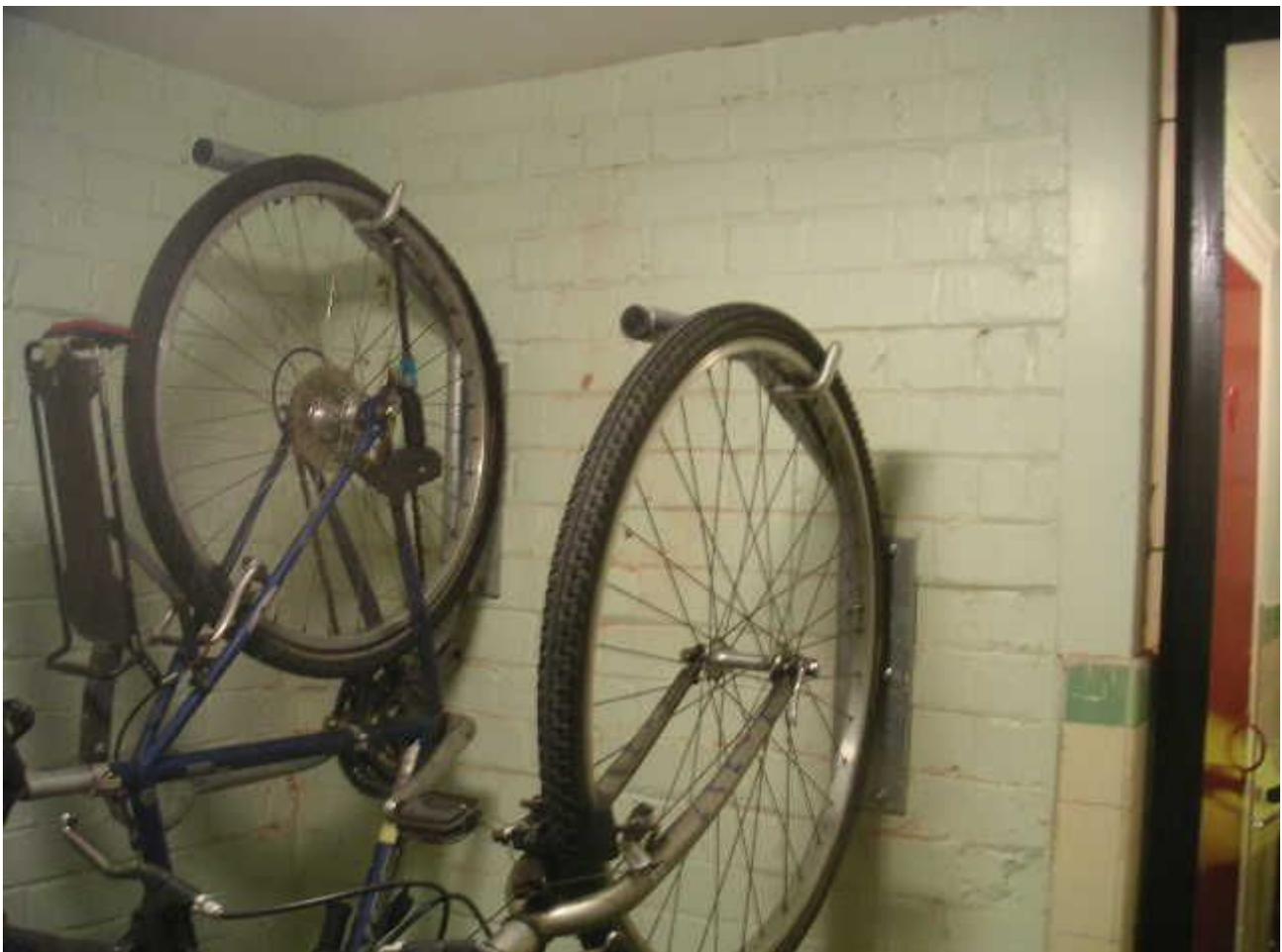
Supply and install mortice	£141.00
Orion WEGA hangers x2	£70.00
Labour to install the above	£30.00
Total	£241.00
Bikes parked	4
<i>Cost per bike</i>	<i>£60.25</i>

Outcome

Residents are able to park all their bikes securely.

Conclusion

Improvement of existing facilities and spaces is very cost effective.



Two bikes parked in the common parts outside store rooms