

# Public Document Pack



## Cambridge City Council

### MEMBERS CYCLING AND PEDESTRIAN STEERING GROUP

**To:** **Committee Members:** Councillors Blencowe (Chair), Bird, Moore, Robertson, M. Smart and Tucker

*Despatched: 15 April 2015*

**Date:** Thursday, 23 April 2015

**Time:** 4.30 pm

**Venue:** Conference Room - The Depot

**Contact:** Clare Rankin

**Direct Dial:** 01223 457000

#### AGENDA

- 1 **Welcome and Introductions**
- 2 **Minutes of Last Meeting and Matters Arising**
- 3 **Promotion grant funding**
- 4 **County Team Leader Cycling Projects (including City Deal)**
- 5 **City cycling schemes updates**
- 6 **Joint Cycleways Budget (*Pages 5 - 16*)**
- 7 **Carter Bridge ramp**
- 8 **Any Other Business**

## Information for the Public

**Location** The meeting is in the Guildhall on the Market Square (CB2 3QJ).

Between 9 a.m. and 5 p.m. the building is accessible via Peas Hill, Guildhall Street and the Market Square entrances.

After 5 p.m. access is via the Peas Hill entrance.

All the meeting rooms (Committee Room 1, Committee 2 and the Council Chamber) are on the first floor, and are accessible via lifts or stairs.

**Fire Alarm** In the event of the fire alarm sounding please follow the instructions of Cambridge City Council staff.

**Facilities for disabled people** Access for people with mobility difficulties is via the Peas Hill entrance.

A loop system is available in Committee Room 1, Committee Room 2 and the Council Chamber.

Adapted toilets are available on the ground and first floor.

Meeting papers are available in large print and other formats on request.

For further assistance please contact Democratic Services on 01223 457013 or [democratic.services@cambridge.gov.uk](mailto:democratic.services@cambridge.gov.uk).

**Queries on reports** If you have a question or query regarding a committee report please contact the officer listed at the end of relevant report or Democratic Services on 01223 457013 or [democratic.services@cambridge.gov.uk](mailto:democratic.services@cambridge.gov.uk).

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**Cycling and Walking Promotion Grants:  
APPLICATION FORM 2013-2014**

**ABOUT YOUR GROUP/ORGANISATION**

**Q1 What is the name of the group / organisation?**

Cambridge Cycling Campaign

**Q2 For this application, who is the contact?**

Hazel Laura Hartman Jenkins

**Q3 What is their position in the group / organisation?**

Member

**Q4 What is their daytime telephone number, address and e-mail address?**

1223333417 (pool office, ask by name, please)

Wolfson College

hlhj2@srcf.net (preferred)

**Q5 If you are a voluntary group/Charity please answer the following questions:**

**5a) What are the names of the Chair, Secretary and Treasurer of the group?**

Chair Robin Heydon

Secretary Vacant

Treasurer Chris Dorling

**5b) What are the main aims of the group?**

The Cambridge Cycling Campaign campaigns for better, safer and more cycling, in and around Cambridge.

## THE PROJECT

**Q7 What is the name of the project you want us to fund?**

Open Bike Repair Stations

**Q8 Please give a description of the project - include information such as how the project will meet one or more of the aims of the grant, how will it work, who is the project aimed at and where will it be based**

See attached.

**Q9 Where will the project be based?**

At locations around Cambridge, to be determined in consultation with cycle network planning; see suggestions in attached answer to Q8.

**Q10 Who will manage the project?**

Purchasing will be coordinated through the Cambridge Cycling Campaign. Installation will involve drilling holes in the public pavement and bolting down hardware, and will need to be arranged through the City.

**Q11 How many people will benefit and how will you measure this?**

Anyone cycling in and around Cambridge could use the stations. This group probably exceeds 60 000, given cycling figures for the city. The stations come with QR codes linking to instructions on common repairs, so even novice mechanics will be able to learn the needed minor skills. We will conduct use surveys (see Q23) to determine use in practice.

**Q12 Are you working with any partners? If so please give details.**

Because the equipment on the market is heavy and not manufactured domestically, shipping costs are appreciable. We are working with ARU, Cambridge University, and its colleges, and possibly will work with groups in other municipalities (especially those receiving a share of the recent 3-year cycle funding) to bulk-buy the necessary hardware, thus reducing shipping costs for all parties. Note that none of the funding for which we are applying would be spent of these other groups, but the more we can share costs, the more stations we can install.

Outspoken, OWL Bikes, and bike shops are also being contacted as possible partners (in North America, some

bike shops have installed repair stands outside their shops, finding that this drives trade in spare parts).

## FUNDING

### **Q13 What are the project's start and finish dates?**

Start Summer 2015

Finish Indefinite

### **Q14 If the project is ongoing, how will it be funded once the Cycling and Walking Promotion funding ends?**

Very little maintenance is needed; if the pilot is successful and popular, we would expect the city to maintain the repair stands as a public service. In the medium term (a few years to a decade, depending on how much maintenance is needed) we could use the remaining funding (see Q16 below) for replacement hardware (available; see cost breakdown, Q15).

### **Q15 What are the full costs of the project?**

Please attach a detailed breakdown of the costs, together with quotes, where appropriate. Attached separately.

### **Q16 How much funding are you seeking from the Cycling and Walking Promotion Grant?**

We are seeking the maximum £5000 award, but as we can only install an integer number of repair stations, we may have remaining money up to the value of one repair station (likely <£800, see below). We propose to use this for medium-term maintenance as described in question 14, until the city decides to take over the maintenance directly or discontinue the project. At that point, any left-over money would be returned.

### **Q17 What, if any, are your other sources of funding for this project?**

ARU has funding for some stations on its campus. We are also applying for funding through Cambridge university (Living Lab Seed Award) and from individual colleges. One college, Wolfson, has already purchased

a repair station.

## MONITORING

### **Q23 How will you monitor the project?**

Use surveys of each of the locations. We plan to collect data on how many people used each station, what they each used it for, their estimates of their previous and future use of the station, opinions on the effect of the stations on their cycling habits, and free-form comments.

We expect use to vary substantially by time of day, week, and year. Stratified subsampling will be used to keep the survey within the limits of available labour (of volunteers and employees of the Campaign). The Cambridge Cycling Campaign has experience in conducting use surveys.

### **Q25 How will you assess the outcome(s) or success of the project?**

If the repair stations are well-used and public reaction is favourable, we would consider it a success. If they are little-used or repeatedly damaged to the extent that it is impractical to maintain them, we would consider it a failure.

We expect the availability of quick, cheap, on-site repair to make it more likely that people will fix their bikes before riding home, and less likely that they will leave their bikes to languish in a shed for months before they manage to get around to fixing them. We also expect that free and readily available tools and instructions will cause more people to learn to maintain and repair bikes. Easier emergency repair and preventative maintenance (e.g. topping up tires) will presumably reduce the amount of time taxpayers waste on breakdowns, improving quality of life. Beyond asking people about their experiences, though, these effects would be quite difficult to measure, as bike use and mechanical skills are expected to increase even in the absence of this project.

**Once completed, please e-mail this form to: [clare.rankin@cambridge.gov.uk](mailto:clare.rankin@cambridge.gov.uk)**



**Any personal data provided on this form will be processed in compliance with the Data Protection Act 1998. We will only share personal information with other public sector organizations if it is necessary for the prevention and detection of fraud. Further information relating to your rights under the Data Protection Act can be sent to you on request.**

# Proposal for Open Bike-Repair Stands in Cambridge



*Outdoor public bicycle pump in downtown Linköping, Sweden, 2008. [CC-SA-I Lars Aronsson](#).*

- [Precedents](#); others who've done it
- [Facilities](#); what to do
- [Products and Materials](#); how it might be done
- [Locations and Implementation](#); who does it, and where

Bikes sometimes break down, especially with less than perfect preventative maintenance. This can not only mean a long walk home in the rain, at night; it can mean that a cyclist becomes a motorist, perhaps just until they get around to fixing their bike...

Neglected bikes are dangerous: maladjusted brakes or loose handlebars can be lethal. Less critical tasks, like topping up tires weekly, reduce breakdowns and make riding easier and more pleasant, encouraging cycling.

Ideally, maintenance would be easy, fixing unexpected breakdowns would be minimally inconvenient, and everyone would know how to do both.

We therefore propose that fixed bike tools and pumps be installed around Cambridge, in public places that are open around the clock, to everyone, including new arrivals, visitors, and the poor, who may lack basic bike tools. This would encourage new cyclists, encourage people to continue cycling, and make cycling safer for cyclists and those around them.

## Precedents



*Outdoor public bicycle pump in London at Lambeth Road, March 2012. Photo by [John Kennedy](#), used with permission.*

Recently, cycle pumps designed as street furniture have come on the market. Several universities and cities have installed them, including a pilot project in London. They are extremely resistant to weather, heavy use, and vandalism. Public bike pumps have been well-received, and even have their own [Facebook page](#).

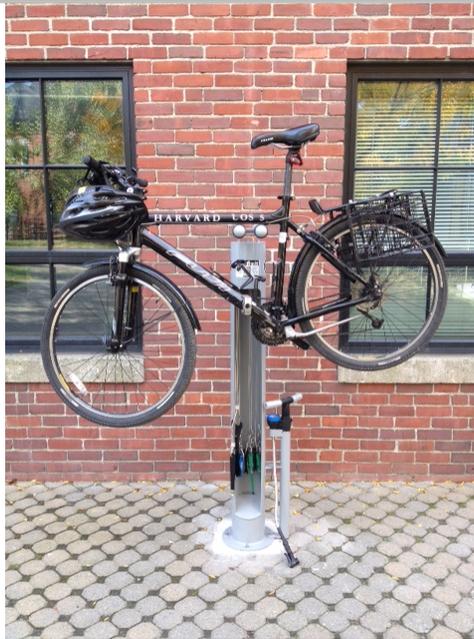
Public bike repair stands have often been installed alongside them. Apart from the support for the bike, these typically have eight to ten tools, firmly tethered. These suffice for most repair and preventative maintenance. Some pumps and repair stands are located under cover, especially in colder and wetter climates.

Wolfson College, Cambridge, has purchased a bike repair stand and pump. They are being installed inside a bus shelter to allow easier use in bad weather.

## Experiences

- "We have four stations around campus and they are really popular... The Science Center Plaza and Blackstone repair stations were installed this Summer. The i-lab station was done in Summer 2012 and the Pound Hall station in 2011. We're hoping to install several more this year. We find that they're cost and space effective and highly useful for students, faculty and staff." - *Ben Hammer, Program Coordinator, CommuterChoice, Harvard*
- "...very well received by the campus community, and seem to be well utilized. One station at the edge of campus was vandalized (most of the tools were cut off their cables); other stations are fine. As a side note, Stanford and UC Davis, which have about a dozen each, have had no such issues as far as I know. UC Berkeley is, however, a much more urban campus with higher crime rates. The pump heads on the models we have failed, and we have had to perform a DIY fix to them, which seems to be working well." - *Greg Haet, Chair, University of California at Berkeley Bicycle Committee*

## Facilities



*Bicycle repair stand with pump on the Harvard campus in Cambridge, Massachusetts. There are five at MIT, four at Harvard, and three installed by the city of Cambridge (MA) in 2011. Photos supplied by Ben Hammer, [CommuterChoice Program](#) Coordinator, Harvard.*

The most important facility would be a pump capable of pumping road tires to full pressure (varies with the tire, but up to 1 MPa / 10atm / 10bar / 150psi should be adequate), with a built-in pressure gauge. The gauge should ideally have both metric and pounds per square inch calibrations. It should handle both presta and schraeder valves, ideally with one head, and definitely without using removable (and loseable) adaptors. Air-filled gauges tend to fog and become unreadable, especially in damp climates, so an oil-filled one is preferable.

The bike stand itself should ideally clamp around a tube of the frame, not just offer a slot to hang the bike by its saddle, since the bike should be rigidly held. The clamp should be padded. Readily detachable parts are undesirable. It should be positioned so one can pump up a tire while the bike is on the stand.

Smaller tools should include a 15mm spanner, an adjustable spanner, a set of metric hex keys, a pair of tire levers, straight-slot and Phillips cross-head screwdrivers, a valve tool, needle-nose pliers with a cable cutter, and a 13/15mm cone spanner. A chain tool, ruler, locking/vise-grip adjustable spanner, small mallet and/or ball peen hammer, a length of 15mm pipe to act as a breaker bar, and jeweller's screwdrivers for fixing lights might also be handy, as might a nearby surface with some dimples to hold small parts.

A layout that secures the tools in a way that would let them be replaced and augmented would be good.

The repair station should be obvious, and obviously open to the public. Some signs on how to use the equipment would probably reduce wear and tear and increase use. It might also be a good place for bike safety messages, such as a notices on lights or helmet adjustment.

A roof and walls, as used at Wolfson, would lengthen the lifespan of the tools, allow the use of less weather-resistant and therefore cheaper tools, and make life much more pleasant for anyone changing a tyre in the driving rain. In some locations, existing shelters might be used.

The space should be well-lit (for instance, under a streetlight, not between them). It should be big enough to work in (at least 3m by 1.5m). Any floor covering should not spontaneously combust if oil is spilt on it.

## Products and materials

### Purpose-designed public pumps and repair stands

Public pumps			
Price	Name	Spec PDF	Company
~£110 plus delivery from the Netherlands (<£163)	<a href="#">Type 1 Dero pump.</a> Has a plastic gauge which tends to fog up in rain, cold weather & fog, marked in psi only.	<a href="#">Spec</a>	<a href="#">NSA Urban Products</a>
~£360 plus delivery from the U.S.A. (>>£163)	<a href="#">Type 2 Dero pump.</a> No gauge.	<a href="#">Spec</a>	<a href="#">NSA Urban Products</a>
~£550 plus delivery from the U.S.A. (>>£163)	<a href="#">Type 3 Dero pump.</a> Oil-filled metal gauge, marked in psi.	<a href="#">Spec</a>	<a href="#">NSA Urban Products</a>
£300 (plus £25 delivery charge)	<a href="#">Type 1 Dero galvanized or coated public pump (as from NSA above).</a> Has a plastic gauge which tends to fog up in	<a href="#">Spec</a>	<a href="#">Cyclerracks</a>

	rain, cold weather & fog, marked in psi only.		
£420 (plus £25 delivery charge)	<a href="#">Type 2 Dero galvanized or coated public pump</a> (no gauge)	<a href="#">Spec</a>	<a href="#">Cyclerracks</a>
£620 (plus £25 delivery charge)	<a href="#">Type 3 Dero galvanized or coated public pump</a> (oil-filled metal gauge, marked in psi)	<a href="#">Spec</a>	<a href="#">Cyclerracks</a>
£290	<a href="#">Bikefixstation galvanized-steel-housed bolt-down indoor pump</a> (psi & bar gauge)	<a href="#">Spec</a>	<a href="#">Cyclehoop</a>
£900	<a href="#">Bikefixstation stainless public pump</a> (psi & bar gauge)	<a href="#">Spec</a>	<a href="#">Cyclehoop</a>
£1890 (5% discount on both if ordered with the £895 Bikefixstation repair stand below)	<a href="#">Bikefixstation stainless public bollard pump</a> (psi & bar gauge)	<a href="#">Spec</a>	<a href="#">Cyclehoop</a>
~£3500 (€2900)	<a href="#">Heklucht stainless pump with rack</a> (no gauge)	<a href="#">Spec</a>	<a href="#">HR Gruppe</a>
~£3900 (depending on Swedish exchange rate)	<a href="#">TMI electronically-monitored public pump</a>	<a href="#">Spec</a>	<a href="#">TMI</a>



*A public bike station with commercial pump, repair stand, and bike part vending machine. Alcosta Chevron petrol station, San Ramon, California. Picture provided by [Bike Fixtation](#), used with permission from Chad DeBaker.*

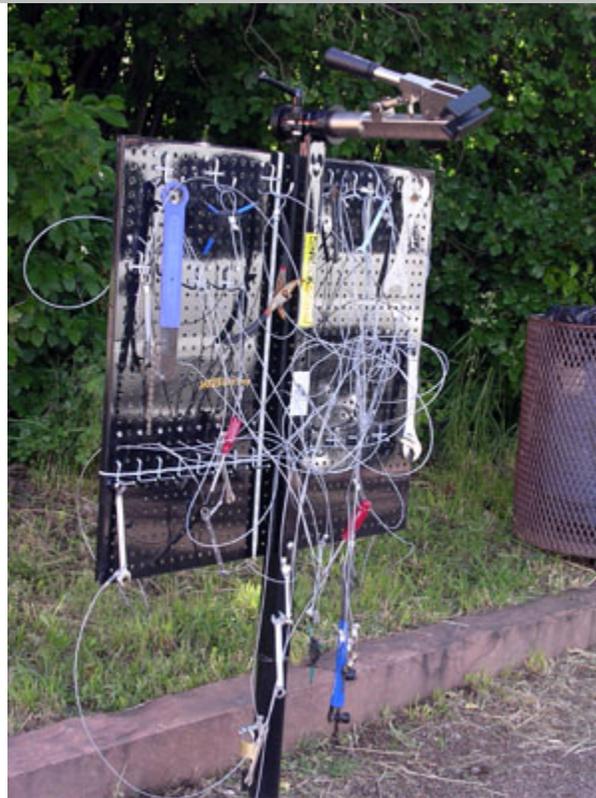
### Repair stands

Price	Name	Spec PDF	Company
~£815 plus delivery from the Netherlands (~£163)	<a href="#">Dero repair stand</a> with Type 1 pump as from Cyclorack; upgrades to type 2 or 3 available	<a href="#">Spec</a>	<a href="#">NSA Urban Products</a>
£895 (5% discount on both if ordered with £1890 Bikefixstation bollard pump above)	<a href="#">Bikefixstation repair stand</a>	<a href="#">Spec</a>	<a href="#">Cyclehoop</a>
~£400 plus shipping	<a href="#">Dero tool kit</a> (with wall or floor mount	Spec not available	<a href="#">NSA Urban Products</a>
Assorted prices, see spec.	Dero replacement parts	<a href="#">Spec</a>	<a href="#">NSA Urban Products</a>

Note that [Bikefixstation](#) and [Dero](#) are US companies; ordering directly from them, the shipping is prohibitive. They do have the most detailed information about their products, though. Cyclehoop are Bikefixstation's local distributor, and NSA are Deros' distributor. I

am not sure whether Cycloracks buy from NSA or elsewhere. Cyclehoop also offer discounts on sales of more than ten pumps. Local manufacture might be cheaper; we are looking into the costs of getting them made locally. Prices to not include VAT or installation, and were quoted in October and November 2013; conversion to pounds was done by the WCBMS.

### **Non-purpose-designed materials**



*A public cycle repair stand in Denver, Colorado, apparently homemade from metal pegboard, aircraft cable, and an indoor bike stand. Photo by [Zesmerelda](#).*

If there is a wish to test the viability of the concept very cheaply, a prototype bike facility could home-made very cheaply from off-the-shelf parts. Standard bike pumps are less robust and will probably not stand up to intensive use as long, but there seems to be little difference in the tools.

- £20-£30 Decent indoor floor pump
- £10-£20 Decent indoor foot pump
- £30-£40 Decent indoor floor repair stand
  
- ~£150 Homemade repair stand:
  - ~£50 tools
  - ~£50 fixing tools to wall
  - ~£50 suitable wall mount for bike

None of these prices include VAT, installation, or maintenance (which [Cyclehoop contracts for](#) at £60 a trip).

While the DIY tool stand shown here is a bit kludgy-looking, there is nothing to stop a homemade tool stand from looking as neat or neater than a commercial one. We have volunteers who have expressed an interest in building these.

## **Shelter**

This could obviously vary tremendously with construction method. We estimated a covered ~3m x 1.5m bus/smoking-style shelter, as used at Wolfson, at ~£1,000.

## **Locations and Implementation**

Suggested locations include Market Square, the train station(s), bike parking areas on Mill Road, and the Science Park. We have an extensive list of possible sites, which would need to be integrated with plans for other cycle facilities.

We are applying for funding from the University of Cambridge to put in facilities in West Cambridge. ARU are willing to fund facilities on their campus.

We suspect, subject to correction, that the city would be happier if we didn't do any installation that requires drilling holes in the public pavement. We should also agree beforehand on how to share maintenance duties.

*Adapted in January 2015 from a version made in November of 2013 by the Wolfson College Bike Maintenance Society, and revised but not updated December 2014. Text public domain. Images are used with permission.*