



FINDINGS AND RECOMMENDATIONS FROM  
ELEVEN SHARED ELECTRIC BIKE PROJECTS

# Shared Electric Bike Programme Briefing

Year 1: December 2016

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supporting shared transport



# Lessons from the Shared Electric Bike Programme

Electric bikes can improve air quality through ultra-low emission commuting, support healthy lifestyles, and open access to opportunities. They can achieve this by attracting a wider range of people cycling and increasing the number of trips people can make by bike.

**The Shared Electric Bike Programme installed electric bikes in eleven projects across England and studied how these bikes were used.**

**The data showed that electric bikes can enable healthy, flexible, low cost travel for all abilities, in hilly areas and for longer distances without the need for too much exertion or 'cycling clothes'.**

The programme set out to understand how the dual factors of electric assist and easy access shared provision affects the take up

of cycling; who uses the bikes, for which trips and the resulting impacts on society.

The projects deliberately represented a diverse range of projects. This enabled us to examine a range of different potential trip types; attract a wider spectrum of users; and showcase different models for scheme development.

Our findings highlighted the opportunity to widen the appeal of cycling to those who don't wish to or cannot ride a standard bike. They can enable people to make faster,

hillier and longer journeys and convert more of their trips to cycling. Electric assist bikes have the capacity to support some people to make a transition from car trips and contribute to a range of social and environmental policy areas.

Creating a network of shared electric bikes where people live, work, study and visit can remove many of the barriers to cycling.

## About the projects

- Almost 188 electric bikes were installed in projects.
- Between late 2015 and September 2016, 2,667 people have tried an electric bike, making 11,702 journeys and travelling over 27,000 miles.



# Key findings

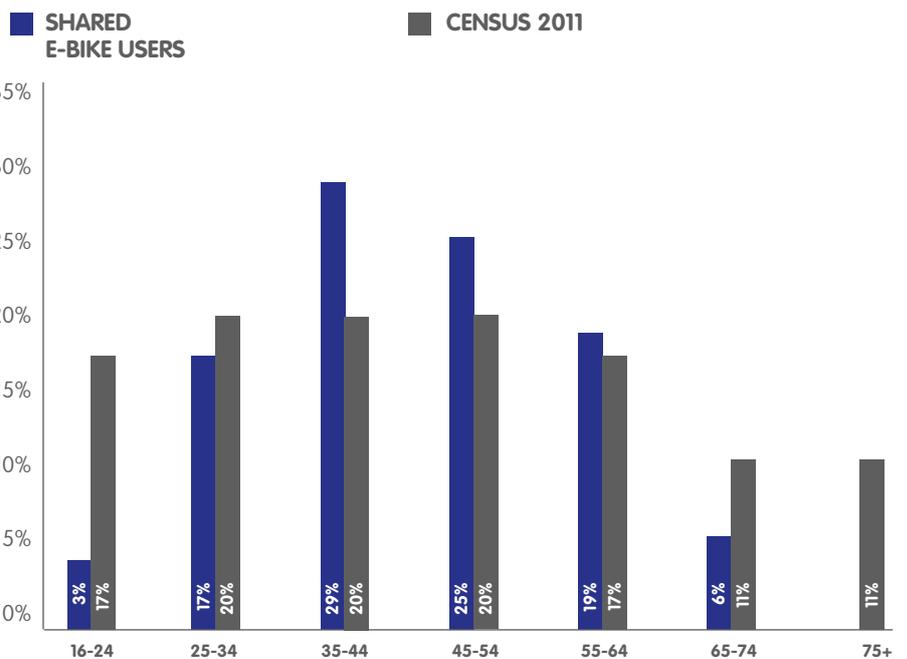
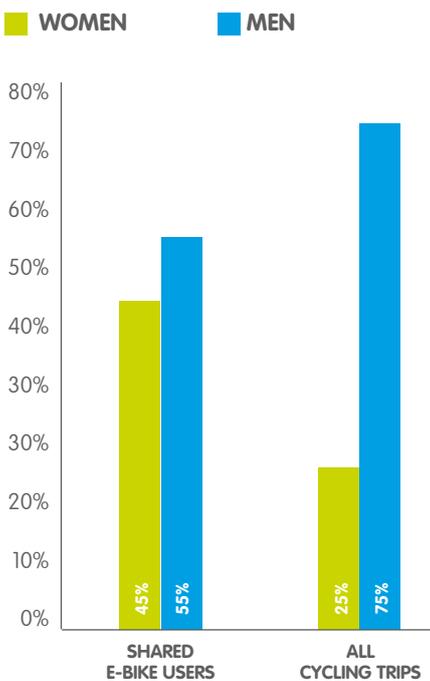
## Electric bikes can attract new riders

One in three of the people using the Shared Electric Bike Programme bikes had rarely or never cycled before they started using the shared electric bikes. In addition, 45% of the users were women – which is significantly higher than the proportion of women cycling in the general population.



“The last time I’d used a bike I was 9 or 10 years old but now commute 5 miles a day on my e-bike”

**Erica Smith,**  
Electric bike rider,  
Meadowhall



Regular users come from a wide range of ages from 25-65 suggesting that e-bikes encourage those other than the younger fitter demographic to cycle.

The programme collected many case studies of people using electric bikes to support recovery from injury or health difficulties.

“Fantastic! An amazing ride - 30 years since I last rode a bike”

**Plymouth electric bike rider**



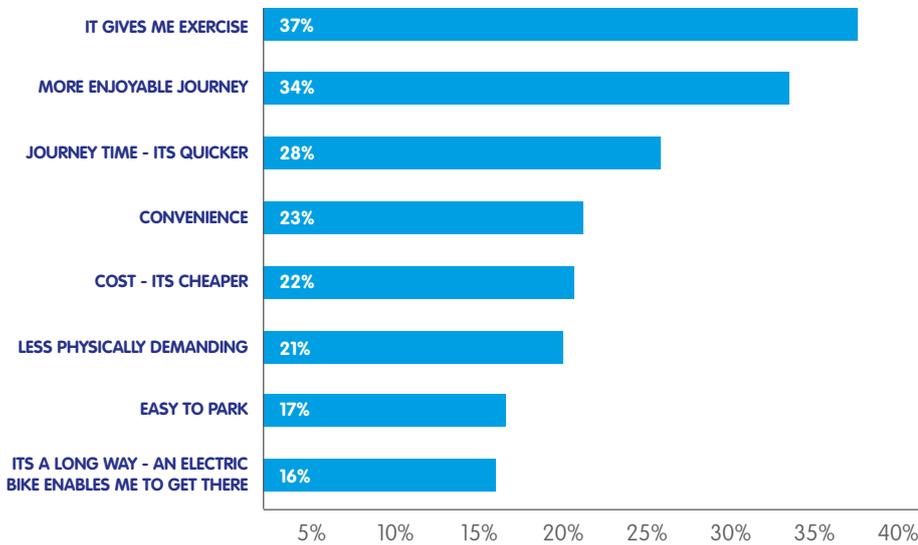
**“This was a good way to get into some exercise following a major operation removing lung cancer at the end of last year”**

**Female rider, Plymouth**

## Electric bikes can improve health and well-being

There are significant physical and mental health benefits of e-bike use, importantly reaching hard-to-reach sectors of the population. E-bikes work for preventative health as well as aiding recovery from illness. Regular riders reported that when riding an electric bike, 58% felt happier and 41% felt healthier.

The most common reason given for choosing an electric bike was that it gave them exercise, reported by 37% of riders, followed by making it more enjoyable (34%).



**“There is nothing more satisfying than placing it in low gears and ‘sport mode’ when flying up some of the steeper Bristol hills. The patients love the fact that I ride and it’s always a great ice-breaker when meeting someone for the first time.”**

**Theresa,**  
Community Nurse,  
Bristol

## Electric bikes can enable new types of cycling trips

Electric bikes can support longer trips, hilly trips and shorter travel times. The average length of trips switched is 5 miles, compared to 3 miles by traditional bikes.

33% of participants responded that electric bikes enabled them to cycle up hills they wouldn’t have otherwise tackled.



**“As a road bike user I do quite a lot of miles on my bike already and I was skeptical about e-bikes. They were completely different to what I thought they would be like. Around the city they are brilliant, the beauty is that I didn’t arrive at work all sweaty, I could just wear my normal clothes.”**

**Carl-Eiler Rodrigues,**  
Sheffield

**“About three years ago I never knew how to ride a bike. I came across the electric bike loan scheme and thought I’d give it a go. It’s been really good. We’re a family of five and have a car, but don’t really like using it if we can help it. I can do longer distances with the electric bike. I use it to go to meetings to or cycle to the tram stop if I need to go further.”**

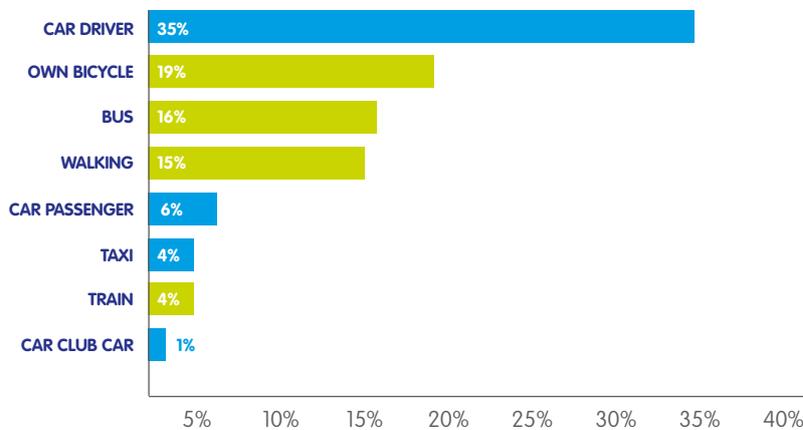
**Nawaz Khan**  
Tinsley, Sheffield

## Electric bikes can reduce car use

The programme has indicated the scope for positive modal shift: 46% of regular shared electric bike trips were previously made by private car as a passenger, driver or in a taxi.

Exercise, more enjoyable journeys and shorter journey times are the main motivation for shifting to shared electric bike.

**CHANGES TO TRIPS: HOW TRIPS WERE PREVIOUSLY MADE**



## Shared electric bikes can provide affordable access to opportunity

22% of users said their reason for choosing to switch to electric bikes was because it was cheaper than the alternative mode. Case studies also show that by offering an affordable, flexible (24 hour) mode these kinds of projects support those accessing employment.

As a farm hand, Daniel needs to be at work by 6am. Buses in the area don’t run early enough and would often involve catching up to three different ones. The area is hilly and too difficult before doing a physically demanding job. He uses an electric bike from Journey Matters, Rotherham.

**“I never thought he’d take to cycling, but loaning this electric bike has really changed his life, and not just because he can get to work easier; he’s lost lots of weight too, so he’s much healthier than before.”**

**Daniel’s aunt,**  
Pat Rumbelow, Rawmarsh,  
Rotherham

### Summary of typical users of electric bikes

There were a variety of reasons for choosing an e-bike for people of all ages and situations:

Unconfident new or returning cyclist particularly female riders,  
Retired leisure riders,  
Commuters wanting to travel faster and arrive at work fresh,  
Commuters wanting to travel longer distances or in hilly terrain,  
Shift workers needing a flexible low cost 24 hour travel

Time constrained people fitting in multiple activities,  
Car drivers looking for a flexible, efficient, healthier alternative,  
People who cannot use a conventional bike due to a physical health difficulty,  
Delivery riders.

**“Very fun and easy to go large distances to see more of the island”**

**Red Squirrel Bikes Rider,**  
Isle of Wight

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## Tourism

In a tourist context the electric bikes encouraged access to visitor attractions which wouldn't otherwise have been possible. 75% of users said they would have done other activities if they hadn't had access to the bikes. In the Isle of Wight the longest trip of the entire Programme was 36 miles from Cowes to the Needles.



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## Last mile delivery tool

Outspoken's cargo bikes have been hired to transport goods for local businesses as well as being used to improve productivity and the well-being of their own staff.

This study identified that riders were 5.5% quicker doing the same run on the electric cargo bike as well allowing staff to work more hours without burning out.



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## Electric hires support a 'try before you buy' model.

Desire to buy an e-bike is greatest amongst regular users: 80% of regular users stated they would be more likely to buy an e-bike after using one, compared to only 33% of one-off users. However many still prefer to use shared access indicating there is a role for bike share as a "try before you buy" and also for on-going hires.

**"I didn't cycle before, but now I cycle to and from work. I ended up saving £56 per month on bus travel and lost 2 stone in weight!"**

**Craig,  
Rotherham**

# Recommendations

The Programme has demonstrated that there is the potential to broaden the appeal of cycling by making electric bikes widely and easily accessible. From schemes which simply provide opportunities to try or loan them, through to using electric bikes in public bike share schemes, the response has been consistently positive.

There are particular settings in which it makes sense to offer electric bikes to encourage people to adopt their use: where people work, where people live, and where people visit for leisure. Together it creates a network to support convenient, low-cost, healthy and flexible travel.

## The key recommendations from the programme are:

### 1. Explore the potential for of increasing e-bike (and pedal bike) availability at more rail stations, travel hubs and accommodation networks across the UK.

This would mean that last-mile or first-mile journeys by e-bike would become a reality for commuting, business travel and in visitor areas. This would not only contribute to local congestion reduction and healthier travel, but would unlock the associated benefits of “capturing” the longer approach journeys from car to public transport. This would require expansion and enhancement of initiatives such as Plusbike and the cycle-rail developments to include e-bikes, as well as new coordinated partnership development including hotel and other accommodation chains.

### 2. Bridge strategic development and delivery with the health sector around e-bikes.

New lines of communication could be developed between with the Department for Transport and Department of Health to optimise the contribution of e-bikes to health through informed policy and funding prioritisation. Regional and local public health organisations should be involved in the funding and delivery of e-bike provision locally.

### 3. Open up funding from the OLEV (Office for Low Emission Vehicles) to include e-bikes alongside electric vehicles.

E-bikes could be seen as an important part of solution in the move towards the development of ultra-low emission transport. With many of the advantages of the car in-terms of flexibility and suitability to hilly and longer trips, e-bikes even more than ultra-low emission vehicles can offer a method to improve air quality and reduce carbon emissions.

### 4. Develop a strategic national programme of try-before-you-buy for e-bikes.

Different models of try-before-you-buy are relevant to different contexts, but all have significant value in accelerating uptake in e-bike use. A national scheme would be a partnership involving manufacturers, Government bodies and bike shop networks, and be associated with other e-bike development initiatives.

### 5. Update the cycle-to-work scheme so that it encourages people to acquire e-bikes.

This could be by increasing the value threshold above £1000 or allowing and promoting a “top up” above £1000 from the rider or employer.

### 6. Evidence and further research

We therefore recommend that the monitoring and evaluation that has been established during this programme is continued. Two areas for further research have also emerged through this programme: in “closed community” residential accommodation (such as new housing developments or student accommodation) and in how shared e-bikes can contribute to accessibility in more rural areas.



# Summary of schemes

## Oxonbikes, Oxford

 22 electric bikes\*

 On-street

 Workplace

Public bike share scheme predominantly serving universities and hospital sites, plus docks at the Park and Ride and railway station. The scheme is a partnership between the University of Oxford and Hourbike.

## Co-bikes, Exeter

 23 electric bikes

 On-street

 Tourism and leisure

 Workplace

 Car club

Publicly accessible electric bike share with docks at stations, the university, business park and Park and Ride. This is an extension of the Co-cars car club and is managed by the car club operator.

## Co-wheels, Bristol

 12 electric bikes\*

 Workplace

The electric bikes are available at the University of the West of England for intersite trips and Bristol City Council and Avon Fire and Rescue for community visits. They are managed by Co-wheels.

## University of Brighton, Eastbourne Campus

 20 electric bikes

 On-street

 Student

 Workplace

Half of the bikes are used to shuttle over the hilly route between the rail station and the campus, the other half are on long term loan.

## Journey Matters, Rotherham

 30 electric bikes\*

 Workplace

A mobile hub offers 1-2 month loans to employees and residents. The scheme is run by Rotherham MBC.

## Compass Bikes, Oxfordshire and East of England

 18 electric bikes

 On-street

 Tourism and leisure

 Workplace

Housing association staff and residents can use the electric bikes for free in selected developments in South East England.

## Red Squirrel Bikes, Isle of Wight

 20 electric bikes

 Tourism and leisure

The electric bikes are available for tourists to hire from Newport, Cowes and Ride. The scheme is managed by Visit Isle of Wight.

## Plymouth Bike Hire, Plymouth

 20 electric bikes\*

 Tourism and leisure

The scheme offers electric bikes for hire from the edge of Plymouth, for tourists to ride on Dartmoor and along the coast. It is run by Plymouth Bike Hire.

## We:Cycle, Hebden Bridge

 13 electric bikes

 Commuting

 Tourism and leisure

The electric bikes are for hire in hill top communities serving residents and visitors. The scheme is managed by the Alternative Technology Centre.

## Outspoken Cycles, Cambridge and Norwich

 7 electric bikes\*

 Workplace

 Specialist

E-cargo bikes used for deliveries and for local resident and business hire. The scheme is managed by Outspoken Cycles.

## PEDALL, New Forest

 3 electric bikes\*

 Specialist

 Off-road

The bikes are adapted electric assist cycles which make cycling more accessible to people with disabilities. They are available for try-out sessions and all day hire. The scheme is managed by the National Park Authority.

\*part of a larger fleet

The full report is available online: [www.bikeplus.org.uk](http://www.bikeplus.org.uk)

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