



WHY AN E BIKE?

Frequently asked questions

1. Aren't they heavy?
2. How fast can they go?
3. Isn't it cheating?
4. Aren't they expensive?
5. They can't carry the stuff I need

INTRODUCTION

I would contend that the E-bike is the 20th centuries' most significant contribution to easing the pollution, congestion and ill health within our cities. It merges an 18th century innovation (or 16th century if you believe that Leonardo's apprentice, Salai invented the bike) with 21st century lithium-ion battery technology to produce an efficient, accessible, sustainable means of urban transport. We don't need drone food delivery, aerial taxi's, AI powered cars, or mini robot trucks on the pavement. The solution to 90% of our cities problems exists right now.



Aren't they heavy?

To a degree, yes, but a useful comparison might be that a steel framed city bike from the 1950's was about 18-20kg. A modern E bike weighs about 25kg with the battery being about 3-4kg. Now that doesn't mean they are easy to move around when you're not riding, but every E bike I've come across has a 'walk assist' function where the bike's motor will operate up to about 4mph without pedalling. With the battery and motor mounted low in the frame it helps reduce the centre of gravity to the point where they are easy to handle at slow speed and relatively easy to pick up if they fall over.

How fast can they go?

All E bikes sold in the UK should conform to the 'EAPC' (electric assisted pedal cycle) legislation. An EAPC bike gives you electrical power assistance only when you are pedalling; the amount of assistance is linked to your pedalling. This is in contrast to throttle-powered e-bikes, on which you can get the wheels turning without pedalling at all which are considered to be motorcycles in the UK, requiring insurance/helmet/mot/VED. A EAPC is also limited to 250w nominal power and 15.5mph (although you can pedal faster).

<https://www.gov.uk/electric-bike-rules>

Isn't it cheating?

No! Categorically not. Obviously if you hid the fact and entered a cycle race then that's cheating but E bikes are about commuting and transport and open up a world of transport (not sport) solutions that get people out of cars (nobody ever asks if that's cheating!!) and sharing the roads more efficiently whilst getting exercise and reducing pollution. E bikes are a fantastic leveller in the urban environment; they flatten the hills, they enable you to get exercise, get to your destination faster and take up less room on the road and when parking.

Aren't they expensive?

Compared to a basic hybrid city bike then yes, but that's like comparing a wheelbarrow to an estate car, and when you compare an E bike to any small city car, they are massively cheaper in running and maintaining. One of the most common reactions we get when people are browsing is "I could buy a car for that!". Which, of course, you could. Our cities have always been built around car transport and the large supply of second-hand cars means you can purchase an older, perfectly functional hatchback for about the same price as a brand new eBike. However, the purchase price is only part of the picture. Ongoing insurance, fuel, VED, maintenance, and other charges soon stack up and can make a dent in the pocket of even the thriftiest of car owners. So, how do the figures stack up if we include a typical yearly commute based on the average UK commuter? Around [67% of people](#) commute by car in urban areas, at an average daily distance of just **11 miles**. That's well within the capabilities of many electric bikes. Most of our mid-range bikes will achieve up to 50 miles on a single charge, with the top end bikes achieving 80-100. Even if you throw in some hefty hills, you won't need to charge more than once or twice a week. So, on paper, an electric bike can certainly replace the car for most people's daily commutes. That doesn't answer the question of costs though, and £2,500 is a lot of money to stump up for a bicycle. So how do the costs stack up?

Electric Bikes Are Cheaper to Run

- eBikes are cheaper within 2 months of ownership
- Save between £1,000 and £4,000, in the first year of ownership
- Save between £5,000 and £9,000 over 3 years

Electric Bikes are cheaper to own within just 2 months of ownership. After that, the extra associated costs with running a car for short journeys rapidly makes the car considerably more expensive. After the first year, you will save £800-4,000 with an electric bike. Within 18 months the eBike has paid for itself.

Cost of an electric bike vs car

Below we've taken the cost of an average family hatchback and taken some ballpark figures for petrol, insurance, MOT etc at time of writing. Of course, your situation may differ slightly. All costs are given as a guide only.

	E bike	E Cargo Bike	Secondhand car/van
Model	https://formeibikes.co.uk/ebikes/by-style/e-leisure/peak-trail-2e	https://www.ternbicycles.com/uk/bikes/472/gsd-s10-lx	https://www.autotrader.co.uk/car-details/202207087599634
Cost	£2,050.00	£5,200	£4,000
Licence Required?	No	No	Yes
Cost to Refuel	£00.07	£00.07	£70.00
Cost Per Mile	£00.01	£00.01	£00.19

*We are assuming a cash purchase, without finance or cyclescheme saving of between 26-42%

Running Costs per year

	E bike	e cargo bike	Small car /van
VED	£0	£0	£360
MOT	£0	£0	£42
Insurance	£50	£50	£600
Servicing	£30	£30	£150
Parts	£100	£100	£500
Running Costs Excluding Fuel	£180	£180	£1,652

If we assume you're driving 20 miles a day based on the average days worked in a year ([254](#)), that's around **5080 miles per year**. Of course, both bike and car can be used for leisure which will drive these figures up, but for now, let's just focus on urban commute/school run.

Annual Fuel Costs

Based on this, over the course of a year, an eBike will cost you about £127/y in electricity. Even less, if you're allowed to charge at work. Meanwhile, a car will cost around **£965.00 (0.19p per mile x 5,080)** in petrol for the year.

	E bike	E cargo Bike	Car
Running Costs excl Fuel	£180	£180	£1,652
Fuel Costs	£51	£51	£965
Total Cost	£231(£19pm)	£231 (£19pm)	£2617 (£218pm)
Initial Cost	£2,050	£5,200	£4,000
Total First Year	£2,281	£5,431	£6,617

This table quickly shows how much more cost-effective a bike is over 12 months than a car. **So yes, you can buy a car/van for the same price as an electric bike.** However, a car/van will cost you far more over the course of a year in running costs, and the eBike will quickly pay for itself. By the end of the first year alone, you'll have saved **between £1,186 and £4,336** in running costs. The electric bike paying for itself in savings within the second year of ownership. Over 3 years, the gap increases massively to between £5,000 and £8,000 in savings. Of course, occasionally you may need a larger vehicle to carry more people or move large items long distances, car/van sharing/rental schemes are widely available and even if that costs £500/year the savings are still massive.

	E bike	E Cargo Bike	Car	Cumulative Saving E bike vs car	Cumulative saving E Cargo bike v car
Year 1 Total	£2,281	£5,431	£6,617	£4,336	£1,186
Year 2 Total	£231	£231	£2,617	£6,722	£3,572
Year 3 Total	£231	£231	£2,617	£9,108	£5,958

They can't carry the stuff I need

How much do you need to carry? Another adult, 2 or three children? There are plenty of cargo bikes available to perform these tasks and while they are more expensive than a single seat E bike, the payback in terms of operating costs is still impressive when compared to a small hatchback - perhaps it might take 2 years but how reliable is a 13-year-old car.... Commercial cargo bikes can carry up to 250kg and still meet all the EAPC legislation.

They can replace driving.

“People are buying electric bicycles as a way to reduce car trips,”. The data backs this up: 28 percent of survey respondents said they bought an e-bike specifically to replace driving a car. And many other reasons buyers listed for wanting an e-bike—including carrying cargo and kids, avoiding parking and traffic, and environmental concerns—also indicate a desire to get out from behind the wheel. Plus, you don’t need to change clothes or clean up when you arrive at your destination, because you don’t have to work up as much of a sweat.

Consider, too, that more than half of all driving trips are 10 miles with some surveys reporting that the average single trip amounts to 5 miles That’s a no-brainer distance to cover by e-bike. In fact, the survey found that owners replaced 46 percent of their car commutes and 30 percent of their driving.

Are you going to do 5,000 miles a year on a bike? Probably not but using the E-bike for the majority of short journeys, using public transport and renting cars from the likes of Zipcar will still save a significant amount of money.

Summary

Lots of stats, lots of anecdotes, bottom line come and try one!! I guarantee you will be pleasantly surprised!!!!