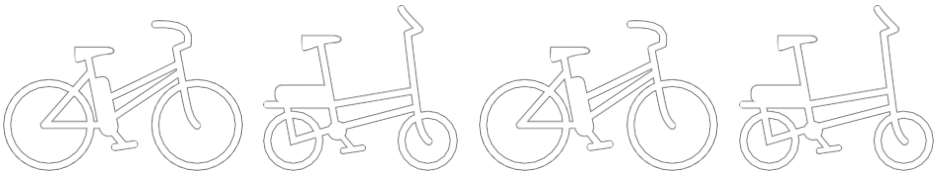
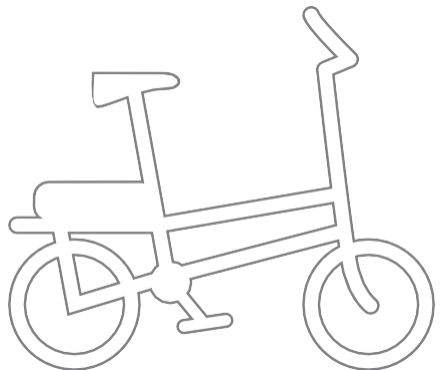
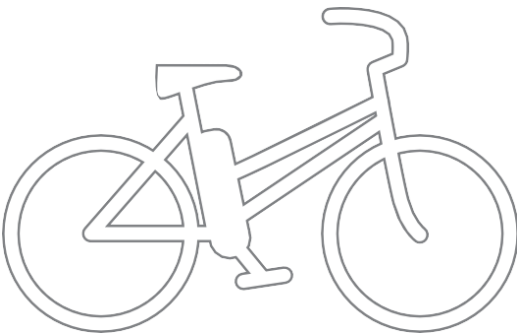


# Your guide to Electric bikes



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# Introduction

Electric bikes have become a popular form of travel worldwide with more than 36 million sold last year. They provide a realistic alternative to the many of the kinds of journey currently made by car. Many people who would struggle to use a regular pedal cycle find that using an electric makes regular cycling not only possible but also an enjoyable experience.

Electric bikes use rechargeable batteries and electric motors to provide assistance in maintaining the pedalling speed set by the user.

There are two types of electric bike; 'power on demand' and 'pedal assisted'. 'Power on demand' bikes work when the power is activated and controlled by a throttle or gear. With these kind of bikes no pedalling is required, although they are designed to work with pedalling which will preserve the battery charge and maximize the distance over which assistance is provided. Additionally, it becomes easier to pedal over difficult terrain (e.g. hills). 'Power assisted' bikes are designed to alleviate the effort of pedalling rather than replace it entirely, effectively lightening the effort. The extent to which the bike assists in pedalling is controlled by the rider.

Electric bikes can be heavy so some electric bikes offer a walk assist mode too which will help you in situations where you need to walk whilst pushing the bike e.g. when going up steps.

# Batteries

Most electric bikes sold in the UK now have lithium ion or lithium polymer batteries. The maximum distance you can travel before needing to recharge your battery varies greatly depending on the type of journeys you make but is typically in the region of 30 to 60 miles. The time taken to recharge a completely discharged battery is between 3.5 to 6 hours. Many manufacturers recommend recharging the battery one a month if the bike isn't ridden regularly. Batteries typically last for around 500 to 1000 recharge cycles before needing replacement. The cost of completely recharging a battery is about 7p. It is worth seeking advice from your electric bike retailer about best practice for recharging your particular battery and the right kind of battery to buy.

# Reasons for buying an electric bike

- 1. Fitness is no longer a barrier**  
If you ever felt that you would like to start cycling but were worried about your fitness, then electric bikes can provide you with the boost you need so that you can cycle as fast and confidently as any regular cyclist.
- 2. Wear what you like when out cycling**  
A major advantage of electric bikes is that you can make your trip without exerting as much energy whilst cycling. That means you can make your journey with getting hot and sweaty. If you want to cycle to work and your employer doesn't have a shower, that's no longer a problem and there's no need for a change of clothes at the end of your journey.

### **3. Goodbye to hills and windy weather**

The thought of cycling up steep hills or against the wind can be one of the most off-putting reasons for not cycling. With an electric bike you can sail up hills without effort and cycling against the wind becomes a breeze.

### **4. No need to take the car for your journey**

Many of the journeys made by car can be made faster and more conveniently by bicycle. No need to waste time being stuck in a traffic jam or searching for a place to park. Electric bikes can use the extensive network of local cycle routes thereby avoiding many of the traffic lights and road works which would slow down a car driver.

### **5. Enjoy cycling for longer distances along scenic routes**

Electric bike users actually spend more time cycling and cycle further than regular cyclists. The assistance provided by an electric bike motor means that cyclists can

make longer journeys without becoming exhausted. York has several scenic long-distance off-road cycle routes which have become popular with electric bike users.

### **6. Great for your health**

Cycling using an electric bike is a great form of exercise. Although electric bike riders use slightly less calories per mile than regular cyclists this is considerably more than the calories used when making the same journey by car. Electric bikes are great for elderly people and those with joint problems or other debilitating conditions as the motor assistance provided by the bike makes pedalling easier meaning that people who would struggle to ride a conventional bike will be able to make their journey without struggling.

Recent studies have shown that cycling regularly can halve the risk of cancer and heart disease. Cycling has also been shown to make you more alert, improve your mood and increase productivity, making it an ideal way to start the day!

## 7. **Be clean and green**

Electric bikes don't pollute the air. By using an electric bike you will be helping to make York a cleaner and healthier city for all. Electric bikes use very little energy when compared to a moped, motorcycle or car. Even better, they can be powered entirely from renewable forms of energy which means you can do your bit in helping to protect York from extreme weather and flooding caused by climate change.

## 8. **Cheaper than running a car or motorbike or using public transport**

The overall costs of purchasing and running an electric bike are considerably cheaper than the costs of buying and maintaining a car or motorbike. The costs of travel also compare favourably with the costs of travelling by public transport on a regular basis. You can expect the costs of owning and maintaining an electric bike to be around £7.50 to £8.50 per week, depending on the initial purchase price and how much the bike is

used. Electric bikes typically cost in the region of £1000 to £1500, but if your employer takes part in the Cycle to Work Scheme (see <http://www.bike2workscheme.co.uk/>) you may be able to purchase an electric bike at a considerable discount.

## 9. **Great range of bike designs available**

Electric bikes now come in a wide range of styles. The latest range of bikes can be very stylish and include mountain bikes, road bikes, town bikes, folding bikes, cargo bikes and disability bikes.

## 10. **You can try before you buy**

Many local retailers allow you the option of borrowing an electric bike to try out over a period of time so that you can make sure that you are buying the right bike for your needs.

# Choosing an electric bike

A good retailer of electric bikes will provide you with full details about a range of electric bikes and the advantages and disadvantages of each kind. They will also help you to find a bike that matches your needs. Some local electric bike retailers will allow you to borrow an electric bike for a short period to make sure that the bike matches your needs.

**Electric bikes and the law**  
The law in England, Scotland and Wales states that you do not need a licence to ride an 'electrically assisted pedal cycle'. Nor do you need to register, tax or insure it. You must be over 14 to ride an electric bike. Whilst there is no official limit to how fast you may cycle under your own power, electric bikes are only allowed to be pedal-assisted for speeds up to 15.5mph. Finally, electric bikes must have functioning pedals and their motors' power output must not be more than 250 Watts.

Recent changes to legislation mean that electric bikes cannot be fitted with a full speed throttle that can work independently (no pedal movement). Start up assist throttles (those that assist up to 6 km/h or 3.7mph) are allowed.

## Cycle training

If you haven't cycled for a while and would like to feel more confident about cycling or if you would like to learn to cycle we can help with a one-to-one training session matched to your needs. Training by qualified cycle trainers costs just £5 for an hour and a half session.

Call **01904 555579** for more details.



For more information see  
[www.itravelyork.info](http://www.itravelyork.info)  
or send an email to  
[itravel@york.gov.uk](mailto:itravel@york.gov.uk)