



EAPC REGULATIONS CONSULTATION 2024 Submission from Cycling UK

ABOUT CYCLING UK

Cycling UK was founded in 1878 and has over 70,000 members and supporters. Cycling UK's central charitable mission is to make cycling a safe, accessible, enjoyable and 'normal' activity for people of all ages and abilities. Our interests cover cycling both as a form of day-to-day transport and as a leisure activity, which can deliver health, economic, environmental, safety and quality of life benefits, both for individuals and for society.

Question 1

Do you support or oppose the proposed change to how EAPCs are classified so that the maximum continuous rated power of the electric motor must not exceed 500 watts instead of 250 watts as set out in the current regulations?

We oppose the proposal to change the way EAPCs are classified to increase the maximum continuous rated power of the motor, for the reasons set out in answer to Question 2.

Question 2

Explain your response to question 1. Are there any additional benefits or risks (including in relation to road safety) not referenced in this document?

We wholly support the Government's ambitions to increase cycling and walking levels and attain the resulting benefits in air quality, emissions, congestion, and health. However, we don't believe increasing the maximum power of EAPCs will help achieve those ambitions – and we note that the Government has not provided any evidence to the contrary. In fact, the changes may achieve the opposite effect. Illegally used high-power, twist and go e-cycles (which therefore are regulated as motor vehicles, but used as e-cycles) are already common on UK streets. Reporting suggests that their usage discourages other people – especially the elderly and disabled – from walking or cycling because they are afraid to share space with these vehicles.

Doubling the maximum continuous rated power of potentially all e-cycles would be a very significant change. The current power limit was set to ensure safety for e-bike riders as well as for other cyclists and pedestrians, with whom they share facilities. Much of the cycling infrastructure in the UK is mixed use – shared with pedestrians – and more powerful bikes could create risks for pedestrians, particularly the elderly and disabled. As the Government has correctly noted, higher power means faster acceleration, which can put both pedestrians and fellow cyclists at risk. Higher power could also mean much heavier e-cycles, which would present greater risks to others in the event of a collision.

The Government has stated that raising the power maximum would help riders in hilly areas or those who are less fit. However, in our experience the current 250 watt limit is sufficient for varying levels of fitness and topography. Cycling UK's Making Cycling Easier e-bike loan scheme operates in Sheffield, a city known for its steep and abundant hills, and we have yet to encounter a participant who cannot travel uphill on a quality e-bike. While cycling up steep hills may be slower, it is of course slower on a standard pedal cycle as well, and we believe that e-cycles have been correctly regulated to approximately mirror the maximum speed and power output of a human rider.

We note too that many of the issues raised in the consultation can already be overcome with better quality e-cycles. For example, as Wheels for Wellbeing has pointed out, e-cycles can have either torque or cadence sensors within the e-assist. Torque sensors tend to be more expensive but provide riders with a smoother, easier cycling experience. Similarly, e-cycles which use mid motors, rather than hub motors, tend to be easier to start riding or to ride up hills. The barriers to using these e-cycles are financial, not regulatory: rather than increasing maximum power, the Government should be investing in financial incentives to make high quality e-cycles accessible to more people.

If the objective is to enable cyclists to keep up with motor vehicle traffic (rather than with other cyclists), the maximum power-assist speed would have to be increased to at least 30mph, which remains the default speed limit in residential areas outside of Wales and London. We don't believe this would be safe for EAPCs, but would be open to the exploration of a new category of vehicles such as speed pedelecs (which already exist in Europe), which can travel significantly faster than EAPCs but can't necessarily access the same facilities, such as cycle tracks and shared use paths, which ensures safety for cyclists and pedestrians. It may make sense to consider this within the LZEV framework (see answer to Question 5).

It's possible that a higher maximum power could indeed be useful for purposes such as carrying heavy cargo uphill, but we believe riders of more powerful cargo bikes should meet additional requirements such as training to ensure safety (see answer to Question 8). As noted by the Government, increased cargo bike power could enable them to carry greater loads and therefore to cause more damage in collisions. We agree that this risk could be offset by removing even heavier forms of freight from the roads, but we think the greater risk should come with greater responsibility in the form of training and licensing. This training should include components on brake checks and safe loading.

Most important for Cycling UK is that e-cycle users (as defined under current regulations) should not have to undergo mandatory training or licensing, so there should be a regulatory distinction between e-cycles with motors up to 250 watts and more powerful e-cycles.

We also disagree with the rationale for changing EAPC regulations to "reduce the incentive for users to tamper with the settings of their e-cycles". The group of people in which e-bike tampering is most commonly observed in the UK is food couriers working in the gig economy. The real driver for tampering with an EAPC is low and insecure wages,

which make it difficult to purchase a safe and legal e-bike and also incentivise faster speeds and higher power. E-bike hire or purchase subsidies would be a much more effective way to incentivise safe and legal use among this group of e-cycle users.

Furthermore, the Bicycle Association has pointed out that there are currently no 500 watt, 15.5mph throttle power e-cycles being manufactured. If the proposed changes are introduced, the delay in manufacture or import of such EAPCs would likely coincide with more frequent modification and tampering to reach the new limits, which would increase existing fire risks. We also echo the Bicycle Association's concerns that it would be easier to tamper with 500 watt EAPCs to achieve speeds as high as 40mph.

Question 3

Provide any relevant evidence to support your responses to questions 1 and 2.

Cycling UK has almost 150 years of experience in understanding the needs of cyclists, and as a charity we devote ourselves to encouraging more people to cycle. We believe in the power of e-cycles to open the benefits of cycling to more people, which is why we run [Making Cycling Easier](#), a scheme in which people can try e-bikes through free loans and skills sessions. Through this experience, we have a very good understanding of what would in fact make e-cycles more attractive and accessible to more people (the Government's stated purpose for the proposed regulatory changes).

In a recent survey, we checked our understanding by asking our members what one change would make them most likely to use e-cycles more or for the first time. Out of 878 respondents, 41% chose "more protected cycle lanes", 29% chose "grant toward buying an e-bike", 14% chose "free e-bike loan", 8% chose "higher maximum speed", 5% chose "higher power limit", and 3% chose "not having to pedal (a twist and go e-bike)". While we did not frame the question within the context of the current consultation, it's clear that the proposed changes would be the least likely to increase e-cycle use among respondents. Meanwhile, improved cycling infrastructure and financial incentive schemes would make a real difference in e-bike uptake.

Question 4

Do you support or oppose the proposed change to allow EAPCs to have throttle assistance up to 15.5mph (25km/h) without the need for type approval, instead of 3.73mph (6km/h) as currently regulated?

We oppose the proposal to allow all EAPCs to have throttle assistance up to 15.5mph without type approval, for the reasons set out in answer to Question 5.

Question 5

Explain your response to question 4. Are there any additional benefits or risks (including in relation to road safety) not referenced in this document?

We firmly agree with the Government's objectives to increase cycling and walking levels as a way to improve air quality, emissions, congestion, and health. However, we don't believe allowing twist and go functionality up to 15.5mph without type approval for all EAPCs will help achieve those objectives.

It is important to maintain the distinction between cycles and motor vehicles, and removing the pedal requirement would blur that distinction. Users of pedal cycles (including EAPCs) are afforded privileges such as not having to wear helmets in part because of the health benefits of cycling. Likewise, one of the economic justifications for investing in much-needed cycle infrastructure is that higher cycling rates lead to public health savings. Removing the pedal requirement removes the inherent public health benefit. Anecdotal evidence from illegally used twist and go e-bikes suggests that when pedalling is not a requirement, fewer people do it. Reducing the clear distinction between e-cycles and mopeds may also result in calls for cyclists to be licensed, registered, and wear helmets, which would almost certainly lower cycling rates and all the societal benefits that come with cycling.

Under current regulations EAPCs without type approval can already have throttle assistance up to about 3.7 mph, which can help people start, particularly in hilly areas. However, it is our understanding that a lack of legal clarity has prevented some UK manufacturers from including throttle assistance in their e-cycles. Greater clarity and awareness should result in e-cycles with low-speed throttle assistance being more widely available.

EAPCs can also already have throttle assistance up to 15.5mph with type approval. We would be open to considering measures to make those cycles more accessible and affordable to people who genuinely need the additional throttle assistance. We also note that Wheels for Wellbeing has developed very sound proposals for reform of the "invalid carriages" category, and there may be changes within those proposals which could make EAPCs more accessible and attractive to disabled people.

We do not believe it makes sense to amend the EAPC definition in the absence of legislation creating a new Low-speed Zero Emission Vehicle category, which the Government has long promised. It may be that higher powered (and perhaps higher speed) twist and go vehicles are an important part of transport decarbonisation, but that is exactly what an LZEV category would create. We don't believe that amending the EAPC definition without having first created the LZEV category is sound, nor that it would help the Government to meet its active travel objectives.

Question 6

Provide any relevant evidence to support your responses to questions 4 and 5.

We have seen no evidence from the countries which do allow higher powered or twist and go e-cycles that this difference results in higher cycling rates or more modal shift away from less sustainable or healthy modes of transport.

In the US, e-cycles typically (depending on the state) have a much higher power limit of 750 watts and only need to have operable pedals – they don't need to be used. Yet in [2022](#), only 1% of all trips were cycled and only 6.8% of all trips were walked in the US – figures that have remained constant or (in the case of walking) decreased over the past two decades. It appears therefore that the introduction of high powered, twist and go e-bikes has done little to increase active travel rates in the US.

Instead of looking to countries with low cycling rates, like the US, it makes much more sense to follow the examples of countries such as Germany and France, which have high levels of e-cycle use. These countries have the same EAPC power limit and pedal requirement beyond 6km/hour. But they also have e-bike subsidy or incentive schemes, as well as safer cycling infrastructure, which we believe are much more effective ways to boost e-cycle use.

DfT's own [data](#) suggests that the most commonly cited drawback of e-cycles is their high cost and the threat of theft¹. Germany, which has the largest e-bike [market](#) in Europe with over 5 million e-bikes sold in 2020, offers both national and regional subsidy schemes to address the cost barrier. And in France, e-bike sales have more than tripled since 2016, when an e-bike financial assistance programme was introduced. Meanwhile, e-bike sales have grown much more slowly in the UK and since 2020 have stagnated.

Some people are able to use the Cycle to Work scheme to make an e-bike purchase more affordable, but this scheme is inaccessible to groups of people such as the unemployed. Expanding this programme is another way to make e-cycles accessible to more people.

Short-term e-bike loans, such as the DfT-funded scheme that Cycling UK delivers, are another effective way to increase e-bike uptake. A 2018 Swiss [study](#) found that providing a free e-bike loan for just two weeks can lead to long term behaviour change.

Finally, all of the interventions proven to increase cycling rates will also increase e-cycle use. Polling shows that the largest barrier to cycling is perceived danger. Measures such as building and maintaining direct, protected cycle lanes; improving crossings; and lowering speed limits are all tried and tested ways to increase cycling safety. In the [Netherlands](#), which is famous for its high-quality cycle infrastructure, e-cycles now make up the majority of all cycle sales. The provision of secure bike storage, both in commercial areas and in high density residential neighbourhoods (which are less likely to have sufficient private space for bike storage), is also important to increase e-bike use, given their higher value.

Question 7

Do you support or oppose limiting either or both of the proposals to disabled people with impairments that affect their mobility and who would benefit from the proposals? If

¹ In the DfT's Technology Tracker survey, "not powerful enough" or "must be pedaled" were not even listed among the options of e-cycle disadvantages. It is therefore puzzling to us that the Government now considers these two factors to be the key to unlocking higher e-cycle use.

applicable, provide views on which disabled people the proposals should apply to. Explain your response and provide any relevant evidence.

Yes, we do think it's possible that disabled people could benefit from some of the proposed changes. We also know that changes to "invalid carriage" regulations are long overdue; these could include provisions for twist and go EAPCs. However, we are not experts in disability and would therefore recommend consulting Wheels for Wellbeing on the details. We note that Wheels for Wellbeing has [not supported](#) the doubling of power for all EAPCs due to concerns about the impacts on disabled people.

Question 8

Do you support or oppose limiting either or both of the proposals to e-cargo bikes? If applicable, provide views on how e-cargo bikes could be defined for these purposes. Explain your response and provide any relevant evidence.

With regard to cargo bikes, we have three concerns, Firstly, there is no hard-and-fast distinction between a regular pedal cycle and a cargo bike. Therefore, it would be difficult to raise the power limit to 500 watts only for cargo bikes, because there is no criteria by which you could prevent people from claiming that their standard pedal cycles were also cargo bikes. Secondly, a vehicle with sufficient power to take heavy loads up hills becomes dangerous when being ridden downhill, unless the rider is well trained in how to control the vehicle and how to load it safely. Thirdly, a vehicle with a 500 watt motor can accelerate much more powerfully than one with 250 watts, even if its motor is limited to the same top speed. This alone could be expected to make 500 watt EAPCs much riskier and more intimidating than those with a 250 watt limit, both for their riders and for pedestrians (especially those with visual impairments).

Given this, our provisional view is that 250 watts is the right limit for all electrically powered light vehicles that can be used without any licencing or similar requirements, including EAPCs. Electrically-powered cycles – and LZEVs more generally – could be permitted to have higher power, but there should be some light-tough licencing required for anyone wishing to use such a vehicle. The requirement could be similar to the compulsory basic training requirements for mopeds, but with a requirement to demonstrate basic competence with a loaded cargo bike rather than a moped. That would enable freight operators in hilly areas to take advantage of higher-powered freight bikes, while retaining the basic principle that light vehicles with electric motors up to 250W can be used without licencing, insurance requirements etc.

Question 9

Provide any relevant evidence in response to the questions in the impact assessment – see paragraph 33.

The consultation is limited to the 2 proposed changes to the regulations and the above questions. It does not extend to wider topics related to e-cycles, cycling or active travel, including mandatory insurance, licensing or helmets, the Highway Code, cycle training or riding in an antisocial manner. Responses that are not relevant will be disregarded.

These questions in the impact assessment refer to the below questions – see answers below.

Question 10

What, if any, evidence can you supply on the current size of the e-cycle stock owned by UK transport users and the total annual trips made?

We would recommend consulting with the Bicycle Association on this question.

Question 11

What, if any, evidence can you supply on the current size of the e-cycle market in the UK, including manufacturing volumes, or its potential future growth rate?

We would recommend consulting with the Bicycle Association on this question.

Question 12

Do you have any:

- **estimate of the response that e-cycle manufacturers will have to the proposed regulatory changes and any costs and benefits associated with that response**
- **costs associated with the response that e-cycle manufacturers will have to the proposed regulatory changes**
- **benefits associated with the response that e-cycle manufacturers will have to the proposed regulatory changes**

We would recommend consulting with the Bicycle Association on this question.

Question 13

What, if any, evidence can you supply on whether and how market prices for e-cycles might be affected?

We would recommend consulting with the Bicycle Association on this question.

Question 14

Specifically in respect of the proposed regulatory changes what estimate, if any, do you have on the response of:

- **consumers to any change in e-cycle function and performance – in particular, how it might affect the number of trips taken**
- **transport users to any change in e-cycle function and performance – in particular, how it might affect the number of trips taken**

We have seen no evidence to suggest that the proposed regulatory changes would increase the number of e-bike trips taken by consumers or transport users.

Question 15

What, if any, evidence can you supply on the number and size of businesses that might be affected by these proposals – in particular, whether small and micro businesses may be affected?

We would recommend consulting with the Bicycle Association on this question.

Question 16

What, if any, evidence can you supply on what impact these proposals might specifically have on disabled people?

We would recommend consulting with Wheels for Wellbeing on this question.

Question 17

What, if any, evidence can you supply on what impact these proposals might specifically have on e-cargo bike users?

We would recommend consulting with cargo bike operators such as Pedal Me on this question.