

ELECTRICALLY ASSISTED PEDAL CYCLES

CONSULTATION RESPONSE

January 2012

Contents

Contents	2
Executive Summary	3
Overview	3
Summary of responses	3
Summary of Government response	4
Introduction	4
Background	4
Consultation process	4
Summary of responses to consultation questions	i

Executive Summary

Overview

The Electrically Assisted Pedal Cycle (EAPC) Consultation was launched on 5 January 2010. It sought views on whether to amend the Electrically Assisted Pedal Cycle (EAPC) Regulations 1983 to simplify the legislation and provide closer alignment with European provisions.

We would like to thank all those who responded to this consultation. All views expressed have been considered carefully, helping to inform current policy and will be taken into account in future work on EAPCs.

Summary of responses

1. Some of the key issues raised by the respondents are covered below:

- Motor power

There is wide support to align with the European power limit (from 200W to 250W). It is suggested that this will improve assistance to the rider, especially in hilly areas. This will not impact on the maximum assisted speed which remains limited to 15 mph.

- Weight limit

Domestic Regulations limit the maximum weight for electrically assisted bicycles to 40kg and for tandems and tricycles to 60 kg. There is no weight limit applied to electric cycles used elsewhere in Europe or to pedal cycles used in the UK.

Comments received during the consultation included concerns that removing the weight limit would permit electric mopeds, heavier cargo cycles and electric pedicabs to be used on cycle tracks/lanes raising safety issues for those sharing the same space.

Others felt that the weight of bicycles and tandems was likely to be self limiting.

- Twist-and-go EAPCs

EU rules require twist-and-go variants to comply with the same “construction standards” applied to low power mopeds. However, we do not apply the same “Registration or Use” rules that are commonplace for twist-and-go types in many other Member States (meaning they are not subject to registration, road tax, insurance, etc) and allow them to be used in GB as cycles.

Some respondents raised concerns about removing "twist and go" products from the EAPC rules – and treating them as motor vehicles. There were comments about the advantages this type of cycle offered - for example to the elderly who may have difficulty pedalling. There were suggestions to retain a limited twist and go function (e.g. up to 4 or 5 mph) to help riders get going, particularly for a hill start. There were also

concerns that sales of EAPCs would fall if "twist and go" was prohibited, with people returning to more polluting forms of powered transport.

Others felt that fully harmonising with EU rules and in effect classifying a twist and go cycle as a moped was essential in order to ensure EAPCs were genuine pedal cycles and not simply electric mopeds fitted with pedals.

Summary of Government response

2. The Department for Transport has considered the responses to this consultation and supports recommendations to harmonise power limits (from 200 Watts to 250 Watts) with similar provisions in place across Europe. This will provide consumers with access to a wider range of electrically assisted cycles.
3. Regulatory proposals will be developed to update the GB power limit for electric cycles once EU discussions on a much wider group of 2, 3 and light 4-wheeled vehicles conclude. We expect this process to be completed during 2012. In the mean time we will also carry out further work to consider whether other parameters (e.g. weight limits) could also be simplified or updated to reflect modern designs.
4. The outcome of EU discussions could have implications for how we regulate EAPCs nationally. It would therefore be unhelpful to pre-empt the outcome of these discussions and to make changes to national rules which might need to be subsequently repealed.

Introduction

Background

5. The Department for Transport (DfT) undertook public consultation on whether to amend the Electrically Assisted Pedal Cycle (EAPC) Regulations 1983 to simplify the legislation and provide closer alignment with European provisions. This was launched by:
 - a statement in Parliament,
 - a DfT press release,
 - documents on the DfT website, and
 - individual mailings/e-mails to around 500 people and organisations.
6. It invited views on deregulation of power limit, clarification of the use of pedal assistance, partial deregulation of bicycle and tandem weight, retention of tricycle weight and enforcement of amendments to the new regulations.

Consultation process

7. The consultation ran for twelve weeks commencing on 5th January 2010 and ended on 30th March 2010, but "late entries" were accepted to the end of May. The consultation was sent to key stakeholders such as road safety groups, cycle interest groups, cycle manufacturers and individuals who had previously expressed an interest in EAPC issues. The consultation was also

placed on the Department's website. DfT would like to thank all those who responded to this consultation. All their views expressed have been considered carefully, helping to inform current policy and will be taken into account in future work on EAPCs.

8. At total of 79 replies were received, the results broken down as follows:

Member of Public	35
Small Medium Enterprise	11
Large company	3
Representative Organisation	5
Interest group	13
Local Government	3
Central Government	3
Police	2
Other	4

9. Respondents included members of the public, representative organisations, local authorities, manufacturers, the police etc. 3 responses were received from foreign individuals, one was a manufacturer and the other two were representing interest groups. Where there were interest overlaps e.g. a government group also involved in enforcement, the body has simply been listed in the group considered most appropriate.
10. Most respondents used the standard reply form, with tick-boxes and space for written comment. Two organisations responded that they had no comments to make; these are not included in the analysis of the results. All respondents included separate written comments in addition to a completed form. 21 returned written comments only.
11. In considering responses, awareness is needed that some respondents are organisations characterised by expertise in road/vehicle use, technology and safety and/or which represent many thousands of members, while others are individuals.
12. The tables below list tick-box results from the 77 replies (the 2 responses that had no comments have been excluded). Where respondents supplied text comments some indication of such comments is offered below the tables.
13. Annex A to this report summarises the responses received to the questions asked in the consultation document. It does not attempt to include all of the comments made by respondents but all comments received have been noted and considered, whether or not they appear in the report.

Summary of responses to consultation questions

Q.1. Do you support raising the continuous rated power of the electric motor for bicycles and tandems from 0.2 kilowatts to 0.25 kilowatts?

	Yes	No	Written comment only or no response
Member of Public	21	1	13
Small Medium Enterprise	10	0	1
Large company	2	0	1
Representative Organisation	1	0	3
Interest group	11	0	2
Local Government	1	0	2
Central Government	1	0	2
Police	1	0	0
Other	2	0	2
Total	50	1	26

14. There was overwhelming support for this measure. Many respondents commented that this would harmonise power levels with those set out in the European Standards on EAPCs. This would allow manufacturers to sell the same cycles throughout Europe rather than producing UK specific models, reducing manufacturing costs and giving better value for money to British consumers.

15. Comments also noted that increasing power improves versatility making the bicycles more practical in hilly areas and providing acceptable performance for heavier riders. Some respondents asked for higher power outputs, reference was made to the US where at least 500 watts is permitted. Royal Mail Group made reference to some recent research, Hybrid and Electric Vehicles Technology (Eureka Project 3364), and suggested that this found 400 watts to be suitable for commercial purposes. Others felt that, provided the maximum speed was restricted, there is no need to limit the power.

16. The single respondent opposed to a power increase felt that they are "more than powerful enough for their intended purpose".

Q.2. Should the current weight limit of 40 kg for bicycles and tandems be removed?

	Yes	No	Written comment only or no response
Member of Public	9	11	15
Small Medium Enterprise	7	2	2
Large company	1	1	1
Representative Organisation	1	0	3
Interest group	9	2	2
Local Government	1	0	2
Central Government	1	1	1
Police	1	0	0
Other	0	0	4
Total	30	17	30

17. The majority (55%) of responses from members of the public (indicating a preference) favoured retaining the weight limit. Conversely, 82% of the replies from the interest groups (potentially representing the views of many members) favoured removing the weight limit.

18. Comments supporting the removal of the weight limit for electrically assisted bicycles and tandems included suggestions that the weight is self limiting and that a heavy cycle cannot be propelled at useful speeds. It was also suggested that manufacturers aim to make bicycles as light as possible.

19. A number of respondents noted that there are no weight restrictions in corresponding European standards and the weight limit should be removed in the interests of harmonisation.

20. Similar arguments were also made by those who wanted to retain the limit, with suggestions that heavier cycles would be difficult to pedal without power assistance and therefore should not be permitted. One respondent felt that permitting heavier cycles would mean riders would not try to pedal at all instead relying exclusively on the motor assistance.

21. There was a comment that cycles used commercially require stronger frames and more durable components which can make it difficult to comply with the current 40kg limit.

22. Safety was an issue for some who considered that standard bicycle brakes might not be sufficient to stop heavy cycles in a reasonable distance. One respondent suggested that removing the weight limit would have "serious safety implications, particularly when a heavy vehicle is travelling downhill, making the use of standard component bicycle brakes non-effective. A heavier machine would therefore create serious safety issues when sharing cycle paths."

Q.3 Should the current unladen weight limit of 60 kg for electrically assisted tricycles be retained?

	Yes	No	Written comment only or no response
Member of Public	11	9	15
Small Medium Enterprise	4	7	0
Large company	0	2	1
Representative Organisation	1	0	3
Interest group	2	8	3
Local Government	0	0	3
Central Government	0	1	2
Police	1	0	0
Other	1	0	3
Total	20	27	30

23. The number of responses from members of the public were identical to the previous question, with 55% favoured retaining the weight limit. Responses from interest groups again indicated a preference to remove the weight limit (80%).
24. There were general comments that the 60 kg limit made it impossible to build a tricycle suitable for carrying loads. One manufacturer stated that in their experience cycles for transporting goods generally weigh 100 kg or more. Another respondent suggested that 125-150kg was a realistic weight for a cargo carrying tricycle - taking into account the mass of batteries and control gear. They suggested that a heavier tricycle designed to withstand higher payloads is safer than a lighter, less substantial cycle that may not be able to cope with the stresses imposed by the load.
25. As an alternative to the current unladen weight limit it was suggested that the limit should apply to the weight or size of the payload (although no figures were suggested).
26. Those in favour of retaining a weight limit mentioned safety concerns with heavier tricycles which might be a hazard to others. A number of correspondents considered that a limit on the physical size of tricycles should be considered if they were to be used for commercial purposes. There were also concerns raised about the ability of the brakes to cope with higher weights, however, one organisation stated that limiting weight was not a suitable way to address concerns over the effectiveness of braking systems - they felt that manufacturers might be encouraged to fit lighter brake components that were inadequate for the vehicle when fully laden in an attempt to keep the unladen weight below 60 kg.

Q.4. If you consider that the unladen weight for electrically assisted tricycles should be increased, what limit, if any, should be applied?

	80 kg	100kg	150kg	No Limit	Written comment only or no response
Member of Public	3	0	0	3	29
Small Medium Enterprise	0	1	2	3	5
Large company	0	0	1	1	1
Representative Organisation	0	0	0	0	4
Interest group	1	1	1	6	4
Local Government	0	0	0	1	2
Central Government	0	0	1	0	2
Police	1	0	0	0	0
Other	0	0	0	0	4
Total	5	2	5	14	51

27. There was no overall consensus between the individuals and groups responding to this question. However, within the interest group category there was a strong preference not to apply a weight limit.

28. One respondent in favour of 150 kg also suggested that riders would be unable to manage a heavier bike, even with power assist and that this is in effect a self limiting factor - so having no limit might also be appropriate.

29. Some responses supporting lower limits indicated that it was appropriate for a vehicle designed to carry a rider and goods.

Q.5. Do you consider that electrically assisted tricycles should be defined by another criterion other than by prescribed weight limit? Some suggestions are: Maximum overall width, maximum payload and maximum gross vehicle mass

Axle Width

	Yes	No	Written comment only or no response
Member of Public	2	0	33
Small Medium Enterprise	0	0	11
Large company	0	0	3
Representative Organisation	0	0	4
Interest group	2	0	11
Local Government	0	0	3
Central Government	0	0	3
Police	0	0	1
Other	0	0	4
Total	4	0	73

Maximum Overall Width

	Yes	No	Written comment only or no response
Member of Public	4	0	31
Small Medium Enterprise	3	0	8
Large company	1	0	2
Representative Organisation	0	0	4
Interest group	3	0	10
Local Government	0	0	3
Central Government	1	0	2
Police	0	0	1
Other	0	0	4
Total	12	0	65

Maximum Payload

	Yes	No	Written comment only or no response
Member of Public	4	0	31
Small Medium Enterprise	0	0	11
Large company	0	0	3
Representative Organisation	0	0	4
Interest group	3	0	10
Local Government	1	0	2
Central Government	0	0	3
Police	0	0	1
Other	0	0	4
Total	8	0	69

Maximum Gross Vehicle Mass

	Yes	No	Written comment only or no response
Member of Public	4	0	31
Small Medium Enterprise	0	0	11
Large company	0	0	3
Representative Organisation	0	0	4
Interest group	1	0	12
Local Government	0	0	3
Central Government	0	0	3
Police	0	0	1
Other	0	0	4
Total	5	0	72

Commercial Activity

	Yes	No	Written comment only or no response
Member of Public	1	0	34
Small Medium Enterprise	1	0	10
Large company	1	0	2
Representative Organisation	0	0	4
Interest group	0	0	13
Local Government	0	0	3
Central Government	0	0	3
Police	0	0	1
Other	0	0	4
Total	3	0	74

30. Most respondents did not positively choose one of the proposed options. Of those who did, a limit on width was most popular, supported in 12 replies, followed by limits on payload and gross weight.

31. Those who supported restrictions on width highlighted this as important when considering their compatibility with cycle lanes and manoeuvrability. A restriction on passenger numbers was suggested as a way of controlling their use as rickshaws. Separate legislation controlling the licensing of passenger tricycles for hire and reward was also seen as a suitable measure.

32. One respondent stated that all the options are considered by reputable manufacturers in the design process and this removed the need for legislation.

33. A common response to these first 5 questions was that GB should not impose any requirements that are in addition to those already set out in existing European standards.

Q.6. Is the most sensible way to provide effective enforcement and to differentiate between cycles manufactured before and after a change in the GB Regulations, to require the date of manufacture to be included on the identification plate for new products?

	Yes	No	Written comment only or no response
Member of Public	14	6	15
Small medium enterprise	4	4	3
Large company	1	1	1
Representative Organisation	1	0	3
Interest group	6	5	2
Local Government	0	1	2
Central Government	1	0	2
Police	1	0	0
Other	1	1	2
Total	29	18	30

34.A majority of members of the public (70%) and interest groups (55%) supported the addition of the date of manufacture on the identification plate.

35.Many of those opposed to this option did so on the assumption that any revised legislation would be more relaxed than current requirements and so there would be no need to be able to differentiate between cycles built to the current rules or new rules. Others, including some who support this option, were concerned about the security of this plate. They felt it would be easy to remove or alter and so serve little purpose for enforcement. Some suggested the plate should be tamper proof or the information stamped onto the frame.

36.For some the date of manufacture was unclear, especially those converting existing cycles to electric power using components that might be five or ten years old.

37.One reply considered that this option would add extra administrative burden on small manufacturers and could see no evidence that this would prevent crime or reduce accidents.

38.Some supported the principle but felt a date was unnecessary; instead a label showing compliance with the relevant European standard or a simple symbol to show it meets the new requirements should be sufficient.

Q.7. If you do not agree that adding the date of manufacture to the identification plate is the best way to ensure effective enforcement and to differentiate between cycles manufactured before and after a change in the GB Regulations. Please suggest alternative options.

39.Most of the proposals reflected comments already made in response to question 6. Many felt there was simply no need to identify cycles made to the new regulations.

Q.8. If the GB Regulations are amended so that new EAPCs must only provide power assistance when the rider is pedalling - how long would retailers and manufacturers need to sell or convert existing stocks of "twist and go" type EAPCs?

Note - There are two distinct types of EAPC available in GB:

- *Pedal assist - where power assistance is applied only when the rider pedals*
- *Twist-and-go -where power is applied to the motor without pedalling (typically via a moped style throttle).*

	6 months	12 months	18 months	>18 months	Written comment only or no response
Member of Public	2	3	2	2	18
Small medium enterprise	1	2	3	1	4
Large company	0	0	0	0	2
Representative Organisation	0	0	0	0	4
Interest group	0	3	1	0	6
Local Government	0	0	0	0	2
Central Government	0	1	0	0	2
Police	0	1	0	0	0
Other	0	0	0	0	4
Total	3	10	6	3	42

40. The majority of responses (indicating a preference) felt that 12 to 18 months would be sufficient to sell existing stocks or convert "twist and go" cycles to limit power assistance.

41. Many respondents to this question raised their objections to any proposal that would restrict "twist and go" in the future. Support for "twist and go" included its use by the disabled and elderly who might not be able to pedal to activate power assistance. There were concerns that sales of EAPCs would fall if "twist and go" was prohibited, with people returning to more polluting forms of powered transport.

42. Sustrans supported only permitting power assist while pedalling and preferred that "twist and go" cycles be restricted to the road. Others felt that providing power while pedalling was fundamental to the definition of an EAPC and would also harmonise UK requirements with the rest of Europe.

43. Some felt that if "twist and go" is prohibited, it is essential that it is retained for speeds up to 6 km/h (3.7 mph) to assist start up, especially when pulling away up hill. This would harmonise with the European requirement.

Q.9. Can you give an indication of the current sales volumes of EAPCs in GB? An indication of the split between twist and go and pedal assist cycles would be useful.

44. According to the British Electric Bicycle Association (BEBA) there is a market for 21,000 bikes, 80% being "twist and go". One estimate ranged from 12,000 units to 25,000 units. One respondent suggested a 50/50 split between "twist and go" and pedal assist.

Q.10. Are manufacturers and retailers likely to suffer any additional costs as a result of these changes? If so can you quantify them?

	Yes	No	Written comment only or no response
Member of Public	14	2	19
Small medium enterprise	6	2	3
Large company	0	0	3
Representative Organisation	0	0	4
Interest group	5	3	5
Local Government	0	0	3
Central Government	0	0	3
Police	0	0	1
Other	1	0	3
Total	26	7	44

45. The main costs identified appear to relate to any restrictions on "twist and go". One supplier has quoted retooling costs of £200,000 to convert their throttle controller to pedal assist. Another suggested re-tooling costs of £15 per unit together with additional testing costs of £5-10k and changes to literature, etc of up to £3k. Others noted that additional costs would be incurred by the addition of pedal sensors. One reply said that some cycles might need a complete redesign as some "twist and go" cycles are difficult to pedal, being intended primarily to operate on "twist and go" without pedal assistance. Some felt the most significant costs would be due to the loss of sales if "twist and go" was no longer available.

46. In contrast many felt that any costs would be offset by increased sales that would come from harmonising UK requirements with those in EU, opening the market to higher power cycles that are available across the EU.

Q.11 Do you see these proposals creating new opportunities for the use of EAPCs? If so what would they be?

	Yes	No	Written comment only or no response
Member of Public	6	11	18
Small medium enterprise	5	3	3
Large company	1	0	2
Representative Organisation	0	0	4
Interest group	7	2	4
Local Government	1	0	2
Central Government	0	0	3
Police	0	0	1
Other	1	1	2
Total	21	17	39

47. Many replies recognised the role that electric pedal cycles can play in shifting towards greener transport. However concerns were expressed that restricting "twist and go" would restrict the market rather than increase it.

48. The European Twowheel Retailers' Association (ETRA) made reference to their policy document on this issue available at: <http://www.etra-eu.com/docs/ElectricBicycles.pdf>

49. The main advantage of removing weight limits and increasing power was to facilitate commercial cargo carrying operations and the introduction of pedicabs.

Q.12 Do you think these proposals will offer consumers a greater choice of product?

	Yes	No	Written comment only or no response
Member of Public	4	13	18
Small medium enterprise	7	2	2
Large company	1	0	2
Representative Organisation	0	1	3
Interest group	8	2	3
Local Government	1	0	2
Central Government	0	0	3
Police	1	0	0
Other	0	1	3
Total	22	19	36

50. Harmonising with EU requirements was seen as enabling an increased selection of EAPCs in the UK - as some models currently sold in Europe are not permitted to be used as a cycle in GB. These products would become available to consumers.

51.Many respondents suggested that any action that might increase restrictions on "twist and go" powered cycles would lead to less choice for consumers.

Q13. What groups do you think will most benefit from these proposals?

	Young (over 14)	Adult (18 to 35)	Adults (35 to 50)	Adults (51 and over)	Less able	Commuters	Others
Member of Public	5	2	4	7	7	7	5
Small medium enterprise	2	2	4	3	4	4	4
Large company	0	0	0	0	2	0	2
Representative Organisation	0	0	0	0	0	0	0
Interest group	2	4	5	7	6	8	6
Local Government	0	0	0	1	1	1	0
Central Government	0	0	0	0	0	0	0
Police	1	1	1	1	1	1	0
Other	0	0	0	0	0	0	0
Total	10	9	14	19	21	21	17

52.Many comments stated that the greatest benefits would be to Commuters and the mobility impaired.

53.Others felt that the changes would be of no benefit and that increasing restrictions on twist and go products would disadvantage certain groups, particularly the old and less physically able.