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Dear Sir,

Public Consultation on a Framework Directive for 2 and 3 wheeled motor vehicles and quadricycles

Thank you for the opportunity to comment on the Commission's consultation, please find enclosed the response from the Department for Transport (DFT) in the UK.

The Department welcomes measures to simplify the approval process, improve the safety for motorcyclists, and users of quadricycles, and reduce emissions, however any proposals to achieve these goals must be supported by robust impact assessments and supporting evidence. Our consultation response gives the Department's detailed views on the individual measures proposed by the Commission.

I have also enclosed a recent study carried out on behalf of the DfT, "Development of a methodology for the evaluation of safety systems for powered two-wheelers". This report was commissioned by the Department to develop a methodology for assessing the potential benefits of advanced technologies on motorcycles and applies it to three technologies; ABS, combined Braking and Brake Assist. The results have been used to inform our response on the introduction of ABS and other advanced safety technologies.

As mentioned in our response we will be publishing a report comparing the differences in safety performance of passenger cars and micro cars and I will forward this to you when it is complete.

While we have consulted with other government agencies, please be aware that this response represents the views of the DFT.

Yours sincerely,



Adrian Burrows

Response to the public consultation on a proposal for a framework regulation on the type-approval of two and three wheel motor vehicles and quadricycles from the UK Department for Transport

1. Simplification

Question 1: What do you think of the use of one basic EU Regulation and the split level approach for the revision of the legislation on two- and three-wheelers? Why?

In principle the UK supports a new integrated regulation for two and three wheel motor vehicles and quadricycles, if this reduces the legislative burden, removes trade barriers, improves road safety and environmental protection. Provided that this is justified by a robust impact assessment showing the costs and benefits to be worthwhile.

However, we do not feel that this proposal delivers the promised simplification and we would urge you not to proceed at this time. Unlike for cars etc. there are not parallel UNECE Regulations for many of the Directives so the potential benefits are small. Furthermore the current General Safety Regulation is still under discussion/close to agreement and we would urge that some experience be gained with this new initiative before extending it to other categories of vehicle such as motorcycles.

Question 2: Do you agree with the approach to increase the use of references to UNECE Regulations? Why?

The UK supports the increasing use of UNECE Regulations, where this reduces the duplication of legislative work and engages the wider international community in the development of harmonised vehicle standards.

Where there is a corresponding UNECE Regulation it makes sense to repeal the equivalent Directive. However, unlike passenger cars and goods vehicles, there are many Directives without corresponding UNECE Regulations for example 97/24/EC Chapter 7, anti-tampering, 95/51/EC, power, etc. Repealing Directives where no UNECE equivalent exists would require the text of the Directive to be reproduced in a new EU regulation. We believe that the benefits of this work are limited and potentially unnecessary. Directives should be retained until equivalent UNECE Regulations have been drafted and entered into force.

Question 3: Which administrative measures introduced for motor vehicles (Directive 2007/46/EC) should not be included in the legislation on two- and three-wheelers? Why?

The administrative measures should be in line with those contained in Directive 2007/46/EC.

Furthermore, the UK has been contacted regarding the use of personal motorised transporters on the road and is aware that other member states are also considering how to apply legislation to the vehicles. Development of a revised Framework Directive offers the chance to set out a common European approach to these devices.

2. Emission standards

Question 4: Do you support the introduction of new emission limits for motorcycles equivalent to Euro 5 limits for petrol cars? Why?

Proposals for new emissions limits for motorcycles, mopeds, tricycles and quadricycles¹ should be based on an assessment of the effectiveness of such standards on reducing exceedences of air quality objectives and their cost benefit of a range of options. It would not be appropriate to set new emissions standards purely on the basis of what is technically feasible. Although the significance of motorcycle emissions will increase as tighter emissions standards for other vehicles come into effect, this is not in itself a reason for tighter motorcycle emissions standards.

The Commission should consider both the contribution of motorcycles to air quality hotspots, in particular of those pollutants for which exceedences remain throughout the EU, and also the cost of tighter emissions standards. In the UK, road transport related exceedences of air quality objectives are limited to NO₂ and PM₁₀ objectives.

The unit cost impact of emissions standards can be significantly reduced if emissions standards are globally harmonised allowing a common product to be sold in a number of markets. We would therefore urge the Commission to engage with non-EU governments, and in particular Japan, to seek agreement on emissions limits that could form the basis of globally harmonised standards. With global harmonisation in mind we strongly support the suggestion that test procedures for future EU motorcycle emissions standards be those defined in the World motorcycle test cycle GTR.

In respect of alignment with Euro 5 standards (presumably those applying to petrol cars) we would note that the University of Thessaloniki study concluded that, in some areas, such standards exceeded the limits of current best available technology. This would clearly be unacceptable.

¹ Subsequently simply referred to as motorcycles

Question 5: Do you think that additional emission measures should be introduced in the legislation? Why? What is your opinion on the introduction of additional measures such as CO₂ measurement, fuel consumption, etc. ?

As noted above the content of the Commission's proposal should be decided on the basis of a cost benefit assessment of a range of options. Additional emissions control measures would be acceptable if there are in practice emissions control problems with current motorcycles, and provided that these problems could be addressed in a cost effective manner by additional provisions.

Measurement and recording of CO₂ emissions is eminently sensible bearing in mind the importance of greenhouse gas emissions and the fact that measurement can be piggybacked on air quality emissions tests with minimal to zero costs. The likely cost effectiveness of durability limits is not clear to us in advance of seeing an Impact Assessment from the Commission. If the Commission's assessment does show durability requirements to be cost effective we would expect them to be based on bench aging tests. Our experience from In Service Conformity testing of cars leads us to conclude that similar requirements for motorcycles would be impractical.

Evaporative emissions control measures would also need to be justified in terms of cost and benefit. In particular this assessment should consider the availability of suitable type approval test facilities and the potential capital costs if new facilities are needed.

3. New safety measures

3.1 Advanced braking system for motorcycles (i.e. ABS/coupled braking devices)

Question 6: What is your view on the mandatory fitting of ABS on all motorcycles? Why?

The UK supports effective safety measures provided a robust Impact Assessment demonstrates a positive cost benefit.

ABS on two-wheelers has been shown by a recent study carried out on behalf of the Department² to have the potential to prevent up to 6% of injury accidents in the UK. Further work is now required to determine the cost implications that any mandatory requirements would impose.

Our study indicates that the benefits are likely to be greater for larger capacity machines. From this we conclude that extension of ABS to all categories on a mandatory basis is unlikely to offer sufficient benefits that outweigh the significant costs. It is necessary to understand this issue better and the possibilities should be considered jointly by the Commission and the Member States working closely with stakeholders in the sectors involved.

² Development of a methodology for the evaluation of safety systems for powered two-wheelers – final report. T L Smith, T Gibson and M McCarthy. TRL published project report PPR381.

Question 7: In your opinion, are there other/supplementary solutions better suited for certain categories (i.e. coupled braking, stability control systems, etc.) that would produce the same/better effect at better costs?

This should be explored with industry and other stakeholders. There is a risk that mandating ABS will deter manufacturers from developing alternative solutions that may offer similar or greater benefits and be more cost effective for particular categories of vehicle. The potential for alternative solutions, for example, voluntary commitments or consumer awareness schemes should also be explored.

Simple alternatives to ABS may be more appropriate and cost effective for smaller machines however care is needed to ensure that technologies fitted to bikes used by inexperienced and learner riders are consistent in their performance with those fitted to larger machines. If this is not the case then there will be the possibility that riders will need to adapt their riding style to accommodate different braking technologies on different machines. Our research suggests coupled braking is likely to provide additional safety benefits for motorcyclists although these are expected to be lower than ABS. However, this assessment was based on very limited information highlighting the need for a better understanding of the effectiveness of such systems. At present it is probably premature to consider legislation mandating the fitment of these systems.

3.2 Anti-tampering measures for mopeds, motorcycles, tricycles and quadricycles

Question 8: Do you think that the additional measures proposed by the TÜV study and the one proposed in the Motorcycle working group mentioned above? Why?

With respect to the recommendations for additional anti-tampering measures in the TÜV study, proposals to prohibit removable components from silencers, 'cycle beating' in respect of noise and to address modifications to electronic control systems/software seem sensible. We have not commented on TÜV proposals which relate to roadworthiness enforcement etc, which we presume to be outside the scope of this consultation.

We are sceptical of the benefit of current anti-tampering provisions and would expect to see a cost benefit assessment for any additional measures. We can see the logic of anti-tampering requirements on vehicles where licencing restrictions exist and so extending anti-tampering requirements to motorcycles limited to 25kW may be justified. However we see no justification for extension to higher performance machines which are not associated with driver licencing restrictions.

Question 9: Do you think other solutions should be preferred? Which one?

We have not considered alternative solutions and would need to review any that were suggested in the future.

3.3 74 kW power limit for motorcycles

Directive 95/1/EC on maximum design speed, maximum torque and maximum net engine power has harmonized the national requirements in this field. However, it still allows Member States to refuse vehicles with a power above 74 kW. This creates a situation where a motorcycle above 74 kW type-approved in one country is refused in another one. This type of situation is not in line with the spirit of the internal market.

Question 10: Do you think that the option given to Member States to limit the maximum power of motorcycles to 74 kW should be maintained? Why?

We are not aware of any evidence which shows that limiting engine power is an effective measure to reduce accidents and so do not agree that limits on the maximum power of motorcycles are necessary.

However, this could be a sensitive issue in some member states who may see a need to restrict engine power for a number of reasons. We have no evidence to suggest that the current system of national power limits affects the market for these products. We conclude, therefore, that individual Member States should continue to be permitted to limit engine power on a national basis.

We do not support the introduction of a blanket limit imposed on all Member States.

Question 11: Do you think that alternative criteria could be used (i.e. Power-to-mass ratio, acceleration potential) to limit the accident occurrence of motorcycles?

We have not undertaken any research that would support alternative criteria.

3.4 mini-cars (L6 and L7 quadricycles)

Question 12: Given their localized markets, do you think that EU legislation on these vehicles is justified? Why?

We recognise the potential benefits of these types of vehicles to both reduce vehicle emissions and congestion and so support their wider use. While the number of these vehicles in the UK is currently small, we estimate around 7,000, the benefits they receive in terms of reduced vehicle excise duty, congestion and parking costs, has seen many drivers switch to micro cars

from M1 vehicles. Many of these drivers are unaware that micro cars may not meet the same safety standards as passenger cars.

We have commissioned a comparison between the safety requirements for quadricycles and passenger cars and will forward a copy to the Commission when it is published. The most significant improvements in safety of micro cars are likely to come from the introduction of frontal and lateral impact tests; and the assessment of protective steering, and seatbelt anchorage tests that are more in line with those for passenger cars. There are also potential benefits from closer alignment of the braking requirements with those for passenger cars. For example, split braking systems are not currently required on quadricycles but could be added at relatively little additional cost. Since these vehicles are intended to be used in urban environments further research may be necessary to determine whether pedestrian protection improvements are also necessary.

In 2007 the Department arranged for two micro cars to be tested to the requirements of Directive 96/79/EC (front impact). The results highlighted concerns in their crash performance as well as issues regarding the most suitable test procedures to be used for these types of vehicles. The Department would be happy to discuss these results with the Commission and other member states to help develop suitable performance standards.

Based on the above further legislation should therefore be considered to improve safety. However we accept that any measures should be cost effective and it may be impracticable for micro cars to comply fully with the same safety standards as passenger vehicles in the near term.

Question 13: Do you think that these vehicles should have a stricter mass/passenger limitation to justify that they do not have to meet the safety requirements applying to cars or do you think that such vehicles should comply as much as possible with car requirements? Why?

As noted above, we would prefer to see the introduction of proportionate requirements to ensure the minimum safety performance of these vehicles. However we recognise that there is significant uncertainty in the application of the Type Approval requirements for passenger payload, seating capacity, goods carrying capacity and load platforms. This must be addressed in forthcoming review of the Directive.

These vehicles are subject to a maximum passenger payload, however the definition of the passenger mass is unclear and not enforced at Type Approval. For example the maximum passenger payload is limited to 200kg in the Directive but with no definition of the passenger mass it is possible for manufacturers to specify a number of seating positions which in reality would lead to the maximum permissible mass of the vehicle being exceeded if every seating position was filled.

We are currently reviewing the dynamic stability of three wheeled vehicles which have seating positions for 6 persons despite being limited to a

passenger payload of 200kg in the Directive. Initial indications are that the stability of these vehicles is likely to be compromised when loaded with six passengers, and we would expect similar issues to occur if four wheeled vehicles were similarly overloaded. We would welcome a review of the current requirements to ensure the number of seating positions is correctly defined and can be used sensibly without exceeding the maximum payload.

Greater clarity is also required in the definition of goods vehicle to give better differentiation between these and passenger vehicles. Goods vehicles are permitted to operate at a higher laden mass than passenger vehicles and our approval authority has experience of a manufacturer seeking approval as a goods vehicle of a quadricycle which in our view was simply a passenger vehicle with a very small load surface added. Unless there is a clear differentiation between goods and passenger vehicles manufacturers may use this route to approve what are basically passenger vehicles but taking advantage of the higher load limits permitted for goods vehicles. This may have more serious implications in the future if new safety requirements differ between the two classes of vehicle.

3.5 Off-road quads (L7)

Question 14: Should these vehicles be in the scope of type-approval whereas they are not designed to be used on the road?

These vehicles are primarily designed for use off road and unpaved roads. However Member States are obliged to allow access to market, including their use on all public roads if they are type approved as L7 vehicles, even if their handling characteristics and stability are unsuitable for use on the public highway.

We believe there are three distinct types of off-road (ATV) quadricycle, those which are genuine off road vehicles, e.g. Competition quads, and not intended for use on roads; those used for leisure which may need to use public roads for short distances; and the type used for agricultural and forestry activities.

Genuine off-road quadricycles are not suited for use on public roads and should be removed from the scope of the Directive.

Leisure type quadricycles may need to be used on public roads so there is potential justification in creating a new category to cover these vehicles. However we are concerned that features specific to their off road use, such as having no rear differential and low pressure tyres, are not suited to public road use and could lead to handling and stability problems. If these vehicles are to be approved then provision should be made to address these issues. For example, the provision of a rear differential would significantly improve their handling. While we accept that this addition might compromise their off-road performance, this could be overcome if manufacturers were permitted to fit a "diff lock" to enable users to lock the differential for off-road use (in the same way as agricultural vehicles have for many years).

We do not want to put unnecessary restrictions on quadricycles intended for agricultural use and would suggest that approval to requirements similar to those applied to the T3 tractor category in the agricultural vehicle framework directive be an appropriate route for these vehicles. We would welcome the Commission's thoughts on the relevant approval route for agricultural quads.

Question 15: Do you think that at present the category in which these vehicles are type-approved is adapted to the design of such vehicles? Why?

There is a clear and urgent need to be able to distinguish the different categories of micro car, off-road quad, leisure quad, and agricultural quad, and for appropriate standards to be applied to the different designs. The current categories do not allow for this.

Question 16: Should new specific requirements be added to improve the safety of such vehicles? Why?

As noted above we believe that there are safety concerns where these vehicles are used on public highways. We would welcome any research to identify suitable requirements to ensure the safety of these vehicles.

4. Safety of hydrogen powered L category vehicles.

With more and more research being carried out on hydrogen vehicles, the Commission is assessing the possibility of creating new EC legislation on hydrogen powered L category vehicles.

Question 17: Do you think that EU legislation on hydrogen vehicles is needed? Why?

Work has taken place at the Community level to introduce harmonised requirements for hydrogen powered M and N category vehicles using Regulation (EC) No 79/2009. This approach was driven by the need to avoid different requirements being applied across Member States and to ensure the safety of the fuel system. A similar method is necessary to help create a market opportunity for the development of safe hydrogen powered L category vehicles.

5. Overall impact of the legislation on the competitiveness of the EU industry.

Question 18 & 19: What do you think will be the impact of the range of measures that are outlined above on the competitiveness of the EU industry, and in particular SME's?

What will be the impact of the measures on employment in the EU?

Any regulatory measures should be supported by robust impact assessments which should consider these issues. Manufacturers will need sufficient lead times to allow them to implement any changes that are necessary.

Question 20: Do you think that the measures proposed could have a significant impact on the final price of the vehicles? If yes, which ones?

Introducing measures to improve the safety of micro cars would include significant costs to manufacturers if compliance with full passenger car requirements are introduced in an unrealistic time scale. There may be scope to introduce measures which are more proportionate for these types of vehicles that impose less cost on manufacturers while delivering far better safety to consumers.

Mandating ABS or other advanced safety measures is likely to impose disproportionate costs on smaller machines compared to larger ones. The impact assessment should identify which machines, if any, should be included, taking account of costs and benefits.