

**Tottenham & Wood Green Friends of  
the Earth**  
(input from Quentin Given)

**Submission for Scrutiny Review of  
Sustainable Transport**

## **Sustainable Transport scrutiny review – input from Quentin Given, Tottenham & Wood Green Friends of the Earth**

1. FOE believes that radical reductions in motor traffic are possible in urban areas, and especially in London with its existing dense network of public transport. In Haringey around 50% of households still do not own cars, and many of them nonetheless enjoy rich lives. This suggests that there is a much greater potential for non-car ownership and consequent reduction in private motor traffic. The following notes mention some of the key actions that a council like Haringey should be taking to achieve rapid cuts in CO2 emissions from road transport.
2. Exemplars
  - Councillors and senior officers to set good example of minimal car use
  - Staff travel plans to reward non-car use and penalise car use
  - Find and publicise examples of households of different types who live rich lives without owning or much using cars
3. Hard measures to discourage car use
  - CPZs on small areas but extending across the whole borough effectively end car-borne commuting and depending on times of operation also discourage journeys within the borough – the kind of short trips that can be displaced most easily to walking, cycling etc. They can also generate surpluses which can be re-invested into sustainable transport
  - Levies on Private Non-Residential Parking can also reduce commuting and some local journeys and also generate surplus for sustainable investment
  - Speed restrictions discourage car use (see extract from Stephen Plowden paper below) and encourage cycling and walking
  - Traffic calming areas also discourages cut-throughs and ultimately reduces traffic by making certain car journeys unattractive. Seek to create car-free areas where residents reap benefits eg green space, safe play, growing food on land that was previously tarmac.
4. Soft measures to discourage car use
  - Smarter choices programmes to inform everyone of better ways to make their journeys
  - Health promotion
  - Car clubs especially targeting people who own cars now
  - Rewarding people who give up cars
5. Encouraging greener cars
  - Differential parking fees in CPZs, parking meters, council car-parks and estate parking schemes can help discourage gas guzzlers
  - Car clubs to be mainly electric
  - Include car-charging facilities in all new developments
  - Surplus from parking fees could potentially be used to invest in renewable electricity generation to recharge vehicles.
  - Ultimately TROs could be used to restrict polluting vehicles from certain roads.
6. Reducing and greening road freight
  - Reducing consumption of goods by encouraging spending on material-light lifestyles (eg theatre or live music rather than buying more consumer not-very-durables), reuse and local recycling
  - Encourage movement of necessary bulk goods (and waste) by train or water (yes, this may require building new handling facilities which may face local opposition).

We have sidings at Hornsey and potential space along the Lea (Tottenham Lock/Hale Wharf)

- Local freight partnerships to encourage more efficient use of journeys (these may need to be at sub-regional level) including local distribution centres
- Use S106 etc to require smaller local deliveries to be in electric vehicles

See also [http://www.foe.co.uk/resource/briefings/getting\\_serious\\_about\\_transport.pdf](http://www.foe.co.uk/resource/briefings/getting_serious_about_transport.pdf)

## 7. Aviation.

This discussion rightly focuses on transport that the Council has an explicit policy role for. But we should not ignore other modes, especially air travel. People who fly often are likely to have over 50% of their carbon footprint made up of aircraft emissions. We welcome the Council's policy of avoiding air travel for staff and councillors, and its joining the 4M Group to oppose Heathrow Expansion. We would like to see the Council also oppose Stansted expansion, which is in many ways more relevant to Haringey. We will continue to lobby MPs on aviation emissions. Local publicity about sustainable lifestyles should focus on the top priorities – and that should include reduced flying.

## Appendix:

Extract from Stephen Plowden paper:

### “TOWNS

#### **The case for a 20mph default speed limit**

Pressure from road safety organisations is building to change the urban default speed limit from 30mph to 20mph. In 1996, a study by the TRL of the 72 20mph zones which had been in existence long enough to allow proper before-and-after studies to be conducted found that crashes had fallen by 61% and fatal and serious crashes by 70%. A study of 20mph zones in London showed that they had reduced casualties by 45% and fatal and serious casualties by 57%. 20mph limits are in force on more than a quarter of the roads in Hull, where crashes have fallen by 56% and fatal and serious crashes by 90%.<sup>(5)</sup> Since 20mph limits have been introduced in areas where the greatest benefits were expected, making most urban roads subject to a 20mph limit might not bring quite such dramatic reductions, but the reductions would be very substantial nevertheless.

Crashes and casualties are not the only consequence of danger on the road. It distorts travel patterns and inhibits street life, or, if the travel and other activities continue, they are a cause of stress and worry to the people undertaking them or to others on their behalf. This intimidation is a major concern in the daily lives of many people.<sup>(6)</sup> One of the most serious effects is to deter cycling. To create conditions which would allow everyone who would like to cycle to do so should be a major, perhaps the major, objective of urban transport planning. The potential for improvement is illustrated by the difference between Britain, where until recently almost no attention was given to cycling, and the Netherlands, where encouraging cycling has long been a major policy aim. In the Netherlands in 2003, thirty-five per cent of journeys of less than 7.5 kilometres were made by bicycle, and seventeen per cent of journeys of over 7.5 but less than 15 kilometres. In Britain in 2005, only two per cent of journeys of under five miles were by bicycle, and about half of one per cent of journeys of over five miles but less than ten.<sup>(7)</sup> Part of the difference is explained by the terrain, but not too much should be made of that. Most English towns are fairly flat. In those that are not, electric or electrically assisted bicycles would enable people to overcome the hills at very modest cost.

Lower speeds, though the most important single measure to make the roads safer both for cyclists and others and to reduce the dominance of cars, would not be enough. There is also a need to create more segregated facilities for cyclists, to reduce the threat from lorries and

motorcycles, and to reduce car traffic by reallocating road space away from cars and by more stringent parking controls covering both on-street and off-street facilities.

The Government has resisted the idea of a 20mph urban default limit on the grounds that although this would be good for safety “emissions of CO<sub>2</sub> and other pollutants would increase markedly”.<sup>(8)</sup> The extensive Continental experience of 30kph limits shows that this concern is unwarranted.<sup>(9)</sup> Changes in fuel consumption, emissions and noise are small and can be in either direction. If anything, decreases are more likely than increases, even without allowing for switching from cars to walking and cycling, and for the elimination of those escort trips now undertaken only because it is thought too unsafe for the escorted person to travel on their own.

The effect of a default 20mph speed limit on journey times might be quite small. The capacity of an urban road network is governed by the capacity of the junctions, which is higher when vehicles approach it at a low speed. In addition, low speeds reduce the delays experienced by people joining or crossing main roads from side roads. If low speeds did lead to a reduction in car travel, that could considerably ease congestion.

If the Government is still in doubt about the case for changing the urban default speed limit from 30mph to 20mph, then it should organise demonstration projects. They should take place in towns of different sizes, with several towns in each size category, and should be set up as quickly as possible. But since demonstration projects with proper statistical controls inevitably take some years to complete, any local authorities who are already convinced that 20mph is the right default limit should be allowed to introduce it without waiting for these results.

### **Should the urban default limit be lower than 20mph?**

A case can be made that the urban speed limit for cars should be lower than 20mph not just in selected streets but generally. That depends on one's view of the proper role of cars in towns. At present, cars predominate, but an alternative view is that they should have only a minor role: most journeys should be made on foot, by bicycle or by public transport, and the role of cars should be to serve those journeys which it would always be more convenient to make by car even if the alternatives were vastly improved. Such journeys would include transporting children or disabled or sick people, carrying heavy or awkward loads, and making relatively long journeys at night when public transport services have ceased or have been substantially reduced. The problem then is to find ways of allowing cars to be used for journeys such as these while preventing, or at least strongly discouraging, their use for other journeys too. So long as cars provide quicker door-to-door travel than other modes, people will always be inclined to use them, even when the other modes would be almost as convenient for them and far preferable for society. A lower limit for cars than for buses (say 15 mph rather than 20mph) would help to reduce this incentive to inappropriate car use, although the lower limit would have to form part of a package also including parking controls and the reallocation of road space away from cars. The Government's Transport Innovation Fund could be used to explore the possibility of a 15mph default limit. The most suitable towns to start with might be resorts. Some people, especially with young families, would particularly value being in a town where the danger and nuisance of traffic are minimised when they are on holiday.

### **METHODS OF ENFORCEMENT**

At present, the most widely used methods of enforcement are speed cameras for roads with a speed limit of 30mph or more, and speed control humps, or similar highway engineering measures, for roads with a speed limit of less than 30mph. Both methods have been effective and show good value for money. The value for money of speed cameras should be much increased when type approval, expected imminently, is given to the new type of average-speed speed cameras. These cameras can cover longer stretches of road than the present ones and, unlike the present ones, do not need to be accompanied by optical fibre cables. This greatly reduces costs. They would also be suitable for enforcing low speed limits and so could largely replace highway engineering measures, which, useful though they have proved to be, have significant disadvantages. Speed humps, tables and cushions are not always effective; they can

cause discomfort to some road users; they and their signs can detract from the visual quality of a street.

Better than either of these methods, however, would be to limit speeds by fitting vehicles with variable speed limiters. Variable speed limiters can either be operated by the driver or activated externally. Driver-operated variable speed limiters would have to be accompanied by some external indicator to show other road users and the police at what point the limiter had been set. The indicator could take a number of different forms. There could, for example, be a colour-coded light on the rear windscreen, or perhaps a row of lights, with the number of lights that were illuminated indicating within what range the limiter had been set. Alternatively, it might be possible for the exact number at which the limiter had been set to be displayed in lights.

In the type of externally activated now most favoured, vehicles are fitted with a global positioning system (GPS) and an on-board digital road map in which the speed limit of each link in the network has been encoded. Compliance with the prevailing speed limit is ensured by a control on the throttle, supplemented if necessary by a control on the brake.

The obvious advantages of externally activated limiters are that they work automatically, without drivers having to cooperate, and drivers would no longer need to rely on other means of ascertaining what the speed limits on different roads are. A disadvantage is that some drivers would resent the loss of control. Even though there would be a legal obligation to set a driver-operated speed limiter at a speed at or below the limit for the road on which they were driving, drivers might feel less resentful about this kind of speed limiter than about an externally activated one. Externally activated limiters might also give rise to legal disputes: if something did not work properly, it might sometimes be unclear whether the fault lay with the system or the vehicle. The technology of driver-operated limiters is tried and tested, being almost identical with cruise control, which has been used for decades. Although the R&D on externally activated limiters has been very successful, there is still some work to do. At present, driver-operated speed limiters would be cheaper, but as more and more cars are fitted with GPS for other reasons, this cost advantage would disappear.

It might be possible to allow car owners to choose which of these limiters to have fitted. Another possibility is for the limiter itself to be operated by the driver, and for any drivers who wanted it to use GPS and the on-board road map not to activate a limiter but simply to tell them what the speed limit was.

More research, which should be put in hand urgently, is needed to fix the details. In the meantime, both the EU and national governments should immediately announce their commitment to making variable speed limiters mandatory as soon as possible.

## **CAR DESIGN AND THE STRUCTURE OF CAR OWNERSHIP**

### **Reducing the weight and power of all-distance cars**

Cars are now much heavier and more powerful than their function requires, and their average weight and power have increased steadily year by year. The consequence is that the costs their use imposes on society are unnecessarily high. In our study *Cars Fit for Their Purpose*, Simon Lister and I examined how fuel consumption and emissions could be reduced, and road safety improved, if cars' weights were reduced by 40% and their power was no greater than was needed to accelerate from 0 to 60mph in 20 seconds. Experience shows that a 40% reduction in weight can be achieved with existing materials and methods of construction, and that an acceleration of 0 to 60mph in 20 seconds is more than enough to allow cars to cope with those traffic situations which require a relatively high acceleration. Our calculations showed that fuel consumption and emissions could be reduced by some 29% for smaller cars and 35% for larger ones. These figures are probably under-estimates, since they do not allow for the opportunities which these changes in design would create to reduce rolling resistance, or for the changes in driving behaviour which they could also be expected to bring. The improvement in road safety would be substantial. Pedestrians and cyclists would be the greatest beneficiaries, but the occupants of lighter cars would also gain. Making cars lighter and less powerful would also help

to overcome one of the obstacles to the introduction of electric cars, the limited range of their batteries.

These changes in car design do not depend on lower speeds. Regulations to bring them about could and should be introduced now. Nevertheless, lower speeds would facilitate a tougher approach to regulation. If it became impossible to drive at high speeds on public roads, people would start to wonder whether there was any point in owning a fast, powerful car. That, in turn, could help to create a different attitude to cars and driving.

### **The local car** <sup>(10)</sup>

Some people want a car only for local travel, and it would be in their and society's interests if they were to use a car designed for that purpose rather than an all-distance car. A local car would be a legally distinct type of car, designed to be especially 'green' in every respect, with its own fiscal and driver-licensing regime. As well as serving the needs of people who now use cars only for short local journeys, local cars could be suitable for people, such as the elderly, who would like to own a car, and may need one because of difficulties in using other means of transport, but who are not able, or should not be allowed, to drive a conventional car, not even a more modestly designed one.

The potential market for local cars is not confined to these two classes. Depending on what transport policies were in force, people who use their cars primarily for local purposes, but for some longer travel as well, might prefer to own a local car and to make other arrangements for their occasional longer journeys. They might, for example, go by train or coach and hire a local car for the last few miles between the station and their final destination; or they might hire an all-distance car for the entire journey; or, if they had enough garage space, they might own both a local car and an all-distance car.

The safer that local roads could be made, by lower, better enforced speed limits and other complementary measures, the more that people would be prepared to buy and use local rather than all-distance cars, and the lighter and cheaper the cars could be.

### **Car clubs and car hire**

The use of car clubs has been growing both in Europe and America. It has been shown that they reduce the car population, one car from a car club vehicle replacing five to six privately owned cars. Car mileage is reduced and public transport usage is increased, although some users are not car owners and rarely drove before joining a car club. The cars themselves tend to be smaller, more efficient and less polluting than privately owned ones.<sup>(11)</sup>

Lower speeds and other road safety measures should reduce the risk of crashes and so make car clubs cheaper and more attractive. The introduction of local cars would open up the possibility that car clubs could provide local cars for short journeys and all-distance cars for longer ones. Alternatively, some car clubs could provide only local cars, and non-car-owners could make use of conventional car hire services for longer journeys. A problem with car clubs at the moment is that it is usually necessary to return the car to the station where it was hired. With local cars it may become easier to hire a car at one station and leave it at another. That would make it possible to use a car from a car club for journeys for which it could be prohibitively expensive to use one at present, for example for an evening out.

### **Notes and references**

1. *Transport Statistics Bulletin, National Travel Survey: 2006*, DfT, August 2007, Table 2.1. The NTS is concerned only with journeys within Britain, excluding foreign travel.
2. The formula is of the form  $C_a/C_b = (V_a/V_b)^x$ , where  $V_b$  stands for the average traffic speed before the change,  $V_a$  for the average traffic speed after the change,  $C_b$  for the number of casualties before the change and  $C_a$  for the number after it. The value of  $x$  differs according to the severity of the casualty, and for each severity a range of values was given, with central values of 4.5 for fatalities, 3 for serious casualties and 1.5 for slight casualties. This formula with these central values was used in Table 2. The formula probably understates the extent to which

a strict enforcement of speed limits would reduce casualties. Strict enforcement would result in a traffic flow with an unusually compact distribution of speeds and no high values. The casualty rate of such a flow would be lower than that of a traffic flow with the same average speed but a more dispersed distribution containing some higher values. The traffic flows on which the formula was based probably included some with relatively dispersed distributions with many values above the speed limit.

3. The DfT's formula is of the form  $L = a - bv + cv^2$ , where  $L$  is fuel consumption in litres per kilometre and  $v$  is the average speed in kph of vehicles on a section of road. The values of  $a$ ,  $b$  and  $c$  used for the calculations in Table 2 were respectively 0.1559, 0.00275 and 0.00001905. These values are derived from *Transport Analysis Guidance, Value of Time and Operating Costs*, DfT, December 2004. They assume a mix of petrol to diesel cars in the ratio of 786 to 214. This formula is presumably based on observations of the fuel consumption associated with traffic flows of different average speeds in present conditions. If so, it must understate the reductions in fuel consumption that would result from a strict enforcement of speed limits, especially of reduced speed limits. For example, the strict enforcement of a 60mph on motorways would lead to a smooth traffic flow with an average speed for cars of a little over 58mph. Such a flow would be associated with relatively low rates of fuel consumption. But given the present, poorly observed speed limit of 70mph, the only times when the average speed of cars on motorways would fall to 58mph would be in congested conditions characterised by considerable variations in speed, perhaps including speeds at times when cars were only crawling along. Such conditions are associated with high rates of fuel consumption.

4. For a detailed discussion of these points see Appendix L of Stephen Plowden and Simon Lister *Cars Fit for Their Purpose*, Local Transport Today, December 2008.

5. London Road Safety Unit, Safety Research Report No.2 *Review of 20mph zones in London boroughs*, September 2003.

6. See Appendix A of *Cars Fit for Their Purpose*.

7. This information comes from the British and Dutch National Travel Surveys, which are based on very similar designs. The British National Survey can be found on the DfT's website. The figures from the Dutch NTS were provided by the Scientific Statistical Agency in the Netherlands.

8. *New Directions in Speed Management*, DfT, March 2000, para 117.

9. An early study by Carmen Hass-Klau for Friends of the Earth found that in some of the German residential areas where 30kph limits had been introduced car drivers used 12% less petrol (*An Illustrated Guide to Traffic Calming*, Friends of the Earth, 1990, page 3). Danish experiments with 30kph roads showed that they could change noise, fuel consumption and air pollution slightly in either direction (*An Improved Traffic Environment- a Catalogue of Ideas*, Report 106 Danish Ministry of Transport, 1993). A Swedish study which compared driving patterns on otherwise similar streets, some of which had speed humps and others did not, found that fuel consumption was less on the streets with humps (Lena Smidfelt Rosquist *Vehicular emissions and fuel consumption for street characteristics in residential areas*, Lund University, undated but not before 1999, Section 3.1).

10. When Simon Lister and I started on our study of lighter and less powerful all-distance cars, we intended to accompany it by a study of the local car. Since we obtained no support for either study, and since the study of the local car would have involved some expensive market research, we decided to go ahead only with the study of all-distance cars. The proposal for the study of the local car contains detailed descriptions of the various potential markets, the reforms in the wider transport context that would be required to enable the local car to succeed, and the research required to quantify these possibilities and the wider social benefits that would follow. The proposal can be made available to anyone interested in pursuing this idea.

11. *Car-sharing, Where and How It Succeeds*, TCRP Report 108, Transportation Research Board, 2005.

12. For a fuller description, see *Cars Fit for Their Purpose*, Chapter 7, Reference 7.
13. *European Best Practice in Delivering Integrated Transport*, Commission for Integrated Transport, 2001.
14. Report in *Local Transport Today*, 2 December 2004.
15. "Government opts for market-driven adoption of ISA technology", *Local Transport Today*, 19 September 2008.
16. Transcripts of the proceedings of this conference were not prepared, but copies of the slides used in the talks are available on the LCVP website. Mr Pendlebury made the remark quoted in the text when presenting his slide "But policy measures addressing this need to be cost-effective".
17. Some of this evidence is reported in *Cars Fit for Their Purpose*, Appendices A and K"