

Submission of Evidence to the Commission on Travel Demand

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I am a Chartered Landscape Architect and Chartered Engineer with 30 years' experience working for a multi-national firm, I am based in the northwest of England. I have two particular areas of interest in regard to how travel demand affects my areas of work:

- The design of streets and public spaces in towns and cities to balance the needs of various functions and users
- The impact of housing and transport infrastructure on the countryside as pressures for where people want to live change in response to changing patterns of travel

THE DESIGN OF STREETS AND PUBLIC SPACES IN TOWNS AND CITIES

The traffic on our streets has steadily increased over the last few centuries to the point where traffic often dominates a street over traditional functions social and commercial function. The standardisation of highway design, speed and number of vehicles on the street inhibit these other functions and detract from a sense of place. I have been involved in a number of projects that aim to deliver a more balanced environment that accommodates traffic but responds to different priorities in streets and spaces, to create more adaptable, resilient places.

In this evidence I will explore two themes that are relevant to my work:

- How to balance the social and economic functions of town/city centre streets and spaces with traffic demands
- Will the advent of autonomous vehicles have detrimental impacts on public health? How will the design of our streets encourage active modes of travel in the future when people can choose to travel door-to-door in autonomous vehicles

How to balance the social and economic functions of town/city centre streets and spaces with traffic demands to create resilient urban environments

Historically streets and public squares were the places that trade and social interaction took place as well as conduits where people and goods were moved. The future functions of our High Streets and public spaces is very uncertain as well as the levels and types of traffic so how can we design more resilient streetscapes?

Pedestrians would once have felt comfortable in the whole width of a street, happily stopping to chat in the middle of the road sharing the whole space with low levels of horse and cart traffic. As horse and cart traffic increased, the middle of the street became a less pleasant place to stand and chat, the physical space of the street was divided up with pedestrians allocated a portion on the edge of the space. As motor traffic came along,

travelling at higher speeds and in greater numbers, sometimes the space was further divided using guard railing and the pedestrian space reduced to allow more room for vehicle movement or parking.

We have designed a number of projects that, in key areas of towns and cities, aim to attribute more space to pedestrians, whilst accommodating traffic, such that people feel more comfortable spending time in the streets and spaces ultimately to encourage them to spend more money in the local shops stimulating economic regeneration. These streets and spaces are designed such that they appear as pedestrianised spaces so that people use the whole space and vehicles entering the street/space, do so slowly and cautiously respecting the pedestrians right to the whole space. Effectively rather than physical division of the space, it is shared on a temporal basis. This can be a more adaptable, resilient approach compared to physical division of the street. Pedestrians get to use the whole space when there is little or no traffic or when pedestrian numbers are high. Pedestrians use less of the space when vehicle numbers are higher. An adaptable approach such as this is better at responding to uncertain future traffic demands and as the function of our town/city centres change in response to different social and economic conditions.

Below: Pedestrians comfortable to chat whilst traffic negotiates its way around them in Castle Square Caernarfon





Above: Before and after views of Castle Square Caernarfon

Below: Before and after views of Frodsham Street in Chester where a pedestrian priority environment was designed to encourage people to spend more time and hence money in the street and to make a more attractive historic environment to increase tourism whilst accommodating limited traffic.



Below: Before and after photographs of Exchange Square Kidderminster, previously dominated by the carriageway, vehicles still pass through the space but it is designed to appear as a pedestrian space respecting the historic buildings where people are comfortable anywhere in the square



Will the advent of autonomous vehicles have detrimental impacts on public health? How will the design of our streets encourage active modes of travel in the future when people can choose to travel door-to-door in autonomous vehicles

Currently motor vehicles impact negatively on pedestrians and cycles due to safety and pollution issues as well as creating an unattractive environment. There is though, a place for active travel, which improves public health, either in the first/last mile connection to public transport. Also, congestion, as it increases journey times, tends to encourage people to use more active forms of transport. Future transport scenarios that include autonomous electric vehicles will probably create a safer, less polluted environment for pedestrians and cyclists but in a number of instances the motivation to undertake active travel will be reduced:

- the realisation of a door-to-door service will make redundant the active first/last mile of a journey.
- a reduction in journey times due to a lack of congestion or faster travel speeds will make people less likely to choose active forms of transport that will become relatively slower
- the ability to undertake tasks or to sleep in autonomous vehicles will make this form of transport more attractive than active forms
- if travel speeds in autonomous vehicles increase, so people will start to live further from their place of work or other facilities making active travel impractical as an alternative.

There is enormous uncertainty what the unintended consequences of autonomous vehicles will be but there will almost certainly be unforeseen reactions.

There are limited incentives that we can offer to encourage active travel but improving the quality of our streets, such that a cycle or walking experience is pleasant and attractive and which encourages social interaction providing opportunities for trade.

THE IMPACT OF HOUSING AND TRANSPORT INFRASTRUCTURE ON THE COUNTRYSIDE AS PRESSURES FOR WHERE PEOPLE WANT TO LIVE CHANGE IN RESPONSE TO CHANGING PATTERNS OF TRAVEL

Will people commute larger distances if they can perform other tasks whilst in transit or if travel speeds increase? Will remote, attractive areas become more accessible to commuters resulting in more pressure to build houses and transport infrastructure in sensitive landscapes. How do demand forecasts take account of changing patterns in behaviour due to the removal or reduction of a constraining factor? How do we plan our infrastructure and housing needs in the context of such uncertainty and how do we ensure we have in place protections for sensitive environments?