

Neighbourhood Design Perception and Travel Behaviour in Tyne and Wear, North East England, United Kingdom

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ABSTRACT

This paper will present empirically based evidence from the UK in respect of the impact of neighbourhood design on travel behaviour using a case-study approach. The case-study is based on the metropolitan area of Tyne and Wear, North East of England. Ten different neighbourhoods have been carefully selected to characterise two different types of traditional and suburban neighbourhood street layouts. The selection of neighbourhoods was obtained through semi-structured interviews with five districts local authorities and the use of Neighbourhood Statistics resources of British Census (2001) to control socio-economic variants within the case-study area.

A pilot study has been completed based on two neighbourhoods within one of the Districts of Tyne and Wear and includes 200 households in two different types of neighbourhoods. The traditional neighbourhood, represented by the Cullercoats area, were generally older settlement than the suburban neighbourhood, represented by the Battle Hill area.

A frequency analysis between perceived and preferred neighbourhood design characteristics indicated that the accessibility factor, among other factors (which includes other amenities, safety, social issues, outdoor spaciousness and attractiveness) shows a significant difference between the pilot study areas. The residents of Cullercoats perceived better accessibility than the residents in Battle Hill although the reported private weekly mileage travel of Cullercoats' residents was 30% lower than in Battle Hill.

Through factor analysis, perceived and preferred neighbourhood design was extracted into 6 factors: safety and attractiveness, public transport service, outdoor spaciousness, social issues, shopping accessibility and space accessibility. The attitudes/travel preferences were reduced to 6 factors: pro public transport use, travel minimising – time wise, safety of car, pro walking, car dependent and environmental – technological awareness. An ANOVA analysis showed respondents from traditional neighbourhood, scored significantly higher than those from suburban neighbourhood on factors for perceived shopping accessibility and public transport service. In the

attitudes/travel preferences analysis, the traditional neighbourhood also scored significantly higher on factors for pro-public transport use and interestingly car dependent attitudes.

The pilot analysis shows, therefore, some significant differences arising from neighbourhood design and the way that this can contribute to differences in travel patterns. This confirms results identified by previous studies, primarily in the US, that residents of traditional neighbourhoods perceive better accessibility as compared to suburban residents, although the distance travelled by traditional neighbourhood residents were lower. The proposed paper for this conference will provide the evidence from the much larger scale, full survey of 2000 households across Tyne and Wear.

Key Words: neighbourhood design, travel behaviour, factor analysis