Appendix E: Social & Distributional Impact Study Executive Summary - Integrated Transport Planning Ltd

Introduction

1 This Appendix has been prepared by Integrated Transport Planning Ltd as a summary of findings from stage two of the West Midlands TIF Social and Distributional Impacts study. The purpose of the study was to appraise the social and distributional impacts of alternative future congestion management strategies in the West Midlands.

2 The social and distributional impact assessment was undertaken at the 'package level'. A Do-Minimum Scenario representing a continuation of current policies was assessed alongside a Do-Something Scenario that included a major package of additional transport improvement measures, smarter choices initiatives and road pricing. In line with earlier research findings that fed into the report 'Gridlock or Growth', it focused on two types of impact:

- The social impacts that transport can have through making societal activity accessible or inaccessible to people, taking account of spatial, temporal, financial, physical and psychological aspects of accessibility;
- The social impacts that transport can have through the external impacts of traffic and transport systems bearing disproportionately on certain social groups.

3 The social and distributional impact assessment comprised a number of quantitative and qualitative research strands, including:

- Accessibility mapping showing changes in public transport accessibility brought about by the strategies under consideration;
- GIS-based mapping of predicted traffic volume and distribution changes, overlaid with social deprivation index data;
- Analysis of key social impacts questions included within an attitudinal household survey undertaken across the West Midlands;
- Focus groups with people from different vulnerable social groups to gain an in-depth understanding of positive and negative impacts; and
- Consultation meetings with a range of stakeholder organisations representing vulnerable people in the West Midlands.

4 This document describes the methods used to complete the Social and Distributional Impacts study, before moving on to discuss the results and setting out the conclusions from the research.

Objectives and Research Questions

Research Objectives

5 In order to meet the criteria set out in the DfT WebTAG guidance, a series of research objectives and questions were established in relation to evaluation of the social and distributional impacts of potential future West Midlands congestion management strategies.

6 The high level objectives addressed in the social and distributional impact assessment were:

- Who (in terms of both social groups and geographic distribution) incurs potential positive and negative social impacts through changes in accessibility resulting from the alternative strategies, including changes in spatial, temporal, financial, physical and psychological aspects of accessibility?
- How are those accessibility-related social impacts distributed between different social groups?
- Who (in terms of both social groups and geographic distribution) incurs potential positive and negative social impacts through externality-related changes resulting from the alternative strategies, including changes in traffic volumes and distributions and their consequent effects on air quality, noise, road safety and community severance?
- How are those externality-related social impacts distributed between different social groups?
- To what extent are “vulnerable” social groups in particular positively or negatively affected?
- Why are different vulnerable social groups positively or negatively affected?
- What could be done to mitigate any negative social impacts – particularly for vulnerable social groups (this might include additional measures within the package)?

7 A number of specific research questions were developed from these objectives. These research questions are answered in the remainder of this summary report.

Methods

8 Stage 2 of the study used both qualitative and quantitative methods to investigate social impacts in the West Midlands. Our methodology is described below:

Social Impact Mapping

9 The social impact mapping used quantitative data from across the West Midlands conurbation to map the potential social and distributional impacts of a future Do Something scenario versus a Do Minimum scenario for the target year of 2012.

The Do Something scenario involved a package of measures including major improvements to the transport network, more intensive application of smarter choices measures, and Road Pricing (RP) in central areas of cities and on part of the motorway network. The Do Minimum scenario represented a continuation of current policy and strategy. Both scenarios are described in more detail in reports prepared by others as part of the West Midlands TIF initiative.

10 The Social Impact Mapping work covered:

- The social impacts that transport can have through the external impacts of traffic bearing disproportionately on certain social groups; and
- The social impacts that transport can have through making societal activity accessible or inaccessible to people, taking account of spatial, temporal and financial aspects of accessibility.

11 This involved:

- Analysing the effects of the scenarios on traffic flow on all roads across the network, and in particular, those areas with high levels of deprivation;
- Assessing changes in accessibility for potentially vulnerable groups to key goods and services as a result of the 'Do Something' and 'Do Minimum' scenarios.

12 In order to allow the examination of social impacts of the alternative scenarios that would arise from changes to traffic-related externalities (noise, air pollution etc), outputs from the PRISM transport model were provided by Mott MacDonald. These were overlaid by the ITP study team with map-based representations of current geographic distributions of different social groups and characteristics. As with the earlier work for 'Gridlock or Growth', this analysis contained an implicit assumption that the geographic distributions of various social groups and forms of deprivation would remain similar in the target study year to today's distributions.

13 The quantitative assessment of spatial and temporal accessibility changes was undertaken by Mott MacDonald interfacing the PRISM model with the West Midlands Accessibility Model (using Accession) to allow the transport networks (including travel times and service frequencies) output from PRISM to be input to the Accessibility Model. This enabled spatial and temporal accessibility under the alternative scenarios to be analysed and compared.

14 The accessibility analyses encompassed accessibility to employment and other key services (as represented by the nine main city or district centres in the West Midlands conurbation – the Local Transport Plan or LTP centres), access to job centres and access to hospitals. By overlaying the geographic distribution of different social groups against the travel time contours generated for the above three analyses, it was possible for the ITP team to assess the impacts on a range

of “vulnerable” social groups, including low income households, people living in deprived areas (as defined by the national Index of Multiple Deprivation - IMD), job seekers, and older people.

Qualitative Research Methodology

15 The DfT WebTAG Guidance for the appraisal of social and distributional impacts of schemes including road pricing advises that detailed qualitative analysis should be used to support the quantitative research component. Whilst this is not deemed to be a core requirement of the evaluation of social and distributional impacts of packages including road pricing, it is recommended as an option for schemes which are particularly complex or innovative and where the social and distributional impact may be particularly significant.

16 The focus of the qualitative research was on potentially 'vulnerable' social groups identified through previous research conducted by ITP during the feasibility phase of the West Midlands TIF project. The specific vulnerable groups whose views and attitudes were explored in this research were:

- Low income members of the Black community;
- Low income members of the Asian community;
- Disabled people;
- People with caring responsibilities;
- Low income shift workers;
- Low income older people;
- Low income families (including single parent families) with dependent children;
- Low income out-of-work people.

17 The qualitative research activities consisted of a series of 8 focus groups and 5 stakeholder consultation meetings carried out in June and July 2007. The principal aim of these activities was to gain an in-depth understanding of the pertinent issues for vulnerable social groups arising from possible alternative future congestion management strategies for the West Midlands.

Focus Groups

18 The socio-economic and socio-demographic groups identified as those likely to be most affected by the potential future congestion management strategies were targeted for focus group research. The aim was to explore potential social impacts and issues in greater depth with people who represent these potentially vulnerable groups.

19 ITP designed a topic guide and stimulus material in order to respond to the specific objectives of the research. The aim of each focus group discussion was to establish:

- The group members' views on traffic congestion in the West Midlands.
- The main travel choices that members of the groups currently make and how traffic congestion affects these choices.
- Constraints on travel choices pertinent to each of the target groups.
- Reactions to two 'Transport Futures' based on Scenario 1 'Do Minimum' and Scenario 2 'Do Something'.

20 Areas of the West Midlands that may be adversely affected by the potential congestion management strategies were selected as locations for the focus group discussions. These locations were chosen based on a comparison between the target groups identified and the following information:

- Socio-economic ward profile data (Index of Multiple Deprivation, Ethnicity, Income and Employment) based on Census 2001 and February 2007 employment statistics[i]
- Proximity to public transport improvements planned under Scenario 2 'Do Something'.
- Proximity to proposed RP corridors planned under Scenario 2 'Do Something', based on the latest available information.

Stakeholder Consultation

21 In support of the focus groups, a stakeholder consultation exercise was undertaken in order to discuss the potential impacts of the potential congestion management strategies with groups which represent West Midlands' residents who we anticipated may be adversely affected.

22 The stakeholder consultation was undertaken as a series of in-depth interviews with a small number of representatives of organisations which represented the views of the social groups identified as vulnerable to future congestion management strategies in the West Midlands. The following list of organisations was drawn up in collaboration with Centro:

- Birmingham Carers Association;
- Age Concern;
- TUC Centre for the Unemployed;
- Dudley Asian Women's Centre;
- West Midlands Caribbean Parents and Friends Association.

23 The stakeholder interviews were carried out in June and July 2007. The focus group topic guide and stimulus materials were adapted in order to create a semi-structured discussion guide, which allowed the interviewer to lead the stakeholders through the same key points addressed by the focus groups. The discussions were digitally recorded and provided more detailed information from

i Birmingham Economy (2007) *Birmingham Ward Profiles,* available online at: http://www.birminghameconomy.org.uk/wards.htm, last accessed on 21/06/2007.

a 'top-down' perspective by virtue of the interview technique applied. This enabled the interviewer to establish a greater level of understanding with the stakeholders and gather highly detailed information.

Findings

Accessibility Related Social Impacts

24 The accessibility modelling results showed that temporal / spatial accessibility to the main urban centres in the West Midlands (which include major employment opportunities, shopping and leisure facilities etc) by public transport would be significantly better across the overall population under the Do Something scenario[ii] than under the Do Minimum scenario, during both peak periods and inter-peak periods. This means that for many more people, public transport would become a viable choice for key journeys, and the situation for the large number of West Midlands households who do not have access to a car would be improved. Currently around 34% of all households in the West Midlands conurbation do not have access to a car, while 61% of households covered in the household survey who lay in the bottom national income quintile had no access to a car.

25 During the morning peak period, the number of West Midlands households within reach of a main urban centre by a public transport journey of 15 minutes or less would increase by 28% from 474,000 households to 562,000 households – some 54% of all households within the West Midlands conurbation. Public transport accessibility to the main urban centres for vulnerable groups would improve in all cases examined, although not to the same degree as for the overall population – largely because low income and deprived areas in the West Midlands tend to already be better served by public transport services than the average.

26 For areas in the lowest national income quintile or the national 'most deprived' quintile[iii], there would be an increase of 17% of people able to access urban areas within a 15 minute journey. For both of these deprived groups, there would be a decrease of 36% and 33% respectively in number of people unable to access a main centre within a 30 minute public transport journey. For areas within the most 'employment-deprived' national quintile, 16% more people would be able to access urban centres within a 15 minute public transport journey, and 35% fewer people would be unable to access those centres within 30 minutes or less.

27 Impacts of the Do Something Scenario compared to the Do Minimum Scenario were also examined with respect to access to other key facilities such as job centres and hospitals. For job centres under the Do Something Scenario, accessibility by public transport would improve significantly during both morning peak and inter-peak periods for all people in the West Midlands conurbation and

ii Under the 'Do Something' scenario respondents were asked to consider the option of peak period charging on main routes into and out of central areas

iii As measured by Government Indices of Multiple Deprivation (IMD)

for people living in areas within the most employment deprived national quintile. In the most employment-deprived quintile 8% more people (some 48,000) would be brought within a 15 minute public transport journey of a job centre during the morning peak, while the number of people unable to reach a job centre within a 30 minute public transport journey would reduce by 11%.

28 For access to hospitals under the Do Something Scenario, the model results indicate that for people living in areas within the most health-deprived national quintile, some 19% more people would be brought within a 15 minute public transport journey of a hospital during the morning peak. The number of people unable to reach a hospital within a 30 minute public transport journey during the morning peak would reduce by 31%. The number of people aged 80 and over unable to reach a hospital within a 30 minute public transport journey would reduce by 20%.

29 Further exploration of accessibility and transport alternatives was undertaken within the focus groups and stakeholder discussions held with people from potentially vulnerable sectors of society, and within the household survey. This research revealed that a number of measures would need to be put in place for the theoretical benefits of improved public transport services and other mode improvements to be realised. In particular, the following conclusions and recommendations were reached:

30 Safety and security concerns for bus users were felt to be an important barrier, preventing many users from potentially vulnerable sectors of society from using buses. Significant improvement in this area would be needed as part of the overall strategy if people from the social groups consulted are to be persuaded that buses are a viable alternative for them.

31 A significant part of the 'lifestyle changes' (smarter choices) budget within the strategy needs to be focused on deprived areas with concentrations of potentially vulnerable low income groups. This would help maximise the ability of such groups to benefit from the improvements to non-car modes through, for example, community-based travel plans and personalised travel planning. This should include partnership working with the local community to identify and implement locally-based additional measures (e.g. works buses, flexible DRT services) – with an appropriate “ring fenced” budget set aside for such improvements.

32 Bus service quality (including driver training) and priority improvements should be focused on arterial and orbital routes serving areas of the West Midlands with high levels of income deprivation.

33 High quality cycle routes and associated cycle parking infrastructure should be considered in areas of the West Midlands with the highest levels of income deprivation and traffic congestion. Financial accessibility is a key consideration for people on low incomes and respondents indicated that they would be prepared to cycle if high quality, safe facilities were available.

34 Consideration should be given to improving the Ring & Ride service (or other special needs transport services), to make improved provision for the needs of disabled people who are unable to use public transport.

35 The West Midlands Workwise scheme that allows free bus travel for the unemployed and those just starting work should be continued and extended. Such schemes significantly encourage some people to continue working or commit themselves to finding work, removing financial accessibility as a barrier to finding work and remaining in employment.

36 Consideration should be given to ensuring that people with legitimate caring responsibilities are treated in the same way within the charging scheme as disabled badge holders. Many carers have at least as strong a case for special treatment within a charging scheme as many disabled people themselves, providing a valuable service to the community and often within constraints that require car use.

37 Clearly, there would still be some people (including some in vulnerable groups) who would effectively be 'car captive' for certain trips that would incur a RP, since (despite all measures to assist such groups, as suggested above) it is not feasible to provide viable alternatives for all such trips. Such trips would, however, benefit from reduced journey times and improved predictability.

38 Mobile workers (particularly those on low incomes) such as those in building or goods delivery trades may feel the impact of a RP more than most, because of the difficulty of using alternative modes. This was borne out by the household survey findings, where shift workers, mobile workers and respondents whose jobs required considerable travel away from their business base demonstrated significantly higher than average levels of car-use for all trip purposes. However, limiting charges to peak periods and capping of the daily charge would limit any negative financial accessibility impact for such trips.

Externality-Related Social Impacts

39 The focus groups and stakeholder consultations undertaken with various low income groups highlighted the current impact of traffic on quality of life. Respondents in low income, unemployed social groups generally lived in densely urbanised areas of Birmingham and complained about the quality of life issues arising from traffic congestion, citing noise, pollution, parking conflict and visual intrusion of traffic as key local problems. Some respondents from Aston and Sparkhill reported that asthma and respiratory conditions were common among people living in these areas of Birmingham. Many respondents also felt that road safety was poor in their neighbourhoods.

40 Overall, the Do Something Scenario would have a significant positive effect on the traffic related impacts that people living in the West Midlands conurbation experience, by comparison with the Do Minimum Scenario. Traffic flows in general during the morning and afternoon peak periods would be significantly reduced compared to flows that would be experienced under the Do Minimum scenario. Of particular interest, many of the most deprived areas would experience a disproportionate reduction in traffic, since they are often located near to some of the busiest arterial and orbital routes in the conurbation. The main exception to this would be in Wolverhampton, where an increase in traffic would be experienced on some orbital routes that pass through deprived areas of the city, as a result of vehicles re-routing to avoid the RP levied in the city. Mitigation measures to address this would be needed if the Do Something Scenario was to be taken forward.

Conclusions

41 The social impacts mapping analysis suggests the generic road pricing scheme in the Do Something scenario (not the TIF Developed Option) would have significant advantages over the Do Minimum scenario in terms of exposure to traffic-related externalities and spatial and temporal accessibility to key facilities and services. This is generally true both for the population as a whole, and for key vulnerable social groups. A reduction in traffic and an improvement in transport services across the conurbation would provide greater access for all social groups to key services and facilities and, in most cases, socially deprived groups would reap equal or greater benefits than the general population. Financial accessibility impacts arising from a road user charge within the Do Something scenario are more difficult to assess. The key to achieving a “socially equitable” solution in this respect would be to include specific measures targeted on socially deprived groups and areas to try and minimise the number of trips where there is truly no alternative to car travel.

42 The household survey suggested that, while some of the potentially vulnerable social groups would tolerate major increases in traffic congestion (carers, Asian respondents, families with dependent children), all of them stated they would limit their car use or switch to alternative modes of transport following the introduction of a road pricing scheme. Despite this, most respondents held predominantly negative views regarding current public transport alternatives to travelling by car for trips to their place of work/education. This was also raised frequently in the focus groups and a matter of considerable importance for Centro is the need to address negative public perceptions, and realities, concerning the safety and security of public transport alternatives. These views colour the opinions of West Midlands residents when asked to consider future improvements to public transport systems.

43 The social impact mapping demonstrated that some areas would be adversely affected by the Do Something scenario due to greater incidences of 'rat running' to avoid a charge. However, on the whole across the West Midlands conurbation,

most areas would benefit from a reduction in traffic and therefore greater accessibility to key goods and services such as hospitals, employment and job centres.

44 Finally, the focus groups and stakeholder interviews highlighted the specific issues which may affect the potentially vulnerable groups as a result of introducing the two congestion management scenarios. A wide range of views, and differing levels of support were evident both between, and within, the potentially vulnerable groups we consulted. This served to demonstrate that any one method of managing future levels of traffic congestion is likely to benefit some people, but may have a negative impact on others. Mitigating measures that could be introduced to alleviate any negative effects of the scenarios should therefore be considered in the developing business case for the West Midlands TIF bid in order to ensure that specific groups are not disproportionately affected.

45 Taken together, the findings from our research show that the social equity impacts of a road pricing congestion management scenario would be generally positive across the West Midlands, although specific issues should be considered to ensure any potentially inequitable impacts of a charge are mitigated.