Ipsos MORI
Social Research Institute

FROM A TO B

New analysis of public attitudes towards transport and highways services using the National Highways and Transport Survey, March 2010

Ben Marshall and Daniel Tse

FROM A TO B

New analysis of public attitudes towards transport and highways services using the National Highways and Transport Survey

Acknowledgements

This paper, and the analysis contained within it, was prepared by Ben Marshall and Daniel Tse of Ipsos MORI. We would like to thank the following for their advice and input: Bobby Duffy, Nigel Shepherd, Antonia Dickman, Robert Melvill, Rachel Arthey, Imran Abdul-Hakeem and Anna Di Camillo of Ipsos MORI, Simon Pinkney of meaure2improve, and Peter Radford of Somerset County Council.

Summary

Public interest in transport and highways services at a national level tends to be heightened when things go wrong as evidenced by the extreme weather and resultant travel disruption during winter 2009-10. More enduring, however, is public interest in roads at a *local* level; their condition and how congested they are.

As evidenced by the 2008/9 Place Survey and its BVPI predecessor, residents across England prioritise improvements to local road and pavement maintenance, to traffic congestion and public transport, and do so more than for many of the attention-grabbing public services often in the news such as health and education.

The National Highways and Transport Survey (NHTS) provides local authorities with a valuable evidence-base about public perspectives on services and can be used to inform Local Transport Plans and other priority-setting exercises. The aim behind *From A to B* has been to use the aggregate NHTS dataset to provide local authorities with additional pointers about what they might do next to address public perceptions of transport and highways services.

Highway maintenance requires attention, particularly road maintenance…

To summarise the analysis presented throughout *From A to B*:

- Transport is rarely salient at a national level and suffers in relation to "people services" like education and health in terms of the public's spending priorities. But, at the same time, it is a top-of-mind issue at a local level; residents say they want to see improvements in traffic congestion, road/pavement maintenance and public transport.
- There has been an upward trend in the proportion of the public who want to see extra investment in road and pavement maintenance at a time when the volume of traffic has increased in recent years and when, according to the Highway Condition Index, 11% of all 'B' and 'C' roads were not in 'good' condition before the harsh winter of 2009-10. According to the Local Government Association, councils mended a hole in a road every 33 seconds, on average, last year.

- Our new analysis of the aggregate NHTS dataset further underlines the importance of aligning policies and messages with what matters to people. We found that there are strong associations between overall ratings of transport and highways services and some individual service aspects. Put simply, some transport and highways services matter more than others in shaping perceptions.

- Our evidence shows that addressing road and pavement conditions, and perceptions of them, are vital pre-conditions to improving public views of transport and highways services. After aggregating the NHTS data collected in 76 local authority areas, we can see that the condition of highways is unlike most transport and highways services in attracting more resident dissatisfaction than satisfaction: 49% are critical against 36% who are satisfied. Just under a quarter, 24%, are *very* dissatisfied.

- We have used correlation analysis to find that, at local authority level, the condition of roads is strongly correlated to an index of satisfaction at Q2. At respondent-level it displays a correlation coefficient of 0.512, a particularly large value given the large sample size and the attitudinal nature of both variables.

- The 12 most prominent variables correlated to the index of satisfaction at Q2 help to highlight a number of key themes: highway condition, pedestrian safety, buses, and keeping traffic and pedestrians moving.

- We also ran multiple regression models to examine the statistical dependence between our dependent variable (the Q2 index), and several independent variables i.e. responses to questions throughout the questionnaire (excluding Q2 itself). Analysis such as this is powerful because as it identifies the *relative* strength of different dimensions of public perception in shaping public satisfaction.

- At respondent-level, 33% of the variation in our Q2 model can be explained by just one variable – the condition of pavements and road surfaces.

- Our analysis points to the importance of residents' perceptions of road *and* pavement conditions in shaping their overall views of highway condition (with speed of repair an important third-ranked predictor), but public perceptions of road surfaces are substantially more influential than perceptions of pavements.

- We developed separate models for individual services as a means of identifying the key factors shaping public satisfaction. They point to the importance of the condition of pavements in shaping overall public satisfaction with pavements and footpaths,

bus frequency in relation to satisfaction with bus services, and the provision of cycle routes in driving satisfaction with cycle routes and facilities.

…but there is also value in doing more to understand the local situation while working to manage multiple drivers of perceptions

These findings may not be altogether surprising, nor do they provide a simple blueprint for all local authorities, particularly as our analysis also points to considerable local variation. But the analysis provides a strong statistical basis to priority-setting undertaken by local authorities. It clearly shows that residents' perceptions of road condition are strong determinants of overall satisfaction with transport and highways services. Our analysis gives further weight to the work councils are already doing to prioritise and invest in road repair, while also underlining the potential reputational benefits associated with improvement.

From A to B should help local government (and others) focus on what matters most in terms of public satisfaction, but the issues we raise are worthy of further consideration alongside a wider evidence-base. We think that there is additional value in supplementing perceptual data, generated by surveys such as the NHTS, with data on technical performance and investment, as well as using exploratory qualitative research such as group discussions to inform LTP and policy development, and communication strategies.

Qualitative methods would allow local authorities to better explore and understand residents' priorities, the reasons why they hold the views they do, their expectations, and how receptive they may or may not be to potential solutions. In addition, the analytical techniques we have employed in *From A to B* to understand what is driving attitudes can be replicated at a local level provided that sample sizes allow this to be done in a statistically robust way.

As ever, it is important to remember that perceptions are likely to be shaped by the characteristics of the local population – we know that some local authorities are simply more "challenged" than others in terms of building positive public perceptions quite apart from the services they provide. Public sentiment will also, of course, reflect actual variations in service performance and the quantum of resources invested. Political leadership and media coverage will have an impact too.

In this context, effective communication will be important and echoes the work we have done with local government over many years showing the importance of investing in communications. Perhaps there is a need for those involved in delivering transport and highways services at a local level to do more to fill in the spaces between crisis moments

(e.g. there has been significant negative national press coverage this winter around gritting supplies and pothole repair) with information about what is being done on an ongoing basis about the things that matter to people; road and pavement conditions in particular. Research could usefully explore public expectations and scope effective communications.

Few other public services have had to cope with the surge in demand and use. Government statistics show that between 1993 and 2008 the volume of traffic on local authority roads has increased by 32% for motorway and 'A' roads, 10% for 'B' roads, 19% for 'C' roads and 24% for unclassified roads. This creates significant challenges and it will also be important to manage expectations about what can be done, especially given the economic backdrop, the harsh winter and the impact it will inevitably have had on road conditions. In February 2010 the *Evening Standard* reported that fixing potholes and other 'snow damage' could cost London councils as much as an additional £20 million and, according to the Local Government Association, this comes after councils spent an extra £10.9 million last year on filling potholes.

According to the Local Government Association, "Getting people safely from A to B is at the top of every council's agenda", but as the winter fades and we enter a period of ever tougher decisions about public spending priorities, those lobbying to protect, or even expand, investment in transport and highways services and policies face numerous challenges including competing demands from other services. As a starting point, the case they make could possibly be strengthened by 'humanising' transport and highways services. While often presented in terms of machinery, roads, rail tracks, feats of engineering and project management, transport is ultimately about people and places.

The NHTS, among other surveys, gives voice to people and places. The next step is to make sense of what is said, and to respond accordingly.

INTRODUCTION AND CONTEXT

Introduction

Those organisations and individuals working to improve transport services in England face several challenges in the years ahead including growing pressure on the public purse at a time when demand on infrastructure is growing. Against this backdrop it will be difficult to meet and manage public expectations and more important than ever to align policies with the things that matter to people, and which make a difference.

This paper is entitled *From A to B* not just because transport involves moving people from one place to another for work, leisure and other purposes, but also because our goal is to move beyond the provision and description of basic survey data to more sophisticated, action-orientated insights. In the simplest terms, our aim has been to give those with an interest in public attitudes towards transport services some stronger pointers about what matters and what the focus ought to be moving forward into the next round of Local Transport Plans (LTPs).

We have used the dataset generated by the National Highways and Transport Survey (NHTS) which has become one of the biggest surveys of public satisfaction with the range of transport and highways services provided by local authorities. The survey covers roads, traffic management, public transport, street and pavement maintenance, road safety and many other LTP themes.

The size of the aggregate 2009 NHTS dataset, based on surveys for 76 local authority areas, has allowed us to use correlation and regression analysis to identify those aspects of service delivery that are particularly important in shaping public satisfaction with the transport and highways services provided by local authorities. This provides a strong statistical basis to priority-setting.

This paper goes on to report our findings in detail. Our next chapter draws on a range of Ipsos MORI surveys as well as Department for Transport statistics to provide context, summarising what we know about the perception and reality of transport and highways services. We then go on to present new analysis of the NHTS and finish by setting out some final conclusions and next steps.

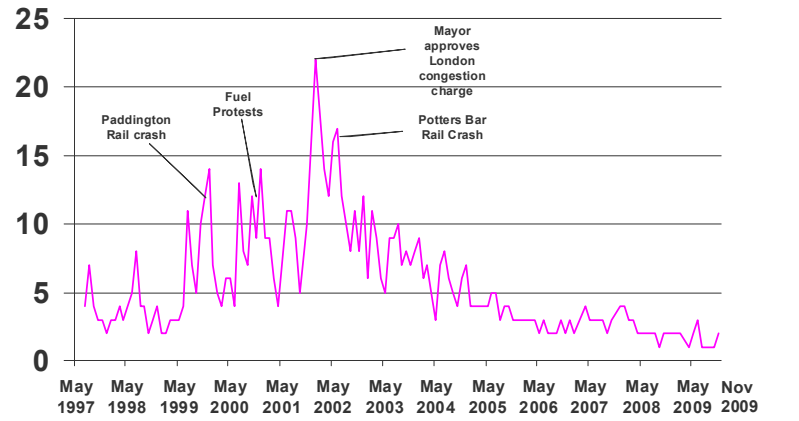
Context: the public, transport and highways services

How important is transport as an issue?

Ipsos MORI has used monthly surveys since 1979 to ask the British public to identify the most important issues facing Britain. Throughout the last decade, health/the NHS, schools, crime and immigration have all featured regularly at the top of the list and there was a rapid rise in the salience of the economy throughout 2008-9. By contrast, transport has rarely been a public preoccupation and has barely registered as a national issue. A handful of events have made it relatively more salient but only ever briefly so.

Transport: a key issue for Britain?

Q. What do you see as the most/other important issues facing Britain today?



Source: Ipsos MORI Issues Index

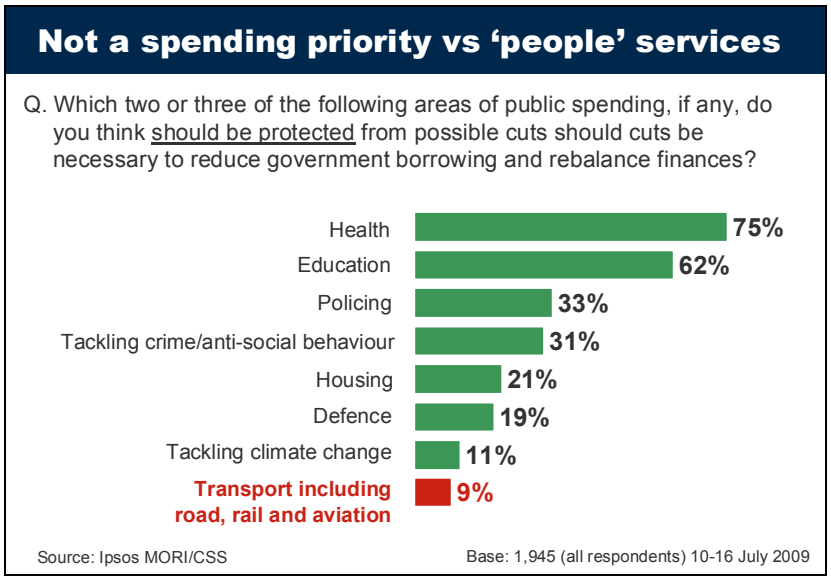
Base: c.1,000 British adults age 18+ each month

While some distance behind health, schools, crime and other issues in public discourse and consciousness, transport issues have occasionally caught the nation's attention, exercising politicians and policy-makers alike. From the fuel price protests in 2000 – genuinely "a major national crisis"[1] – to similar protests in 2008, the introduction of the Congestion Charge in London in 2003 and to the mass anti-road pricing petition and Manchester referendum defeat, transport issues can attract public attention. This is especially the case when they are talked about by politicians and media and particularly, it seems, when they have a financial or fiscal dimension.

[1] Stephen Glaister 'Transport' in *The Blair Effect: 2001-5*, Anthony Seldon and Dennis Kavanagh (ed.s), 2005.

Transport does not, however, tend to feature as an important national electoral issue, at least according to voters. When we have put a list of key issues to Ipsos MORI survey respondents and asked them to tell us which will determine the political party they will vote for at the next general election, public transport has been a third-order issue only a little ahead of Europe.[2]

Nor is transport a spending priority and, looking ahead, this means that policy-makers are likely to face mounting challenges in funding transport investment as competition for public spending intensifies. As the chart below shows, when it comes to protecting public spending from potential future budget cuts, the British public accord transport the lowest priority. Health, education and policing (people-focused service areas) are prioritised ahead of transport (perhaps conceived of as project-focused), but so too are housing, defence spend and tackling climate change.



Councillors in England and Wales are also less likely to prioritise roads/traffic for extra investment than services focused on people – education, social and council housing and children's social services (as well as waste/recycling) all featured ahead of roads/traffic in a survey of 518 councillors last year. This was despite roads/traffic coming bottom of 15 local government services, receiving an average score of 4.95 out of 10 from councillors compared to 6.47 for education and 7.26 for top-rated waste/recycling.[3]

[2] The last time we asked this question face-to-face using a showcard (showing 17 issues) was 20-26 September 2007 – public transport 14%, Europe 11%, crime/ASB 56%, healthcare 47%, education 39%. Surveys have shown that transport features more strongly in London.
[3] ComRes *The State of Local Government*, 2009. Online survey of 518 councillors across England and Wales, 14 April-31 May 2009.

Leading or following public opinion?

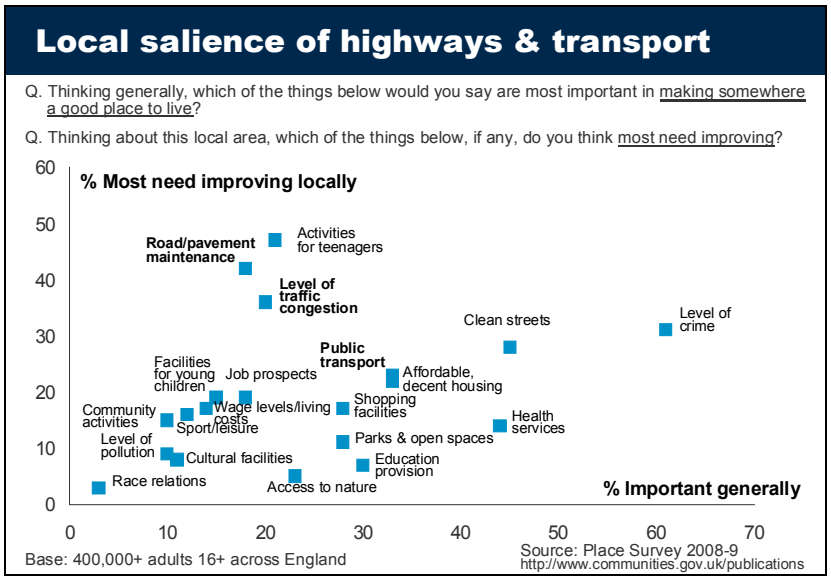
The divisive nature of London's congestion charge in public opinion terms seems to be the exception among transport issues, rather than the rule (although of course, London Mayoral responsibility for transport is itself exceptional). Just before the 2006 mayoral election we found the congestion charge cited as the reason most likely to cause dissatisfaction with Mayor Livingstone, but also the strongest reason for satisfaction.

Discourse on congestion charging, road pricing and other similar policies is often highly charged and politicised. At the same time, there is some evidence that the public's position on such issues is far from straightforward and consistent – broadly, anti-tax and anti-toll, pro-environmental and congestion benefits. Against this backdrop it is little wonder perhaps that politicians tend to be wary of taking radical policy positions and this reluctance is both cause and effect of public opinion. There was a steady rise in public opposition to congestion charging between 2003 and 2009 at a time when Government, local authorities and transport executives found it hard to grapple with the decision about whether to lead or follow public opinion.[4]

Transport's local salience

Few public services can have the same daily impact on people as key highways and transport services such as roads: for example 87% of British adults have used a car in the past month and more than half of drivers, 54%, agree *strongly* that they would find it difficult to adjust to life without one.[5] Except for facilities for teenagers, the 2008-9 Place Surveys found more people across England identifying traffic congestion, 42%, as most in need of improvement than anything else.[6]

[4] For more on public attitudes towards road pricing, see Ipsos MORI *Road pricing at the crossroads* (2008) available at www.ipsos-mori.com.
[5] Ben Marshall and Antonia Dickman, Ipsos MORI for RAC Foundation, *The Congestion challenge* (2009) – http://www.ipsos-mori.com/researchpublications/publications/publication.aspx?oItemId=1284
[6] Source: http://www.communities.gov.uk/publications/corporate/statistics/placesurvey2008 (based on data for all unitary and local tier local authorities in England). The full list presented to respondents (in order of Q2 mentions) included activities for teenagers, road and pavement repairs, the level of traffic congestion, the level of crime, clean streets, public transport, affordable decent housing, job prospects, facilities for young children, shopping facilities, wage levels/cost of living, sports/leisure facilities, community activities, health services, parks and open spaces, level of pollution, cultural facilities (e.g. libraries, museums), education provision, access to nature, race relations.



Local newspapers know that transport issues resonate with their readership and, up and down the land, run regular stories about potholes, “gridlock” and bus fares. Two harsh winters have provoked a series of media stories and debates about the country’s transport infrastructure, its ability to cope with any sort of disruption, as well as bringing into stark focus how reliant our economy and way of life is on the ability to get around.

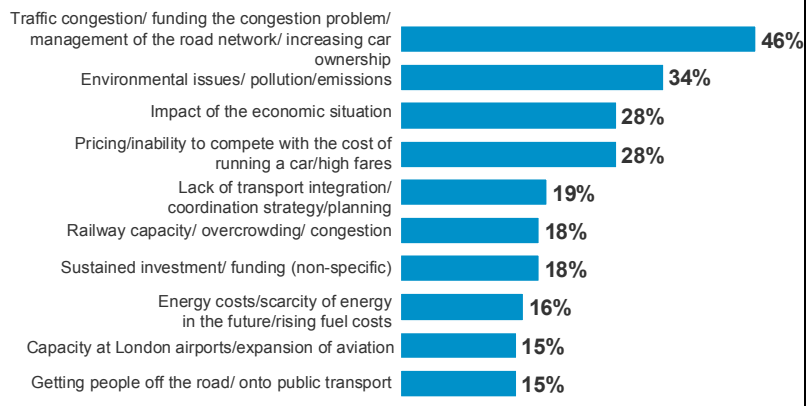
Looking ahead, management of the road network and tackling traffic congestion are likely to continue to exercise politicians and media alike, recognised by respondents to the annual Ipsos MORI Transport Journalists Survey.[7] The Government estimates that the number of cars on British roads will increase by 44% by 2025, and road traffic demand by 43% and this would have implications not only for the country’s transport infrastructure but also the Government’s policy on emissions; transport accounted for something like 24% of UK carbon dioxide emissions in 2006 and road transport 90% of this.[8]

[7] The survey is conducted each year among the leading print, radio and television transport journalists across the UK. The study allows subscribing clients to evaluate their organisation's reputation among this group and specifically among those with whom they have the most frequent interaction. The study also includes several questions which track journalists' attitudes towards important topical issues in the transport sector. The deadline for participation in 2010 is 16 April. For more information, please contact Paul Orovan on 020 7347 3000.

[8] Source: Defra (2008) quoted in *Edge* (Jacobs consultancy, winter 2008).

Transport media: key issues

Q. What would you say are the main issues facing Britain's transport sector today?

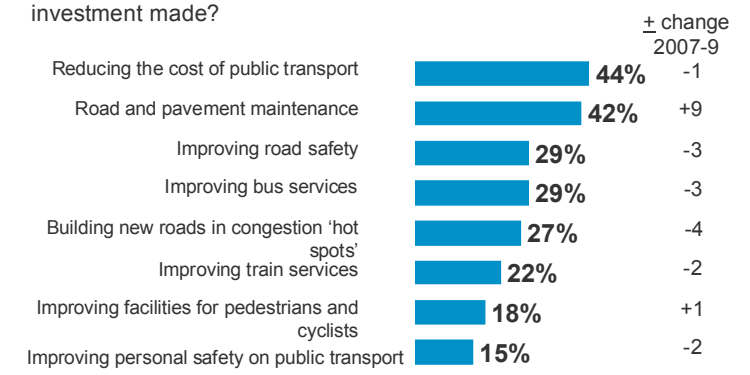


Source: Ipsos MORI Transport Journalists Survey 2009 Base: 68 transport journalists summer 2009

Where funding can be secured for improving transport, public priorities are clear: people want to see government investment where they see local transport issues getting worse. To the public, road and pavement maintenance and the cost of public transport are the top two areas of deteriorating local transport over the past five years and roughly two in five people (44%) believe extra investment should go towards making public transport more affordable. A similar proportion (42%) believe extra investment should be used to maintain roads and pavements – up nine percentage points since 2007 according to data collected via annual Ipsos MORI surveys for the CSS.[9]

Transport spending priorities

Q. If the government were to invest extra money on transport, in which two or three of the following areas would you like to see greater investment made?



Source: Ipsos MORI for CSS Base: 1,945 British adults, 10-16 July 2009

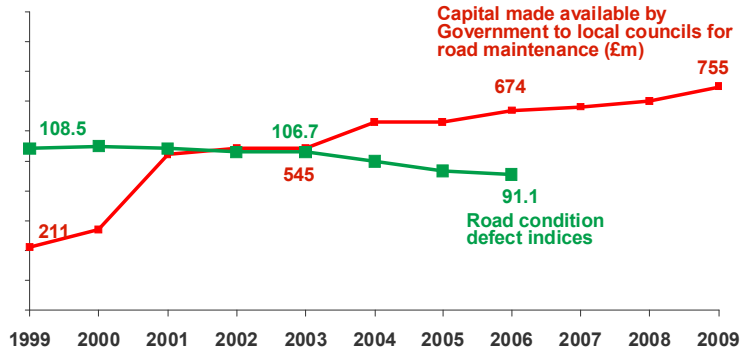
[9] See Ipsos MORI, *Survey of public attitudes towards transport 2009*, for CSS, 2009. http://www.ipsos-mori.com/researchpublications/publications/publication.aspx?oItemId=1296

Is there a 'perception gap'?

These findings come against a backdrop of significant Government investment in highways and transport services. In this respect, transport is perhaps similar to other public services where improving public perceptions have not always followed significant upturns in investment and, in some cases, demonstrable improvements in service delivery. (A series of Ipsos MORI reports have explored this theme in detail – for example, *Frontiers of Local Government* and *Closing The Gaps: Crime & Public Perceptions*[10]).

The following chart shows that there has been an increase in capital made available by the Government to local councils for road maintenance purposes (although this is not the only source of funds for local authorities who can use the wider revenue support grant and their own resources).[11] We have plotted this against road conditions as measured by the Department for Transport (the index is of road defects, meaning that a fall is an improvement).[12] It can be seen that there has been an increase in capital investment and an improvement in conditions between 1996 and 2006 such that the position was better in 2006 across England and Wales (excluding London and trunk roads) than at the end of the previous decade.

Roads: investment and defects

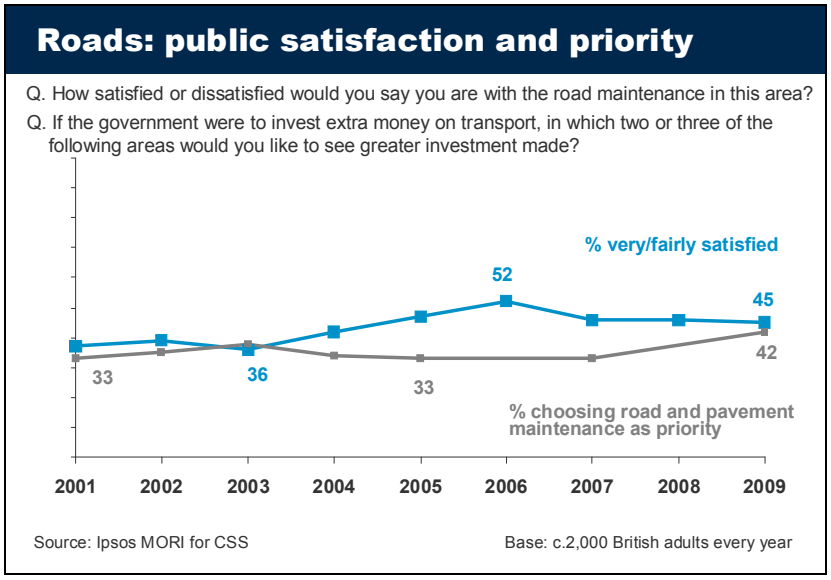


Sources: DfT including *Regional Transport Statistics*, 2008

The chart below presents Ipsos MORI data collected on behalf of the CSS throughout the 2000s.[13] It shows an improvement in the proportion of British adults either very or fairly

[10] Ipsos MORI, *Closing The Gaps: Crime & Public Perceptions*, 2008 and *Frontiers of Local Government*, 2007 – see www.ipsos-mori.com.
[11] Data provided direct to Ipsos MORI from the Department for Transport.
[12] Department for Transport, *Regional Transport Statistics: 2008 edition*.
[13] These surveys have involved face-to-face in-home interviews with representative samples of c.2,000 British adults. Our 2009 report for CSS can be found at http://www.ipsos-mori.com/researchpublications/researcharchive/poll.aspx?oItemId=2464

satisfied with road maintenance, followed by a fall before finishing at a level in 2009 (45%) which compares favourably with that at the start of the decade (39%). Our trend data also shows the increase between 2007 and 2009 in the proportion prioritising extra Government investment in road and pavement maintenance.



Taken together this analysis suggests investment was matched by an improvement in road conditions and that, by the end of 2006, public satisfaction with road maintenance was as high as 52%. Since then, however, satisfaction has fallen and the proportion of British adults prioritising maintenance for extra investment has increased. Has something happened to the condition of England's roads since 2006? The Department for Transport's *Transport Statistics Bulletin – Road Conditions in England: 2009* presents several useful statistics about the contemporary state of road conditions[14]:

- The volume of traffic on local authority roads has increased substantially over the period between 1993 and 2008 – by 32% for motorway and 'A' roads, 10% for 'B' roads, 19% for 'C' roads and 24% for unclassified roads.
- Across all surveyed classified roads, 3% are *not* in 'good' condition but this rises to 11% of all **'B'** and **'C'** roads. A higher proportion of **'A'** roads are in 'good' condition compared with 'B' and 'C' roads (there are considerably more B' and 'C' class roads in England).
- A lower proportion of 'B' and 'C' roads are in 'good' condition in rural areas than in urban areas – 87% versus 96% in 2008/9.
- Using BVPI and NI data, there was an improvement between 2006/7 and 2008/9 in the proportion of the **network** where maintenance "should be considered" but this headline

masks variation by region – for example, NI169[15] was 10% in the South East, 7% in the North East.

- There was a small decrease in the overall condition of **classified** roads between 2006/7 and 2007/8, a decrease from 2006/7 to 2007/8 in the percentage of classified roads where maintenance should be considered and a slight increase from 2007/8 to 2008/9.
- There has been a slight improvement in the overall condition of **unclassified** roads but some variation when broken down by region or type of local authority.
- In the late 1990s and early 2000s there were large real term increases in expenditure in non-trunk road maintenance but in recent years (since the mid-2000s) expenditure for the non-trunk network has gradually decreased.

These statistics, and our survey evidence showing the public's prioritisation of road and pavement maintenance, come at a time when two harsh winters and adverse weather conditions have undoubtedly had an effect of road conditions. In February 2009, the AA reported that:

> *"Although potholes are inevitable after severe weather, the UK teeters on local road collapse from a maintenance backlog that was already going to cost £1 billion and take 11 years to put straight – before this winter."*[16]

Then in July, *The Daily Telegraph* reported the AA's estimate of 1.5 million potholes on UK roads with driving instructors being forced to reroute lessons due to 'crumbling' road surfaces and having to teach learners special pothole avoidance techniques. The AA's own research with its members in 2009 found 60% of the view that road surfaces were in a worse condition than they were 10 years ago including 40% who considered them to be *much* worse.[17]

In January 2010 Local Government Association reported that councils mended a hole in a road, on average, every 33 seconds last year and spent an extra £10.9 million than the year before. The LGA described the 2009-10 winter conditions as the worst in 30 years and asked the public to urgently report any defects to their local authority to enable repair. Councillor David Sparks, Chair of the LGA Transport Board, said:

---

[14] Department for Transport, *Transport Statistics Bulletin – Road Conditions in England: 2009* available at www.dft.gov.uk.

[15] NI169 is the percentage of 'B' and 'C' roads where maintenance should be considered.

[16] AA, 16.2.09, 'Potholes: Snow and ice cause 40% increase in road damage' (sourced from https://www.theaa.com/public_affairs/news).

[17] *Daily Telegraph*, 'Driving lessons rerouted due to potholes, says AA', 19.8.09.

"Potholes are the gaping sores in our road network and councils know how much motorists want to see the proverbial bandage being applied. Getting people safely from A to B is at the top of every council's agenda."[18]

More recently, the *Evening Standard* reported that fixing potholes and other 'snow damage' could cost London councils as much as an additional £20 million. The cost to motorists has been estimated at £30 million and AA Insurance reported a four-fold increase in claims for pothole-related damage compared to the same period last year. According to the *Evening Standard* the Local Government Association wrote to the Department for Transport asking for £100 million to be brought forward to pay for the damage.[19]

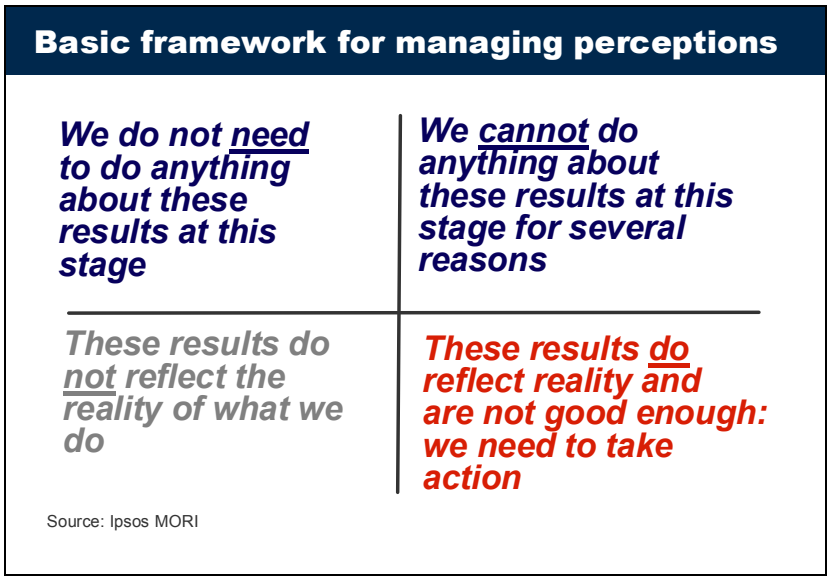
The issue briefly made political headlines in February when North Yorkshire County Council proposed a 2.94% rise in council tax for 2010 saying that although the rise was the lowest in 16 years it would have been less had the damage to roads not been so extensive. The council's bill to repair roads and cover the cost of grit after the harsh winter weather was put at almost £20 million.[20]

Managing perceptions

The patterns in perceptual and technical data described above remind us of the enduring and cautionary advice we provide to clients that perceptions sometimes accord with reality but sometimes don't; that there is value in comparing perceptual with technical data; and that there can be a time-lag between perceptions and reality. Perceptions need to be managed effectively (they remain important to those holding them for whom perception *is* reality) and, as a starting point, there is merit in using frameworks such as the one shown below and used by Ipsos MORI with clients for many years.

Research into public perceptions, used alongside a wider evidence-base, may lead to the conclusion that no action is necessary (top left quadrant), or that nothing can be done (top right). Alternatively, it might be concluded that public perceptions are inaccurate and do not reflect reality (bottom left) or that they do and action must be taken (bottom right). Each of these conclusions is likely to require, at least, a communication-based response and possibly a policy response.

[18] 'Councils working flat out to repair potholes caused by bad weather', Local Government Association press release, 12.1.10.
[19] 'It's gone to pot…big freeze leaves London with a £100m repair bill', *Evening Standard*, 8.2.10.
[20] '£20 million roads bill after North Yorkshire snow', *Yorkshire Post*, 1.2.10.



Communication might be necessary to correct misperceptions and/or to make sure that residents are aware of what is being done to improve things. Our work for a county council in the South of England last year found seven in ten residents (69%) saying that they do not currently feel informed about road and pavement maintenance services, and over half (55%, up from 44% three years earlier) *disagree* that they feel informed about how money is spent by the county council on these services. At the same time, more than half (53%) say they would like to receive more information about these services.[21]

The same survey found that those who reported feeling informed about road and pavement services were more likely than those who did not, to express satisfaction with the condition of main roads (74% versus 55%). Similarly, residents informed about how the Council spends money on highway maintenance were considerably more positive about the time taken to complete roadworks than those who do not feel informed (62% versus 39%). The survey also showed stronger dissatisfaction with the speed of repair (55%) than with the quality of repairs (38%).

Our work across public services suggests that investment can make a difference but only if it leads to tangible improvements in services which are observed and noted by the public. An illustration of this in the transport sector is that increased train patronage over the last decade – passenger numbers have increased every year for the past 13 years[22] – has been accompanied by a rise in the proportion of the public thinking train services have improved over the last five years – up from 4% in 2001 (chosen from a list) to 11% in 2009. This

[21] Source: telephone survey of 1,200 residents aged 18+, 19 February-8 March 2009.
[22] Jerome Taylor, 'The new age of the train', *The* Independent, 11.4.08. Figures are up to 2007 and sourced from ATOC: "…the number of miles travelled on the rail network reached a record-breaking

upward trend is even more pronounced among train users; positive views have trebled from 7% to 23%. Bus users are similarly more likely to think bus services have improved than they were at the start of the decade: up from 23% in 2001 to 34% in 2009.

Attitudes towards public transport

While there has been an improvement in ratings of trains and buses among users, there is stubborn scepticism about the alternatives to private motoring among car drivers. More than four in five, 84%, of those drivers who say they are personally affected by congestion also say they couldn't adjust to life without a car. And 53% of drivers say they would rather risk getting stuck in a traffic jam than get public transport. Even among those drivers who consider congestion to be a serious local problem, more than half, 57%, would rather risk sitting in a traffic jam than get public transport.[23]

Our research for the RAC Foundation found a strong sense that congestion will be a problem in the future – 61% of drivers think it will deteriorate in as short a period as the next five years – but, among the wider public, fewer agree that they would "travel by car less if bus and train services around here were better" than was the case at the start of the decade. Private transport users – car drivers, passengers, those who ride motorbikes or take taxis – are more sceptical than those who rely more on buses and trains about the chances of public transport getting better.[24]

Local variation and LTPs

We have already pointed to some big challenges here but the national headlines mask considerable local variation which is of particular significance to local authorities charged with improving transport services and shaping perceptions of place. To illustrate this, our analysis of the Place Survey dataset last year found that public transport was identified as something in need of improvement, from a long list of 20 potentials, by anything between 8% in Camden to 50% in East Dorset. In Castle Point in Essex, 63% think traffic congestion needs improvement and 71% of St. Albans' residents identify road and pavement repairs as a priority.[25]

---

peacetime high of 30.1 billion during 2007, capping a huge rise in popularity in which passenger numbers have increased every year for the past 13 years."

[23] Ben Marshall and Antonia Dickman, *The congestion challenge*, Ipsos MORI for RAC Foundation (2009) – http://www.ipsos-mori.com/researchpublications/publications/publication.aspx?oItemId=1284

[24] Ben Marshall and Antonia Dickman, *The congestion challenge*, 2009.

[25] Ipsos MORI analysis of the Place Survey dataset – see http://www.nhtsurvey.org/Library.

When preparing Local Transport Plans, local authorities can obviously benefit from understanding this very local picture and how typical, or untypical, resident perceptions are. There are additional forces in favour of researching local public opinion and benchmarking it. For example, the Local Government and Public Involvement in Health Act and *Communities in Control* demands that public services (including public servants and politicians) are in tune with, and accountable to, local citizens while this year's Department for Transport guidance for the next round of LTPs ('LTP3') and amendments to previous plans, stresses the need for clear evidence and data on stakeholder views. It emphasises the value in creating "opportunities for stakeholder and public consultation" including market research.[26]

It is also clear from the DfT's guidance that plans must identify challenges and generate options and, where appropriate, work across boundaries to reflect the cross-boundary nature of travel and infrastructure. This further underlines the value of local and regional measurements of public opinion and satisfaction, and benchmarking, as well as audits of technical performance.

The National Highways and Transport Survey

Against the backdrop of a growing need for transport planning to take resident attitudes and priorities into account, 33 local authorities worked together in 2008 to develop a streamlined mechanism to survey residents and measure satisfaction with services. They were keen to plug the gap in the local-level evidence-base left by the phasing out of the BVPI surveys which asked a suite of questions relating to transport. Many were doing their own surveys and the idea was to better understand public satisfaction with highways services by facilitating benchmarking via consistent and comparable surveys.

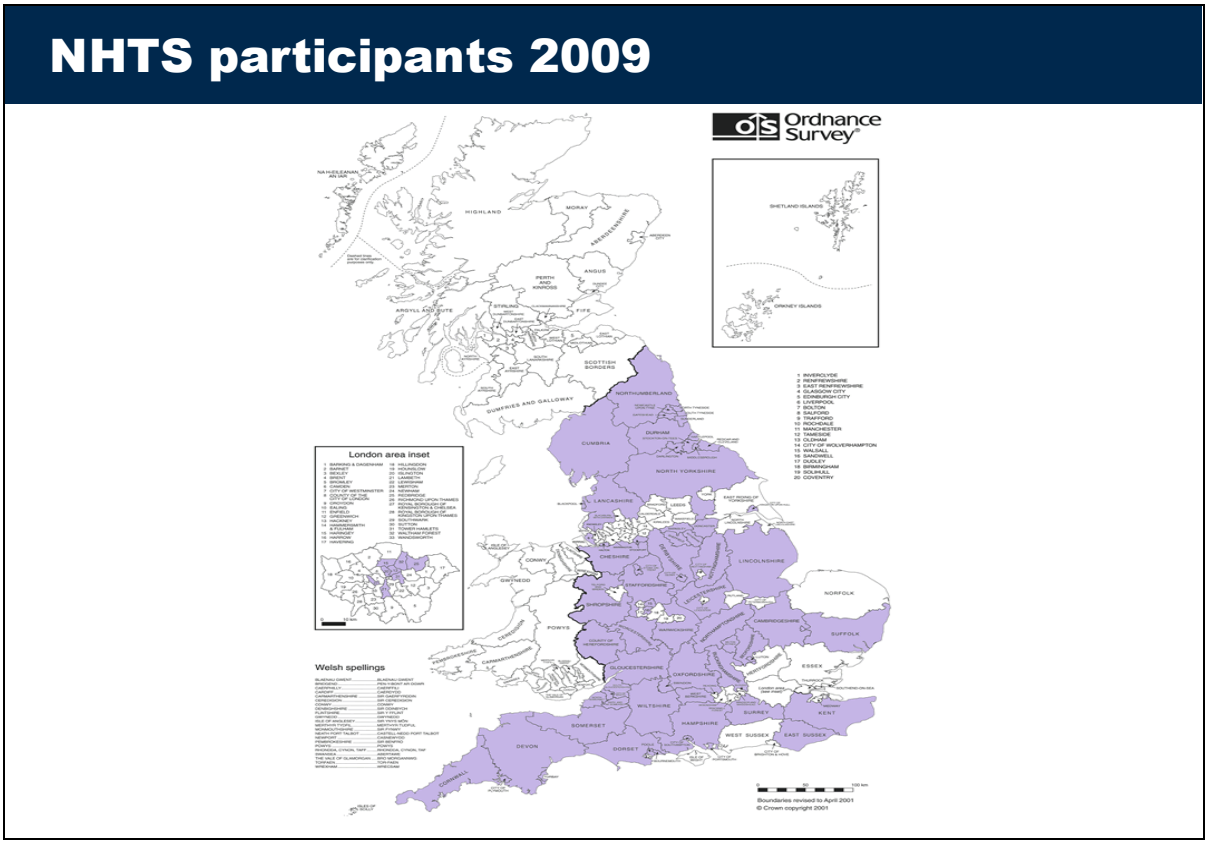
Ipsos MORI worked with measure2improve and the National Best Value Benchmarking Club to design and deliver 33 postal surveys with considerable cost efficiencies and unprecedented benchmarking potential. The 33 authorities included numerous county and unitary authorities across the South West but also from other parts of England, including one London borough. They worked together to design a questionnaire, with input from Ipsos MORI, and this was structured to generate data grouped as Benchmark Indicators (BIs) and Key Benchmark Indicators (KBIs). The KBIs corresponded to LTP2 themes.

By the time questionnaires were sent out in summer 2009, the survey had grown from 33 authorities to 76 who chose their own mail-out sample sizes ranging from 4,500 to 8,000. This meant that a total of 365,000 postal questionnaires were dispatched, yielding 75,000

[26] Department for Transport, *Guidance on Local Transport Plans*, July 2009.

returns. The 76 represented a good spread of different local authority types with coverage across most English counties and several cities, shaded on the map below. (Further details about the survey can be found in Appendix A and at www.nhtsurvey.org where the data and dashboard summaries can be sourced at individual authority level.)

NHTS participants 2009



The survey has delivered data and insights at the local level, contextualising local authorities' Benchmark Indicators (BIs) and Key Benchmark Indicators (KBIs) through comparison with neighbouring and other authorities. With the survey as a prompt, the National Highways and Transport Network facilitated the sharing of best practice by strong performers in terms of the indicators. With the help of several Regional Improvement and Efficiency Partnerships, the Network undertook some additional work to map the survey-based perceptual indicators against technical ('quality') performance indicators and the financial resources invested by authorities.

The survey provides one of the largest datasets collected at a local level since the BVPIs which was the basis of our 2006 paper *Leading the pack: Frontiers of performance in transport*. In that paper we report the findings of statistical analysis to pull out the key drivers of public satisfaction with transport. We have used similar techniques and applied these to the NHTS dataset with our findings presented in the following chapter.

Key statistics at a glance [27]

72% of people aged over 17 have a full car driving licence

469 cars per 1,000 population

314.7 billion miles travelled by vehicles per year

85% of British adults have used a car in the last month

53% of drivers say they would rather risk getting stuck in a traffic jam than get public transport

54% of British drivers agree *strongly* that they would find life difficult without a car

2% of British adults spontaneously say transport/public transport is the most important issue/among the most important issues facing Britain today

42% of adults across England think road and pavement repairs are most in need of improvement from a list of 20 (2008)

11% of all 'B' and 'C' roads are not in 'good' condition according to the Highway Condition Index

968,195 potholes repaired across the country in 2009

£10.9m *additional* council spend on filling potholes in 2009

35% of British adults rate *urban* road surfaces as being in good or very good condition

26% of British adults rate *rural* road surfaces as being in good or very good condition

60% of AA members think road surfaces are in a worse condition than they were 10 years ago

45% of British adults are either very or fairly satisfied with road maintenance…

41% …are very or fairly dissatisfied

+9 percentage point increase between 2008 and 2009 in the proportion of British adults choosing road and pavement maintenance from a list of areas for greater government investment in transport if resources available

9% of British adults pick transport (including road, rail and aviation) from a list of eight areas to be protected from possible cuts

[27] Sources: IAM Motoring Facts (2008) (from DSA *Drive on*, 2009), Department for Transport, National Highways and Transport Survey, Local Government Association, AA, Ipsos MORI surveys during 2008-9.

ANALYSIS: THE NHTS AND PRIORITIES

Analysis: the NHTS and priorities

Overall ratings and the importance of road conditions

Two of the Key Benchmark Indicators (KBIs) generated by the National Highways and Transport Survey – KBI01 and KBI02 – are derived from the first two questions, Q1 and Q2, of the twelve page NHTS questionnaire. Q1 asks respondents to rate several aspects of highways and transport service provision using a four point scale – *Very important*, *Fairly important*, *Not very important* and *Not at all important*. Respondents are asked to rate the importance of each aspect in isolation rather than an alternative, and more discriminating, question asking respondents to tell us which among they consider to be the most important.

Q1 How important, if at all, do you consider the following…?

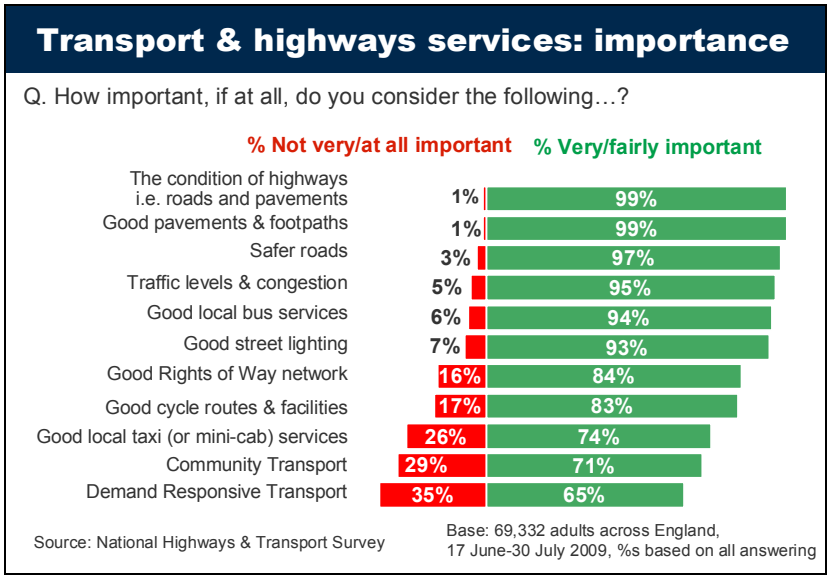
Good pavements & footpaths
Good cycle routes & facilities
Good local bus services
Good local taxi (or mini-cab) services
Community Transport
Demand Responsive Transport
Safer roads
Reducing traffic & congestion i.e. queues
Good street lighting
The condition of highways i.e. roads & pavements
A good Rights of Way network[28]

Q2 goes on to ask respondents to think locally and indicate their satisfaction or dissatisfaction with the same eleven aspects, this time using a five point Likert scale; *Very satisfied*, *Fairly satisfied*, *Neither satisfied nor dissatisfied*, *Fairly dissatisfied* and *Very dissatisfied* with a Does not apply/don't know option also available.

In terms of the findings generated by these questions, adopting the approach used for the Place Survey and confining our analysis to 'all valid responses' (that is, excluding

[28] Some further explanation was provided to respondents for several of these:
Community Transport – 'Dial-a-Ride & volunteer car schemes'
Demand Responsive Transport – 'i.e. flexible bus services'
A good Rights of Way network – 'Rights of Way are routes open to the public which are often in the countryside but can also be found in towns'.

respondents returning a questionnaire lacking an answer or ticking 'don't know'/'does not apply')[29], it can be seen that most residents consider most services to be important. Non-universal services such as Community and Demand Responsive Transport are, however, deemed relatively less important.



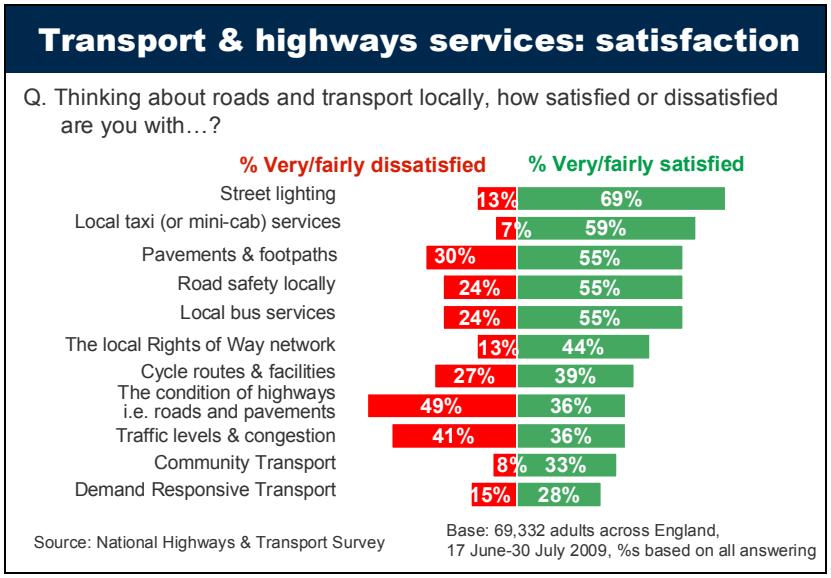
Looking at the top six services – all of which are considered very or fairly important by at least nine in ten residents – it is useful to disaggregate findings to look at the proportion considering each *very* important. For example, 82% of residents across England consider safer roads to be *very* important compared to 68% who think the same of traffic levels and congestion. The condition of highways is the top-ranked service area on both counts – 99% think it very or fairly important including 84% who see it as *very* important.

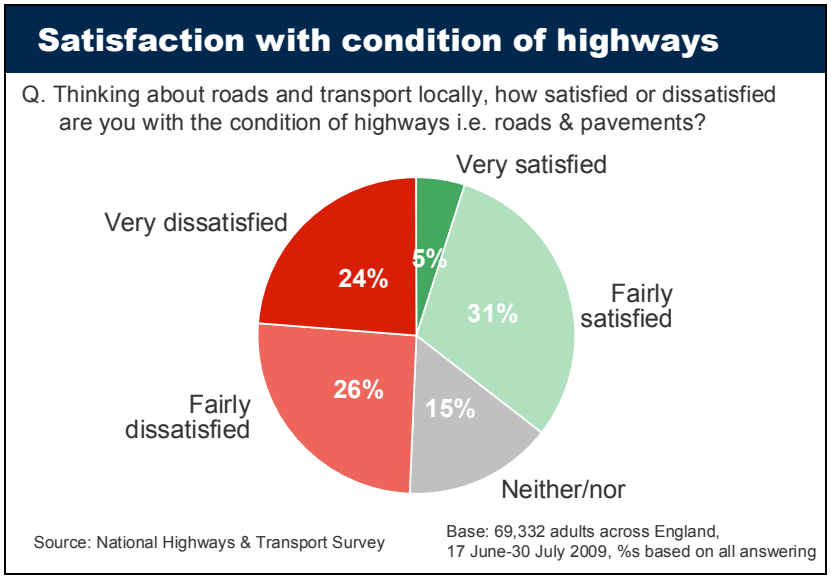
Across the 76 local authority areas, a higher proportion of residents are satisfied with street lighting than with any of the other service areas asked about. Just under seven in ten (69%) say they are either very or fairly satisfied, and residents are positive rather than negative by a margin of more than five to one (69% against 13%). The same margin is a little under two to one for pavements and footpaths – 55% against 30%. By contrast, more residents are dissatisfied than are satisfied with the condition of highways (49% dissatisfied, 36% satisfied) and with traffic levels and congestion (41% versus 36%).

Comparing this aggregate position with that of 2008, there has been a deterioration in public ratings of pavements and footpaths and the condition of highways, and an improvement in ratings of buses although, of course, the survey was more than twice the size in 2009 and involved many more metropolitan and unitary authorities second time around. It also followed

[29] N.B. our aggregate level analysis adjusts for the respective population sizes of the different local authorities (otherwise, responses in Devon would count for twice those of other authority areas despite having a much smaller population) in addition to the weighting schemes applied in relation to individual local authority socio-demographic profiles – see Appendix A for more details.

a severe winter (there was heavy snow in many parts in February 2009 and otherwise wet conditions) creating challenges in terms of treating, maintenance and repair.



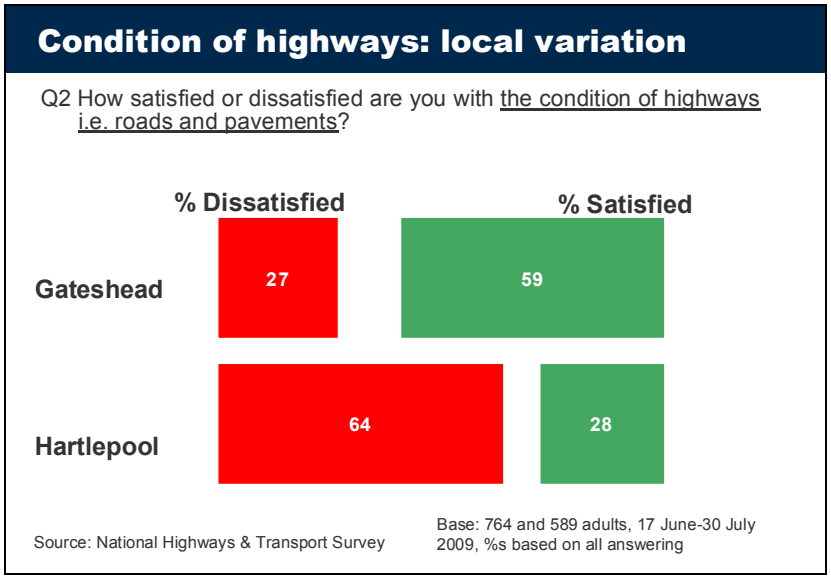


As the top chart shows, in the case of several of the service areas more respondents fail to express an opinion either way, reflecting relatively low exposure to, and experience of, services such as Community Transport and Demand Responsive Transport. We asked about usage of transport modes (at Q3) and while, for example, bus users are more positive about local bus services than the wider public, they are also no less negative. Cyclists are more negative about cycle routes and facilities than the public as a whole.

Q1 and Q2 of the NHTS are used to generate Key Benchmarking Indicator 01 and Indicator 02 for each local authority participating in the survey. The first, KBI01, overlays satisfaction across Q2 and Q1 data, thereby linking the extent of public satisfaction in the local area with

how important each service is considered at a national level (i.e. across the 76 authorities in the case of NHTS 2009). The second, KBI02, is derived in the same way but uses local, rather than national, data for Q1.

Local authorities' KBI and KPI scores were calculated by measure2improve. on behalf of the National Highways and Transport Network. In 2009 KBI01 ranged from Herefordshire's 50.19 to Kensington and Chelsea's 61.84, and the average among the 76 authorities was 56.18. But it is at an individual service level that the variation is more pronounced. For example, there was a significant difference in resident satisfaction and dissatisfaction with the condition of highways between nearby Hartlepool and Gateshead, shown graphically below.

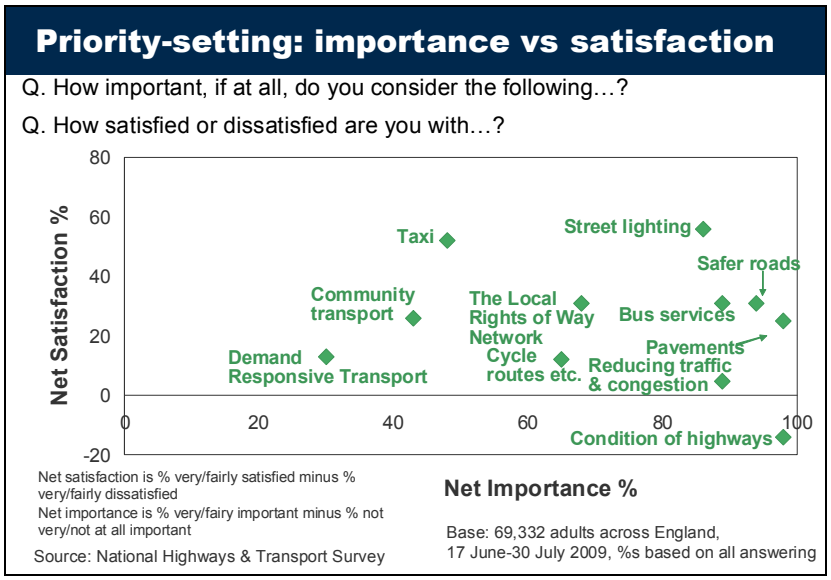


Using the data to scope priorities

The individual local authorities participating in NHTS are able to source KBIs and KPIs from www.nhtsurvey.org and to use the dashboard summaries developed by measure2improve. summarising the performance of each authority. These perception-based indicators are benchmarked against other authorities. Such analysis adds to the evidence base necessary for identifying priorities for action. So too does local-level data. The following graphic, based on aggregate data but easily repeated for an individual authority, plots net importance (the proportion rating a service as important less the proportion who do not) against net satisfaction[30].

[30] Net importance = (Very important + fairly important) – (Not very important + not at all important)
Net satisfaction = (Very satisfied + fairly satisfied) – (Fairly dissatisfied + very dissatisfied)

The condition of highways stands out as a service considered important and one which is a weak performer in terms of satisfaction. Looking at the full list of 26 KBIs (and again remembering changes in the number and profile of authorities taking part in 2008 and 2009), it can be seen that, for the most part, there has been an improvement in perceptual terms. But, notably, KBI 23 – the condition of highways – has fallen.



Q2 – Average public satisfaction

	2008	2009	± change
Pavements	54.90	54.02	-0.88
Cycle routes	52.35	53.11	0.76
Local buses	56.83	60.20	3.37
Taxi services	66.73	66.74	0.01
Community transport	57.97	58.95	0.98
Responsive transport	52.40	53.85	1.45
Safer roads	57.48	57.93	0.45
Reducing traffic	44.33	45.29	0.96
Street lighting	69.25	68.75	-0.50
Highway condition	**42.65**	**41.07**	**-1.58**
Rights of way	59.56	58.78	-0.78
Overall	55.45	56.40	0.95

Source: NHT Network analysis by measure2improve.

Average KBIs 2008-9 (selection)

	2008	2009	± change
KBI01 – Overall (local)	55.43	55.62	+0.19
KBI02 – Overall (national)	55.43	55.65	+0.22
KBI03 – Ease of access (all)	75.57	77.92	+2.35
KBI06 – Local bus services	55.09	57.53	+2.44
KBI08 – Public transport info	43.11	44.72	+1.61
KBI11 – Pavements & footpaths	57.26	56.65	-0.61
KBI13 – Cycle routes & facilities	52.41	52.77	+0.36
KBI17 – Traffic levels & congestion	44.38	45.33	+0.95
KBI18 – Management of road works	47.29	49.50	+2.21
KBI20 – Road safety locally	57.52	58.06	+0.54
KBI23 – Condition of highways	**44.56**	**43.10**	**-1.46**
KBI24 – Highway maintenance	53.15	52.84	-0.31
KBI25 – Street lighting	67.91	67.57	-0.34

Source: NHT Network analysis by measure2improve.

It is also notable that the best performing authority in terms of KBI01, Kensington and Chelsea, also rated higher than any other on KBI23 in 2009 and, according to NHT Network analysis of the aggregated data across the 76 local authorities, the largest gap between average importance and satisfaction for the eleven services existed in relation to the condition of highways.

Disaggregating the national NHTS dataset, we can see some striking differences among different types of local authority, among different age groups and users of different modes of transportation. Car owners are more dissatisfied with the condition of road and pavements than non-owners by a margin of eight percentage points. Those who use a car two or more times a week are dissatisfied but so too are walkers, cyclists, train and tram users (there is, of course, some overlap between these groups). Bus users are the most positive but even among this group negative ratings outweigh positive ones.

Perhaps even more striking are the regional differences. In the South East of England – where the 2009 survey involved ten authorities such as Kent, Surrey and East Sussex and a total of 10,379 respondents – well over half of residents, 55%, were either very or fairly dissatisfied. This is significantly higher than the 37% in London (eight authorities, 5,153

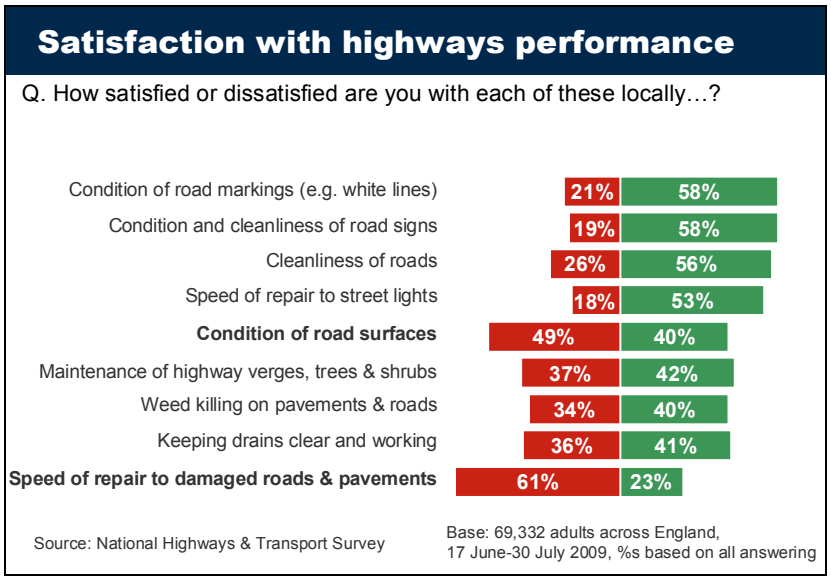
respondents) where, unlike all other English regions with the exception of the North East, a higher proportion of residents are positive than are negative.

Q2 How satisfied or dissatisfied are you with…. **The condition of highways i.e. roads and pavements**

	% very/fairly satisfied	% very/fairly dissatisfied	± Net satisfaction
Total	36	49	-13
Unitary authority	38	46	-8
Two-tier	34	51	-17
London	42	37	+5
South East	31	55	-24
Gateshead	59	27	+32
Herefordshire	21	65	-44
16-34 year olds	43	40	+3
35-54 year olds	34	51	-17
55+ year olds	33	54	-21
Car owners	34	51	-17
Not car owners	42	40	+2
Car users	34	51	-17
Walkers	36	49	-13
Bus users	41	42	-1
Public transport user	37	47	-10

Base: 69,322 adults 16+ across England
Source: Ipsos MORI analysis of aggregate NHTS dataset
N.B. user = 2+ times a week

What seems to be the problem with the condition of highways? The following chart summarises data derived from several questions included within the 2009 NHTS. The condition of roads surfaces is the subject of strong criticism from residents – 49% are dissatisfied – and, by a margin of more than two to one, residents are negative about the speed of repair to damaged roads and pavements (61% against 23%).



Taken together, this NHTS evidence allied to findings from a number of other surveys described in the previous chapter provide several clear pointers about the importance of public perceptions of highway conditions – that is, the condition of roads and pavements. But there is still merit in additional statistical analysis to identify, with greater statistical certainty, the factors which are most closely related to overall attitudes towards transport and highways services.

Additional statistical analysis

As we have already shown, the NHTS dataset permits the generation of basic tables listing local authorities in terms of their KBIs and KPIs. The England-wide data can be disaggregated to local authority level and, allowing for sampling tolerances[31], disaggregated further still in order that we can identify relationships between two variables – for example, satisfaction with road condition and the use of a car. Correlation analyses show the strength of those relationships and, below, we present findings derived from such analysis exploring the relationships between a number of variables and a composite Q2 satisfaction index.

Correlation analyses are useful but only take us so far. Additional multiple regression models have the advantage of allowing us to examine the statistical dependence between a single dependent variable and several independent variables. We used similar techniques in 2006 – contained within *Leading the pack?: Frontiers of performance in transport*[32] – based on the large BVPI dataset sourced from hundreds of local authority surveys. We built several analytical models based on exogenous as well as endogenous data i.e. data sourced from a

[31] See Appendix B.
[32] Ipsos MORI, *Leading the pack?: Frontiers of performance in transport*, 2006.

number of external secondary sources including the Census, the Index of Multiple Deprivation and MOSAIC.

We then used Data Envelopment Analysis to compare local authorities' resident satisfaction ratings with the 'optimal' based on performance elsewhere by councils operating under similar conditions and with similar restraints (including levels of car ownership and rurality). This showed which authorities were performing 'efficiently' in perceptual terms relative to the local conditions. (This analysis was made possible by the large number of authorities, 150, for whom survey samples were available).

Our analysis in 2006 suggested that overall satisfaction with transport services is, in part, related to factors beyond the control of local councils, authorities and operators. Ratings of local transport services reflect levels of car ownership and public transport usage in an area, as well as population demographics and levels of rurality. Service standards and infrastructure also have an impact. We found that the number of bus commuters in an area was the strongest positive driver of overall ratings of transport services.

The analysis done in 2006 was borne out of research by Ipsos MORI throughout the 1990s in hundreds of local authority areas and a resulting recognition that we ought not to take absolute satisfaction scores at face value. Some areas are just more difficult to achieve positive perceptions in, and to get a true understanding of performance we need to take this context into account. This is evident in the differences, reported earlier, between resident opinion about the condition of highways in Herefordshire and Gateshead – these authorities face very different challenges in terms of maintaining roads. Attitudes are also shaped by the characteristics of local populations; an Ipsos MORI report published in January 2010 presented an *Area Challenges Index*.[33]

Our focus in *From A to B* is less about understanding the role of 'place' and contextualising KBIs (although this paper does include some analysis on this theme), more about identifying what it is that local authorities need to prioritise if they are to improve public perceptions of transport and highways services as a whole, and individually. Beyond this, the analysis we have done tells us that there is value in better understanding which 'inputs' (such as financial investment) are productive relative to 'outputs' (including service quality and public

[33] Ipsos MORI, *Mind the Gap: Frontiers of Performance in Local* Government, 2010. This report identified seven common themes consistently strongly associated with satisfaction or agreement with key question statements harder to achieve (including the key National Indicators measured through the Place Survey): the Index of Multiple Deprivation (IMD) score (i.e. how deprived an area is), ethnic diversity, the proportion of young people living in the area population churn, physical living conditions (over or under occupancy) urbanity, and geographic region.

perceptions) and a National Highways and Transport Network project titled 'Optimising Customer Satisfaction, Investment and Quality' is currently doing more on this.

As a first stage, we investigated simple bivariate correlations between endogenous variables within the NHTS survey and a satisfaction index composed of the eleven Q2 items, at local authority level (a sample of 76) and also at respondent-level (a sample of 67,000). Then, we ran multiple regression models to examine the statistical dependence between a single dependent variable (our Q2 index), and several independent variables i.e. responses to questions throughout the questionnaire (excluding Q2 itself).

Our outputs measure the proportion of variance in the dependent variable that is explained by the independent variables. We have also run additional, sub-models to examine the statistical dependence between each of the services at Q2 and the corresponding independent variables as a way of better understanding the factors which are driving the different transport and highways services underpinning KBI01.

We have used a composite of Q2, an index, rather than KBI01 (or KBI02), because the KBIs are not 'clean' measures of resident satisfaction (deliberately so) and they link responses to two questions – Q2 with Q1 – as described previously. Our index is an average of all responses to the eleven Q2 components.

Use of such an index has been necessary because the survey does not, at present, ask respondents to give an overall rating of services. More importantly, KBI01 ratings exist at local authority rather than respondent-level. Using the larger dataset of 69,000 cases, rather than 76 local authority units, is advantageous if we are to build statistically robust models, generating findings which can be used with confidence.

Ideally, we would have confined our analysis to cases (that is, respondents who have completed questionnaires) for which we have complete data for all eleven component questions; excluding those who left one or more blank or ticked 'don't know/does not apply'. However, this would have excluded 70% of the respondent base. Therefore an appropriate cut-off point was chosen to de-select respondents with 'too many' missing values at Q2. 'Too many' was defined as eight or more, and 1,658 respondents were eliminated, leaving 67,674 respondents for analysis purposes.

Key findings

The following table shows the strength of correlations between a number of important variables relating to different elements of transport and highways services, and overall satisfaction with transport and highways services based on our composite index of Q2.

Model 1	
Independent variable	Correlation coefficient
The condition of pavements in local area	0.512
Condition of road surfaces locally	0.473
Provision of safe crossing points in local area	0.420
The local bus service overall locally	0.412
Safety of walking in your local area	0.404
Frequency of bus services locally	0.396
How the Council deals with obstructions on pavements	0.381
Location of permanent traffic lights locally	0.342
Efforts to reduce delays to traffic (e. g. carrying out works at night)	0.327
Provision of Rights of Way footpaths, e. g. for walking or running locally	0.310
Availability of taxis or mini-cabs	0.259
Good local taxi (or mini-cab) services	0.111

Source: Ipsos MORI
Base: 67,674 cases, R-Sq. = 53.8

It shows that the condition of pavements in the local area is more strongly related to responses at Q2 than the other eleven most prominent variables, although the condition of roads is not far behind. The former displays a correlation coefficient of 0.512, a particularly large value given the large sample size and the attitudinal nature of both variables. (A perfect correlation of 1.0 would mean that within the sample data, a perfect linear relationship exists between the two variables of interest.)

Looking at these 12 variables, there are some apparent themes:

- *highway condition*: pavements, 0.512, roads 0.473;
- *pedestrian safety*: crossing points 0.420, walking 0.404;
- *buses*: the bus service overall 0.412, frequency 0.396 (as we will go on to see, these are themselves closely related); and
- *keeping traffic and pedestrians moving* – obstructions 0.381, traffic lights 0.342, efforts to reduce delays 0.327.

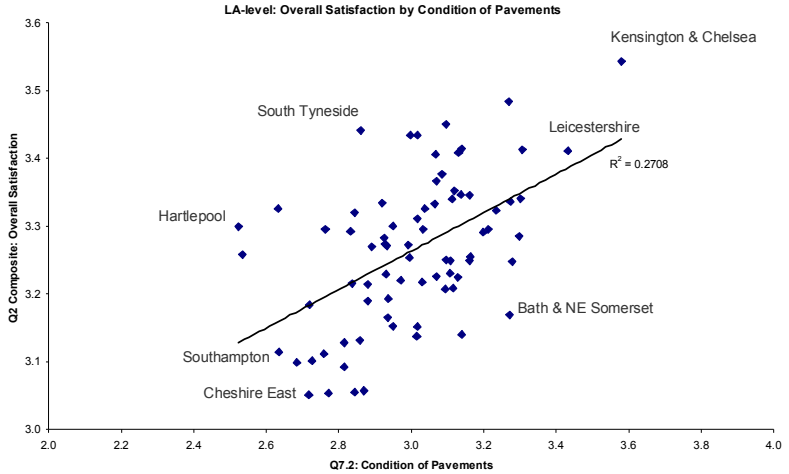
As with all correlation analysis, this cannot tell us what is *causing* each relationship, and it is not necessarily the case that improving any, or all, of the variables will improve overall ratings of transport and highways services overall. It does, however, clearly show us that certain service dimensions tend to run in the same direction as overall ratings, and the prominence of highway conditions reinforces similar conclusions reported in our first chapter.

The following charts are correlation scatter-plots based on the 76 local authorities for whom we have NHTS data. They show each local authority's Q2 index relative to the top six independent variables as identified by our regression analysis described below (we have confined labelling the plots to 'outlier' authorities for the sake of presentation). The regression

lines (lines of best fit) show the trend between the two variables (in all cases, a rise from left to right shows a positive correlation). The R-Sq. value is the square of the correlation coefficient between the two variables, and shows the strength of the relationship (i.e. how close the actual values of the outcome variable are to the values predicted by the regression line).

It can be seen that many data points are *not* near or on the line of best fit showing that they vary considerably from the regression model. Stronger performing authorities relative to the average trend always appear above the line (taking into account performance on both variables). Points above the line can be interpreted as having a high overall satisfaction relative to the comparatively low performance on the predictor variable. Conversely, points below the line can be interpreted as having a low overall satisfaction relative to the comparatively high performance on the predictor variable. At a local authority-level, the condition of local road surfaces has the strongest (R-Sq.) relationship with Q2 among the six variables considered.

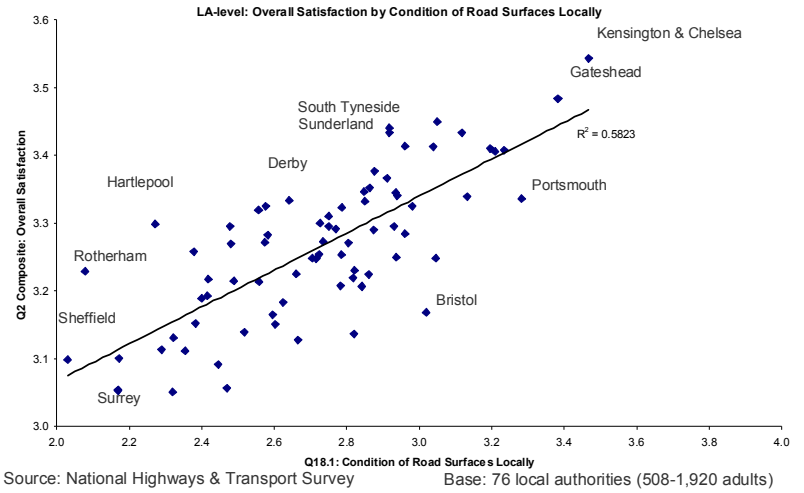
Correlation: condition of pavements



Source: National Highways & Transport Survey

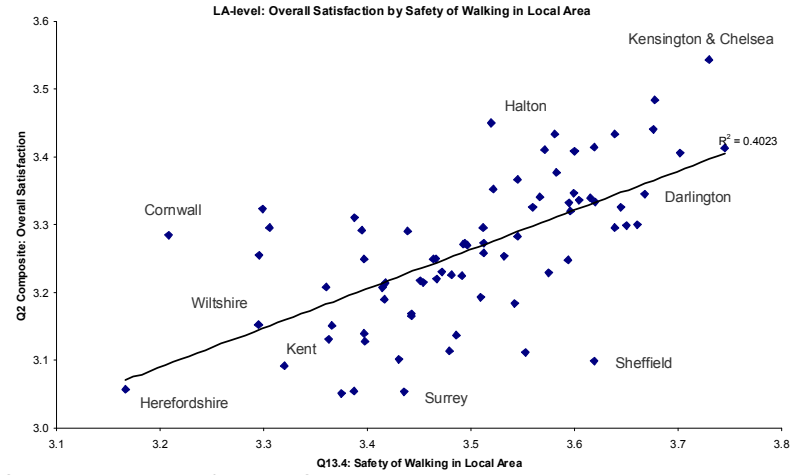
Base: 76 local authorities (508-1,920 adults)

Correlation: condition of road surfaces



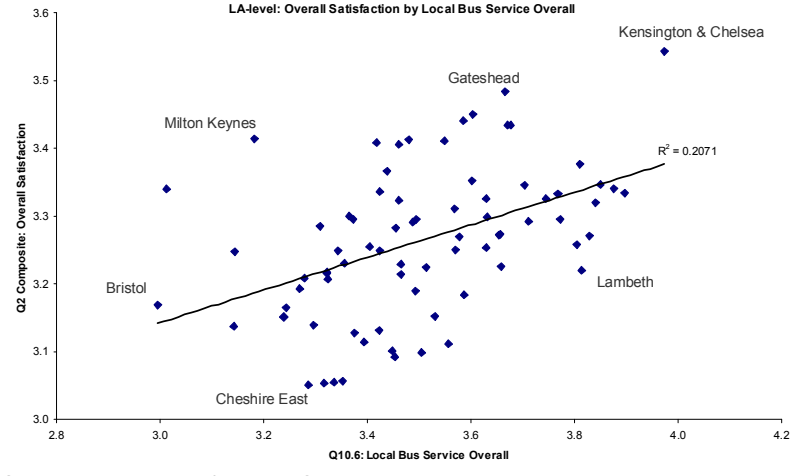
Source: National Highways & Transport Survey Base: 76 local authorities (508-1,920 adults)

Correlation: safety of walking



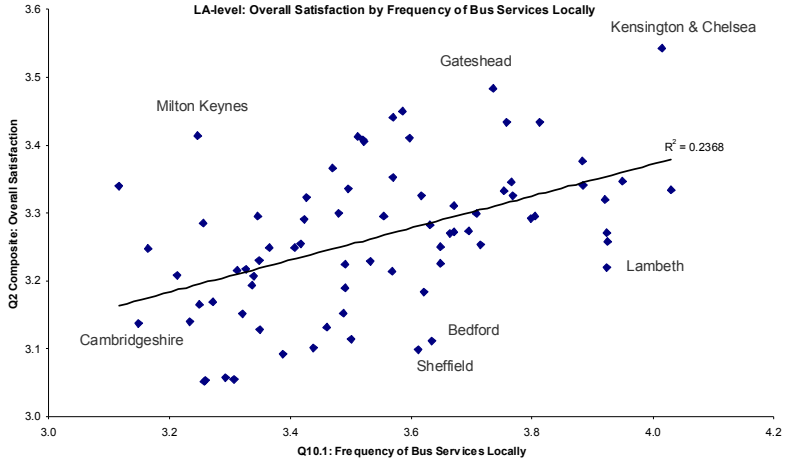
Source: National Highways & Transport Survey Base: 76 local authorities (508-1,920 adults)

Correlation: local bus service



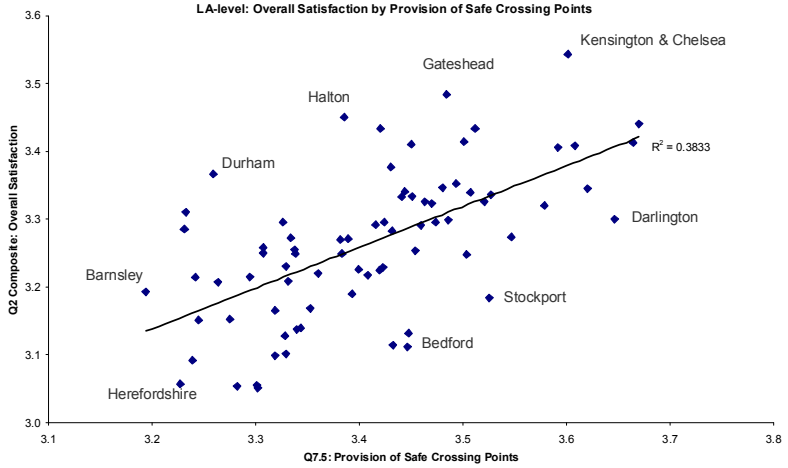
Source: National Highways & Transport Survey Base: 76 local authorities (508-1,920 adults)

Correlation: frequency of bus services



Source: National Highways & Transport Survey Base: 76 local authorities (508-1,920 adults)

Correlation: safe crossing points



Source: National Highways & Transport Survey Base: 76 local authorities (508-1,920 adults)

Having looked at bivariate correlations at local authority and respondent-level, we additionally ran multiple regression models at respondent-level (based on 67,764 cases) to identify the variables most strongly related to our dependent variable i.e. Q2. Analysis such as this is more powerful than looking at simple correlations as it identifies the *relative* strength of relationships by taking into account all other variables in the model. It therefore tells us which variables are strongest at shaping responses at Q2.

Model 2	
Independent variable	Relative strength
The condition of pavements in local area	19%
Condition of road surfaces locally	14%
Frequency of bus services locally	10%
The local bus service overall locally	9%
Safety of walking in your local area	8%
Provision of safe crossing points in local area	8%
Provision of Rights of Way footpaths, e. g. for walking or running locally	6%
Availability of taxis or mini-cabs	6%
Efforts to reduce delays to traffic (e. g. carrying out works at night): local situation	5%
Good local taxi (or mini-cab) services	5%
Location of permanent traffic lights locally	5%
How the Council deals with obstructions on pavements	4%

Source: Ipsos MORI
Base: 67,674 cases, R-Sq. = 53.8%

Just under a fifth, 19%, of the variation in the Q2 regression model can be explained by ratings of the condition of pavements relative to the other eleven variables. In all cases, the variables are positively related to Q2. This means that, in general, higher scores on the independent variable, such as the condition of pavements, tend to be paired with higher satisfaction scores on the dependent variable (Q2) and lower scores on one variable tend to be paired with lower scores on the other.

This model explains the majority, although not all, of the variation in Q2 at a respondent level; 54% of all variation in Q2 can be explained by referencing responses to just twelve variables lifted from the questionnaire and built into our model. Among models of this type, this is a relatively high degree of explanatory power.

It is important to be clear about what this model means. Obviously, it is limited to those endogenous measures, or variables, contained within the NHTS questionnaire, and while a lot is crammed into a relatively short 12 page postal survey, it clearly did not cover all of the variables which could possibly have a bearing. *Causal* ordering between variables cannot be inferred from the model – it is not the case that the condition of pavements causes 19% of overall satisfaction – but it does provide a hierarchy in terms of the relative importance of different service dimensions in shaping overall satisfaction with transport and highways services.

As a result, this national-level analysis illustrates that a range of service dimensions need to be addressed (rather than one ‘single bullet’ solution) if the goal is to improve overall public ratings of transport and highways services. It provides those involved in delivering local services with useful pointers about which service dimensions to prioritise when planning services to deliver stronger public satisfaction with transport and highways service delivery.

Key drivers: individual services

To build on the models already described, we ran additional sub-models to examine the statistical dependence between each of the services at Q2 (our new dependent variables) and several hand-picked corresponding independent variables drawn from the questionnaire but confined to service aspects and satisfaction (i.e. excluding usage variables, exogenous or 'place' variables). The objective was to establish a means of better understanding the service factors which are shaping public satisfaction with the different transport and highways services.

The following tables, supported by short commentary, summarise our findings in respect of some of the stronger models. A list of the independent variables included in each model can be found in Appendix B.

The condition of road surfaces and pavements dominate the first model – Model 3 – with, respectively, 46% and 30% relative strength. This shows that of the two main components of highway condition – roads and pavements – it is the former which is relatively stronger and this is confirmed by our additional model, Model 3a shown below, confined to these two variables. When they are excluded from the model, the speed of repair explains 57% of the variation but the model's R-Sq. falls to 37.7%.

Model 3	
Dependent variable: **Satisfaction with condition of highways i.e. roads and pavements**	
Independent variable	Relative strength
Condition of road surfaces locally	46%
The condition of pavements in the local area	30%
Speed of repair to damaged roads & pavements locally	17%
Pavements being kept clear of obstructions (e.g. parked cars)	2%
Keeping drains clear and working locally	2%
Maintenance of highway verges, trees & shrubs locally	1%
The provision of pavements where these are needed in local area	1%
Provision of safe crossing points in the local area	1%

Source: Ipsos MORI
Base: 67,017 cases, R-Sq. = 54.4%

Model 3a	
Dependent variable: **Satisfaction with condition of highways i.e. roads and pavements**	
Independent variable	Relative strength
Condition of road surfaces locally	63%
The condition of pavements in the local area	37%

Source: Ipsos MORI
Base: 67,017 cases, R-Sq. = 52.4%

Residents' perspectives on the condition of the pavements in the local area dominate Model 4 with a 78% relative strength. When we remove this variable given its similarity with the dependent variable and re-run the analysis, we see a stronger showing for the provision of pavements (46%) and the cleanliness of pavements (35%).

Model 4	
Dependent variable: **Satisfaction with pavements and footpaths**	
Independent variable	Relative strength
The condition of pavements	78%
The provision of pavements where these are needed in local area	17%
The cleanliness of pavements in local area	6%
Pavements being kept clear of obstructions (e. g. parked cars) in local area	4%
Provision of safe crossing points in local area	3%

Source: Ipsos MORI
Base: 67,465 cases, R-Sq. = 51.6%

One variable – satisfaction with the local bus service overall – was removed from our next model given its overlap with the dependent variable (only a small drop in R-Sq. was observed, meaning that the regression model does not lose much predictive power) with the result that the frequency of buses now dominates with a relative strength of 61%. The effects of providing public transport information, whether buses arrive on time and the bus fares charged are the next largest, but small in comparison to the effect of bus frequency.

Model 5a	
Dependent variable: **Satisfaction with local bus services**	
Independent variable	Relative strength
Frequency of bus services locally	61%
Provision of public transport information overall: local public transport information	11%
Whether buses arrive on time locally	9%
Bus fares locally	8%
Number of bus stops locally	5%
Helpfulness of drivers locally	3%
Quality & cleanliness of buses locally	2%
Ease of finding the right information: local public transport information	2%
Availability of information to help people plan journeys in advance (e. g. internet, helplines): local public transport information	1%

Source: Ipsos MORI
Base: 60,912 cases, R-Sq. = 53.8%

The provision of cycle routes where these are needed locally dominates Model 6 with 67% relative strength. The condition of cycle routes locally is the second-ranked predictor, with cycle crossing facilities at junctions and traffic signals locally third-ranked. The remaining three variables in the model have little influence, reflected in their small relative strengths.

Model 6	
Dependent variable: **Satisfaction with cycling routes and facilities**	
Independent variable	Relative strength
The provision of cycle routes where these are needed locally	67%
Condition of cycle routes locally	15%
Cycle crossing facilities at road junctions and traffic signals locally	9%
Cycle parking locally	4%
Direction signing for cycle routes locally	3%
Cycle route information, e. g. maps locally	2%

Source: Ipsos MORI
Base: 34,125 cases, R-Sq. = 49.8%

Our final model filters out all respondents who answered less than eight of the ten independent variables (just under half of the respondents were retained). It has safety of walking as the top-ranked predictor with the safety of children walking to school the second ranked predictor.

Model 7	
Dependent variable: **Satisfaction with road safety locally**	
Independent variable	Relative strength
Safety of walking in local area	27%
Safety of children walking to school in local area	19%
The enforcement of speed limits in local area	11%
Speed limits in local area	11%
Road safety training/education given to young drivers	11%
Safety of cycling in local area	8%
Safety of children cycling to school in local area	6%
Speed control measures (e.g. road humps) in local area	5%
Road safety training/education given to children	3%

Source: Ipsos MORI
Base: 27,217 cases, R-Sq. = 28.3%

Usage and rurality

So far, our model has focused exclusively on understanding which dimensions of highways and transport services are the most important in shaping overall public satisfaction. There is merit, though, in examining whether usage and 'place' enhance the model's ability to explain satisfaction. (As mentioned, our analysis in 2006 benefited from the larger BVPI dataset allowing stronger local-authority level analysis and found that public ratings of local transport services reflect levels of car ownership and public transport usage in an area, as well as population demographics, rurality, service standards and infrastructure).

Usage variables have been derived from Q3 of the NHTS. The five point scale used to measure usage has been 'flipped' so that the category representing the most frequent usage ('daily') is coded 5 and the category representing the least frequent usage ('less frequently

(than monthly)/ never') is coded 1. Although there are many instances of usage variables entering the models relating to individual Q2 services, there is only minimal change in the R-Sq.

The most interesting aspect is the order of the usage variables as they appear in the models. For example, when re-running Model 3 (the condition of highways) we find that car/van usage is the most influential of the road-use variables, marginally more so than buses and motorcycle. Also of interest is the direction of influence; while we see a positive relationship with bus use – i.e. high bus usage is associated with satisfaction with the condition of highways – there is a negative relationship with car and motorcycle usage.

Model 3b (including usage)	
Dependent variable: **Satisfaction with the condition of highways i.e. roads and pavements**	
Independent variable	Relative strength
Condition of road surfaces locally	39%
The condition of pavements in the local area	27%
Speed of repair to damaged roads & pavements locally	15%
How often do you use…to get about? Car/van	4%
How often do you use…to get about? Bus	3%
Pavements being kept clear of obstructions (e.g. parked cars)	3%
How often do you use…to get about? Motorcycle/moped	2%
How often do you use…to get about? Demand Responsive Transport	2%
Keeping drains clear and working locally	2%
The provision of pavements where these are needed in the local area	1%
How often do you use…to get about? Community transport	1%
How often do you use…to get about? Cycle	1%

Source: Ipsos MORI, Base: 67,017 cases, R-Sq. = 54.5%

When including these variables in the overall model (Model 2), the variables do not appear at all and when the usage variables are used exclusively to predict overall satisfaction, the new model gives a very low R-Sq. value. This implies that usage is not a good predictor of our composite index of satisfaction.

The NHTS survey used postcode-based sampling enabling us to overlay respondents' answers to questions with data, in this instance rurality, held at MSOA level (Medium Level Super Output Areas – akin to wards). A quick cross-tabulation shows that there is a difference, with NHTS respondents in 'town and fringe' areas marginally less satisfied than 'urban', and 'village and isolated dwellings' being less satisfied still. These differences are statistically significant.

Mean Q2 scores by rurality (3-category morphology)	
Urban	3.28
Town and Fringe	3.23
Villages and Isolated Dwellings	3.12

Source: Ipsos MORI
Base: 67,674 cases

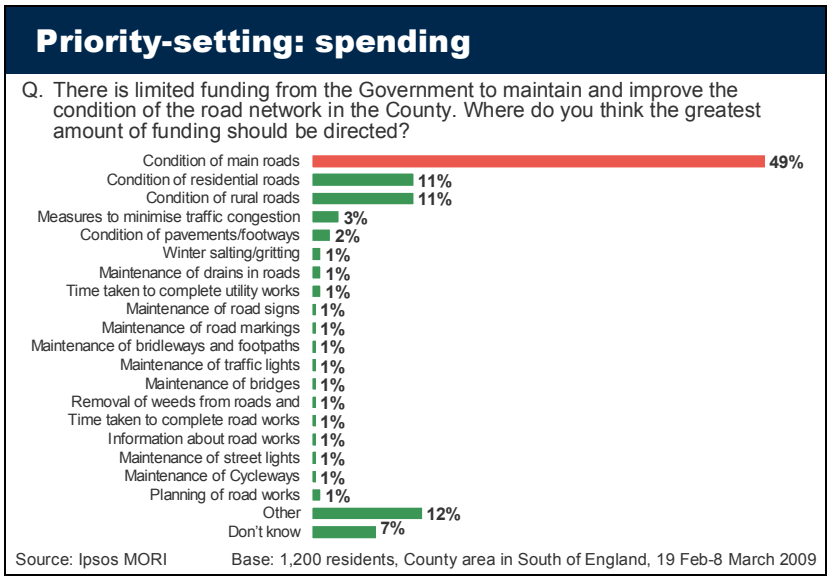
Having done this analysis, we mapped the MSOA rurality classification back to the individual level data and created two binary variables that signify 'town and fringe' and 'village and isolated dwellings'. By doing this, 'urban' is set as the default, and the effect of not living in an 'urban' neighbourhood' is measured. The R-Sq. for this model is very low meaning that the rurality type of a respondent's neighbourhood alone (i.e. in isolation to all other potential factors) is not good at explaining overall satisfaction.

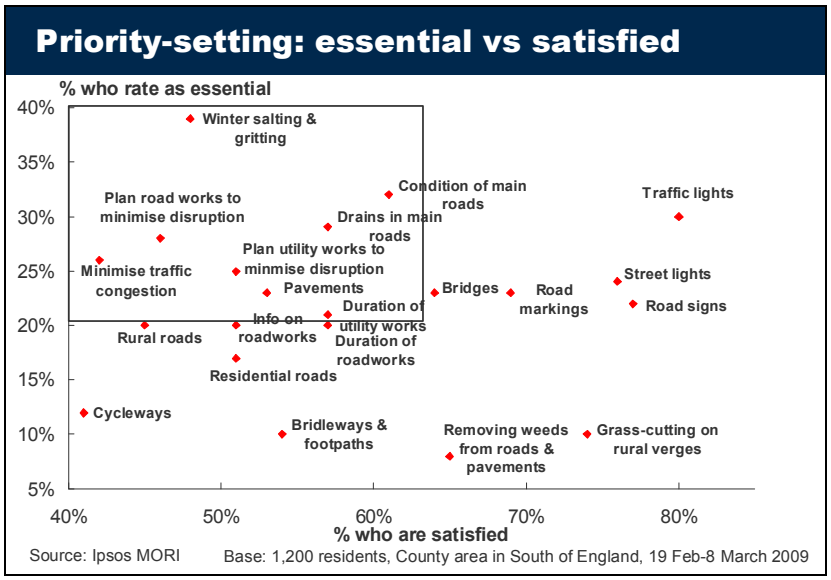
NEXT STEPS

Next steps: using additional evidence to scope priorities

The findings presented in *From A to B* point to potential priorities for local authorities developing LTPs. The techniques we have employed to understand what is driving attitudes across the 76 local authority areas can be replicated at a local level provided sample sizes allow this to be done in a statistically robust way. Additional surveys could also be used to provide local authorities with the chance to ask residents to choose priorities themselves.

The survey we have already mentioned for a county council in the South of England, for example, asked respondents to identify funding priorities without showing a list, as well as asking them to rate several different transport and highways services in terms of importance and satisfaction (key findings are shown graphically below). The survey took place shortly after the heavy snowfalls of February 2009 and this was reflected in a drop in satisfaction with road maintenance and especially with gritting. (At the aggregate level, respondents to the NHTS 2009 were more critical of winter clearance than those who took part a year earlier).





Such surveys provide additional insights by allowing us to ask residents explicitly about their priorities, supplementing the evidence base generated by the NHTS which allow us to *derive* priorities. Like all surveys, though, they can be usefully supplemented with qualitative research, such as group discussions and more deliberative forums including workshops. These allow local authorities to better explore and understand residents' world views in depth, to explore their priorities, the reasons why they hold the views they do, and how receptive they may or may not be to potential solutions and investment, as these illustrative verbatims from research for Oxfordshire County Council show:

> [Reviewing the authority's draft LTP3] *"That's the list you would get…It covers every possible area, nobody loses, everybody wins."*
>
> *"Improving the roads should always be a priority as roads are the main transport system…everyone benefits from improved road conditions (drivers, cyclists and pedestrians)."*
>
> *"Every single year we have major road damage through the amount of rain that we have in this area because…they're just patched up constantly, they're not repaired properly…"*
>
> *"If we put* [all of the allocated budget] *on improving public transport it will solve about three or four of the other* [issues]*…It will reduce congestion, clean the air, reduce carbon emissions because people won't take the car and it will make accessibility to jobs easier."*[34]

[34] Report prepared for Oxfordshire County Council – *Consultation on the Local Transport Plan draft objectives* – by Steer Davies Gleave and based on eight group discussions conducted August 2009.

Finally, as Stephen Norris alluded to in his keynote speech at the 2009 NHT Network conference (which was titled 'Improving public satisfaction in the highways sector'), priority-setting will be complicated by the need for tough decisions about spending and investment across the public sector in years to come. This will mean that effective communication and management of expectations will be important, as will striking the right balance between listening to, and leading, public opinion and behaviour:

> 'Giving road-users what they want is critical to improving satisfaction, despite budget cuts of around 10%, according to TfL board member, Stephen Norris…
> He said *"Transport departments will be one of the hardest hit. Next year [2010] is going to be tough. We're looking at a 10-15% reduction. If you're planning for anything better, forget it."*
> His advice to drive up customer satisfaction was to communicate with the public, use rapid response teams and drive innovation to deliver value for money.'[35]

[35] National Highways & Transport (NHT) Network *Progress Report* newsletter, December 2009.

APPENDICES

Appendix A

The National Highways Transport Survey (NHTS): technical details

- The survey has been set up to collect public perspectives on, and satisfaction with, highway and transportation services in local authority areas. It involves Ipsos MORI sending a questionnaire out to randomly selected households and processing the returns.
- The results of the survey are all stored in a NHT Network performance database with standard reporting and analysis accessible via **www.nhtsurvey.org**. The reporting of survey results includes an online mapping tool, which will present responses spatially on a map. In addition to these standard reports, members of the NHT network have full access to the survey data and can devise and run their own reports, graphs and maps as and when required.
- The survey is administered by Ipsos MORI who generate the sample from the Small Users File which is a sub-file of the Postal Address File (we do not use the electoral register because it is not an inclusive sampling frame). A random probability sampling approach is used. This means that each address has a known, and equal, chance of selection. This is the methodology used for the Government's Place Survey (formerly, the BVPI survey).
- A graphic-designed 12-sided questionnaire is enclosed in an envelope with a pre-paid envelope, and sent to each sampled address. The front page of the questionnaire is co-branded and co-signed by Ipsos MORI and the local authority. It also signposts the availability of assistance for respondents via a telephone number at Ipsos MORI and an email address.
- An average response rate of 19% was achieved across the 33 local authorities who took part in 2008 and, again, 19% among the 76 participants in 2009. In both years there was considerable variation in response rates, ranging from 25% in Dorset in 2009 (1,121 returns) to c.10% in several London boroughs.
- Weighting is used to correct for any imbalances between the survey sample profile and the profile of the 'universe'. Responses from each individual completing the survey are given a weight in accordance with several categories: age, gender, ethnicity and work status. Ipsos MORI sources population profile data from the Office for National Statistics

- Aggregate data across the 76 local authority areas has been weighted using the 76 individual weighting schemes plus an additional weight to adjust for the respective population sizes of the authority areas.
- All surveys are estimates of the 'truth' this being the views/behaviours of the 'universe' – in this case, every 16+ year old resident in a particular local authority area. The variation between the sample results and the "true" values (the findings which would been obtained if all 16+ year olds had taken part) can be predicted from knowledge of the sample sizes on which the results are based and the number of times that a particular answer is given. For example, at the 95% confidence level and with a sample of 1,000 where 50% give a particular answer, the chances are 19 in 20 that the "true" value will fall between 47% and 53% (i.e. within the range of plus or minus 3 percentage points).
- Further details about the NHTS including the 2009 questionnaire, weighting scheme and FAQs can be found at **www.nhtsurvey.org** – see especially *About the survey*, *Library* and *Next survey – 2010*.

Appendix B

Statistical analysis: technical details

Data preparation

- The majority of the questionnaire items are considered as independent variables in the overall regression model. Exceptions to this are the Q17 components (reasons for using one's car less frequently) and the demographic questions (Qs20-29). Likert scale questions are coded so that the least desirable option is given the value of 1 while the most desirable option is given the value of 5. In the case of Q3 components which measure frequency, 1 is assigned to least frequent while 5 assigned to most frequent. Most of the Likert scale questions are measured on a 5-point scale. In the cases where a 4-point scale is used (Qs1), a minimum score of 1 and a maximum score of 5 is retained for consistency. The original 1-2-3-4 scale is transformed into 5-4-2-1. The set of binary variables used in the model (Qs16) require no recoding. The 'don't know/ does not apply' and 'not stated' options are set as missing responses.

- Missing responses are then counted for each variable, and variables with more than 35% missing responses are excluded from consideration in the overall regression. The missing values for the remaining candidate variables are substituted with the within-variable mean score.
- The dependent variable was calculated from the eleven components of the Q2 set of questions. Respondents with more than seven missing responses (i.e. less than four valid responses) are filtered out at this stage, removing 1658 (2.4%) of the respondent base. The Q2 components are first recoded (1-2-3-4-5 scale is transformed into 5-4-3-2-1), then the Q2 composite variable is created simply by taking the average of valid responses for each respondent.

Analysis

- A stepwise regression process is used to determine the optimal predictive model of the Q2 composite variable in terms of the candidate variables. Due to the large respondent base, the test for stepwise variable entry is very sensitive, and the resulting stepwise regression model contains 83 of the 138 candidate variables. A model containing this many explanatory variables is neither robust nor useful in terms of actionability. Keeping with standard procedure, the earliest step that achieves a model with twelve explanatory variables is retained, and an enter regression is run on these twelve. Relative strength for each explanatory variable is calculated as the standardised beta values, expressed as a percentage of the total (absolute) standardised beta values of all the explanatory variables.
- Individual regressions are then run using each component of Q2 as a dependent variable, with explanatory variables chosen from variable sets that are pre-selected, based on their direct relation relate directly to the respective dependent variable. The respondent base sizes vary between these models as only respondents with valid responses are considered. In some cases, a potential explanatory variable is excluded from the analysis as it is deemed too similar semantically to the dependent variable. This applies for the models on ‘pavements and footpaths’ (Q7.2), ‘local bus services’ (Q10.6) and condition of highways (Q18.1).
- Two versions of these component-specific regression models were run; one including the usage variables (Qs3) and one excluding. Where usage variables are considered, all the usage variables are included to test whether a mode of transport which is seemingly unrelated to the Q2 component does has an effect. In general, a number a usage questions appear in these models, but the R-Sq statistic does not change substantially in comparison to the usage-excluded equivalent model.

- The independent variables included within the sub-models were as follows:

Model 3: Condition of highways i.e. roads and pavements
18_2 Cleanliness of roads
18_3 Condition of road markings
18_4 Condition and cleanliness of road signs
18_6 Speed of repair to damaged roads and pavements
18_7 Maintenance of highway verges, trees & shrubs
18_8 Weed killing on pavements and road
18_9 Keeping drains clear and working

Model 4: Pavements and footpaths
7_1 Provision of pavements
7_3 Cleanliness
7_4 Direction signposts
7_5 Provision of safe crossing points in local area
7_6 Drop kerb crossing points
7_7 Pavements kept clear
18_6 Speed of repair to damaged roads and pavements
19_1 Deals with obstructions on pavements

Model 5: Local bus services
10_1 Frequency
10_2 No. of bus stops
10_4 Whether arrive on time
10_5 Easy to get on/off
10_7 Bus fares
10_8 Quality & cleanliness
10_9 Helpfulness of drivers
11_1 The amount of public transport info
11_2 Clarity
11_4 Provision overall
11_5 Ease of finding
11_6 Info about accessible buses
11_7 Availability of info to help plan
11_8 Reliability of electronic display info at bus stops

Model 6: Cycle routes and facilities
8_1 Provision of cycle routes
8_2 Condition
8_3 Crossing facilities
8_4 Parking
8_5 Direction signing
8_6 Cycle route info
8_7 Cycle training
8_8 Cycle facilities at work

Model 7: Road safety locally
7_5 Provision of safe crossing points
13_1 Speed limits
13_2 Enforcement
13_3 Speed control measures
13_4 Safety of walking
13_5 Safety of cycling
13_6 Safety of children walking to school

13_7 Safety of children cycling to school
13_8 Road safety training/education to children
13_9 Road safety training/education to motorcyclists
13_10 Road safety training/education to young drivers

FOR MORE INFORMATION

NHT
Survey
Public Satisfaction

The National Highways and Transport Survey

http://www.nhtsurvey.org/
(see About the survey/Next Survey – 2010)

Jennie Simons
measure2improve

t: 01443 832163

jennifers@measure2improve.co.uk

Ipsos MORI

Ipsos MORI's Transport Research Team works out of the Social Research Institute and Loyalty specialisms, delivering projects for national government, local public services, the commercial and not-for-profit sectors. We specialise in social research, social marketing and communications research, customer satisfaction and loyalty.

We use qualitative and quantitative research, the latest sampling approaches, a range of data collection techniques, Stated Preference modelling and statistical analysis packages. These are applied to help clients understand and act upon public perspectives and behaviours.

For more information, please see www.ipsos-mori.com/transport or contact us:

020 7347 3000

79-81 Borough Road
London SE1 1FY

www.ipsos-mori.com