Valuation of Townscapes and Pedestrianisation

Survey Approach: Technical Note

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Contents

1. Introduction

1.1 Atkins and the Institute of Transport Studies, University of Leeds have together been commissioned by the Department for Transport (DfT) to undertake research into users' valuation of townscape improvements and pedestrianisation.

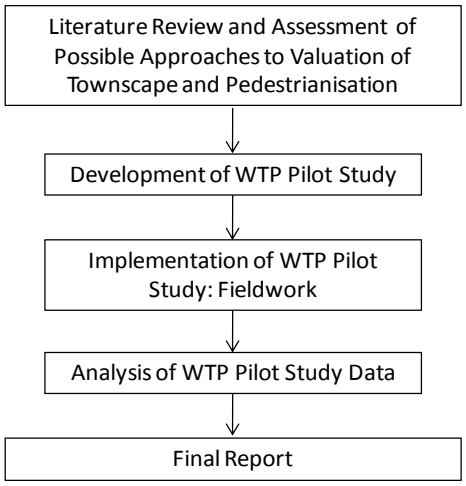
1.2 The study requirement has arisen from the Department's need to assess major scheme business cases (MSBCs), where townscape improvement benefits have been claimed as part of various scheme submissions. Due to a lack of existing research evidence, and a lack of established methodology, the guidance currently available within WebTAG is limited, which therefore brings ambiguity to benefit valuation both for scheme promoters and for the Department.

1.3 Whilst a comprehensive appraisal methodology is desirable in the medium- to long-term, the aim of this inital study is to explore potential approaches to valuation of these benefits through:

- A review of the relevant literature;
- An assessment of possible approches to valuation of townscape and pedestrianisation; and
- A willingness-to-pay (WTP) pilot study, to test the feasibility of the preferred valuation technique emerging from the review, and – provided it is successful – to estimate values for a two real cases which will indicate the possible range of valuations for townscape and pedestrianisation benefits.

1.4 Figure 1 shows the main stages in the study. The findings of the literature review stage were provided in the report entitled "Literature Review and Assessment of Approaches" 28/1/2010. This report arises from the second stage, 'Development of WTP Pilot Study'.

Figure 1



1.5 The remainder of this report takes the following structure;

- Section 2 describes the selection of survey locations;
- Section 3 addresses the sampling strategy;
- Section 4 sets out the proposed survey design;
- Section 5 addresses piloting; and
- Section 6 addresses plans for implementation.

2. Survey Locations

Introduction

2.1 The location of survey sites play an important role in ensuring that responses cover the range of socio-demographics and urban area types, providing a geographically transferable valuation framework once assessed. A wide range of possible locations were therefore considered and discussed, including:

- A selection of recent MSBCs provided by the Department in which townscape benefits were an issue, including:
  - City centre plans related to the Norwich Area Transport Strategy;
  - Loughborough town centre, Leicestershire; and
  - Hucknall town centre, Nottinghamshire;
- A set of low and high quality city and town centre pedestrian environments in England were also developed by the study team in order to identify:
  - Locations where a complete town or city centre townscape improvement scheme was a plausible scenario; and
  - Locations where incremental improvements could be made to a generally good quality city/town centre pedestrian environment.

2.2 At the Survey Steering Group meeting of 8/1/10, it was noted that most English cities have already seen substantial city centre pedestrianisation during the second half of the 20th century, therefore making the potential candidate city survey locations mainly those seeking incremental improvements. Whilst some town centres were partly or entirely pedestrianised, in particular, during the 1950s and 1960s (although not always successfully in economic and social terms), there are many town and suburb centres where this was not done, and where there remains much scope for sympathetic townscape improvements and redesign of streetscapes in favour of pedestrians. These form a second important category of schemes likely to come forward in MSBCs to the Department for Transport.

2.3 Finally, it is also worth noting that having identified stated preference (SP) experiments as the preferred approach to WTP measurement, we can further focus on locations where there is **potential** for townscape improvements; distinct from locations where townscape improvements are already completed.

2.4 The overall WTP survey programme was required to be delivered across two survey locations to aid the capture of stated valuations across varying user types and socio-demographics.

Selection Matrix

2.5 As part of the short-listing of locations, a selection matrix was first defined in order to provide an evidence based framework behind the decision making process. The following survey requirements were taken into account, being then used to choose formally between short-listed locations. The requirements were drawn up to ensure that the chosen locations would theoretically provide a statistically relevant sample for the survey programme, in line with the practicalities of undertaking surveys at two locations within the short timescales of this study.

1) Usage

Even in the *status quo*, there must be sufficient pedestrian usage of the street(s) to make it feasible to recruit a statistically significant sample (~200 per site) within a practicable time period.

2) Range of movements for origins and destinations across the street

The site is not simply a linear walkway, but a space in which there are pedestrian has origins and destinations along the street – e.g. homes, shops and restaurants – and in which there are significant crossing movements between the two sides of the street.

3) Pedestrian severance and permeability are existing issues

The site is not already an optimised pedestrian environment. Thus we will not choose locations such as the shopping street Briggate in Leeds, which was fully pedestrianised in 1996 and has recently undergone a programme of work to further raise the quality of the streetscape.

4) Appropriate demographic mix

Both sites should have a diverse set of users, particularly in terms of income – given the influence of income on WTP – but also in terms of age and gender. Initially, consideration was given to two sites representing different levels of GDP per capita (one affluent, one low income site). However, given the decision to use the two different sites to test other locational differences – in particular one incremental improvement to an existing high quality city centre versus one substantial new pedestrianisation/townscape scheme in a town or suburb, it was decided to select two locations where average household income is broadly consistent with average household income in England outside London[1], but where there is a broad social mix from high to low income earners.

5) Appropriate activity mix

Both sites should attract pedestrian use, not for a narrow set of purposes (e.g. commuter flows across the street to a rail station in the peak hours, or tourism only), but for a range of purposes including personal business (e.g. solicitors, accountants) as well as retail, leisure and services (e.g dentistry, hairdressing). This will help to ensure that respondents include a mix of employed, retirees, students, homeworkers, those seeking work, and so on.

6) Appropriate mix of visitors and continual users

In historic towns and cities particularly, we need to be sensitive to the need to recruit a sufficient number of residents as well as visitors to the survey. Previous research has shown that WTP per visit differs significantly between these groups.

7) Absence of contentious issues

To avoid bias to the survey from protest responses, we need to avoid locations where there is substantial risk that the respondents will link the questioning to a contentious issue. For example, where the townscape/pedestrianisation scheme would likely be linked in the respondent's mind to a contentious bypass project to take the traffic displaced by the pedestrianisation scheme.

2.6 Following a discussion of numerous sites throughout the country including London, where the following locations were shortlisted to focus towards a single region of the country (West Yorkshire) which assisted with survey delivery practicalities as well as a broadly consistent demographic and income mix:

- Micklegate, York;
- Museum Street, York;
- New Road Side, Horsforth, West Yorkshire;
- Bingley Road, Saltaire, West Yorkshire.

[1] the areas to which MSBCs relate

2.7 Micklegate, York, is a radial street within the city walls of York, known locally for a mix of shops, entertainment venues, and historic buildings (Figures 2&3). At the southern end of Micklegate is Micklegate Bar, a stone gateway through the city walls, and at the northern end is Ouse Bridge which leads to the core of York city centre on the other side of the River Ouse.

Micklegate, York (Figure 2 image, Figure 3 map)

2.8 Museum Street, York, forms part of York's inner ring road, but is also the key pedestrian route from the rail station to the city centre and Minster (Figures 4&5). It is often severely congested both on the roadway and the pavements. There is a significant cross-flow of pedestrians to and from Museum Gardens (shown in Figure 4). Retail units along Museum Street appear mostly low quality compared with similar units in adjoining streets, and are present only on the east side of the street. The street is primarily a thoroughfare rather than a destination or a place to be.

Museum Street, York (Figure 4 image, Figure 5 map)

2.9 New Road Side, Horsforth, is a suburban high street within the city of Leeds, 7km from Leeds City Centre, and 1km inside Leeds Outer Ring Road (Figures 6&7). It is located on the A65 road towards Skipton and the Yorkshire Dales.

New Road Side, Horsforth (Figure 6 image, Figure 7 map)

2.10 Bingley Road, Saltaire, is also a suburb centre, this time in an outlying suburb of Bradford – 5km from the city centre (Figures 8&9). Known locally as Saltaire High Street, the section of interest is from the junction with the A657 Saltaire Road to Victoria Road.

Bingley Road, Saltaire (Figure 8 image, Figure 9 map)

2.11 The following table shows how the four shortlisted sites were assessed against the survey requirements.

Table 1: Selection matrix

Site	1) Usage	2) Range of movements	3) Existing issues	4) Demographic mix	5) Activity mix	6) Resident/ visitor mix	7) Non-contentious
Micklegate, York	✓	✓	✓	✓	✓	✓	✓
Museum Street, York	✓	✓	✓	✓	?	✓	×
New Road Side, Horsforth	✓	✓	✓	✓	✓	✓	✓
Bingley Road, Saltaire	?	✓	✓	✓	✓	✓	×

Key: ✓ satisfactory; × unsatisfactory; ? substantial doubt over suitability.

2.12 Furthermore, site visits were undertaken at each of the above in order to understand the effective footfall for each location. Table 2 summarises the usage data from basic pedestrian counts at each site in February 2010.

Table 2: Basic pedestrian counts

Site	Equivalent Pedestrian Flow (15 mins both directions and pavements)	Survey Time
Micklegate, York	261	Friday 14.10 – 15.30
Museum Street, York	709	Saturday 12.54 – 13.09
New Road Side, Horsforth	83	Friday 14.30 – 15.30
Bingley Road, Saltaire	91	Saturday 15.10 – 15.25

2.13 The Micklegate and New Road Side surveys are comparable as they were carried out simultaneously using the same method, whilst the Museum Street and Saltaire surveys were carried out on a different day and at differing times, and hence are not directly comparable but provide an understanding of weekend flows which *should* be greater than weekday.

2.14 In the Saltaire case, the number of separate individuals is lower than the number of people counted since it was observed that some pedestrians visited the shops and returned within the survey period. On the basis of a 10 hour recruitment period on one pavement, and a 20% (cautious estimate) recruitment rate, it is open to doubt whether 200 respondents could be recruited in the Saltaire case.

2.15 For Museum Street in York, there was a significant concern following the site visit that this is a thoroughfare and not a destination street, and in that respect not representatitive of the type of street which it has been decided the pilot study will focus upon. Another concern is that the issue of where to reroute the displaced traffic (in the WTP scenario) would be very contentious, since there would be significant engineering challenges and heritage issues in any attempt to reroute

this section of the inner ring road – for example, there are very few bridges over the Ouse, so an additional bridge and approach roads may be required. This issue does not arise for Micklegate because the *status quo* traffic level is much lower and a reasonable alternative route through the road network is available.

2.16 Bingley Road in Saltaire could be associated in the respondents' minds with both the Saltaire Bypass – various proposals for which have been put forward over many years (including a current proposal) – and the Bingley Relief Road, opened in 2003. The latter, although conforming in many ways to the 'town centre traffic relief' type of bypass scheme, in fact involves a new dual carriageway road (50mph limit) running through the centre of the town, causing significant noise and landscape impacts. Both of these associations are potentially contentious and have had ongoing and recent press in the media.

2.17 Finally, an additional site at Kentish Town in London was considered, but rejected after discussions with DfT as the MSBCs being assessed are primarily for locations outside London.

Chosen Locations

2.18 In summary, although all of the short-listed sites have some merit, the following two sites most suit the specification, and are thus proposed as the two chosen locations:

- York, Micklegate – is preferred due to not having any specific, known contentious issues, and the broader range of pedestrian movements associated with its high street style environment / mix of land use.
- New Road Side, Horsforth – is another location where a scenario of traffic rerouting could be played out in the questionnaire. A rapid scoping study indicates it is feasible to achieve the sample size required for the study.

3. Sampling Strategy

3.1 The sampling strategy is driven by both statistical performance and the Department's wish to be able to apply the results in Value for Money assessments, by aggregation from the sample to total WTP for a scheme. Therefore we need to address the major sources of variation in personal WTP for townscape improvements and pedestrianisation. In particular, previous studies indicate WTP varies a great deal with frequency of visit (e.g. Walker, 1997): annual WTP increases with frequency of visit, whilst WTP per visit declines with frequency of visit.

Sample Size

3.2 In the Inception Report and in the Proposal we stated that we would aim to obtain 200 responses in each of two locations, giving 400 responses in total. Based on our experience with SP data gathering and analysis, this would be a reasonable number to obtain robust modelling results in this study.

3.3 The Literature Review shows how this compares with other the published peer-reviewed studies:

- Wardman and Bristow (2008) gathered approx 200 in each of three locations (for a total of 647);
- Sheldon et al (2007 – the London study) gathered 600; and
- Willis, Powe and Garrod (2005) gathered 1,214.

3.4 The study by Walker (1997) gathered only 117, and found that although it was possible to determine mean WTP, it was not possible to determine WTP by frequency of visit for all frequency categories, which then impacts on the ability to use the results in Cost Benefit Analysis. For the purposes of this study, which is explicitly to pilot a proposed WTP approach and obtain ranges of valuations, we believe that the goal of 400 is appropriate.

Population and Sample Frame

3.5 In principle, we are interested to know the WTP of anyone who may benefit from an improvement in the townscape at the chosen location. This group potentially includes:

- Both residents (of the city/town/suburb in which the study site is located) and visitors; and
- Both users of the study site and non-users.

3.6 We initially proposed to limit this pilot study to residents, in order to reduce the complexity of the survey. The plausibility of the payment vehicle for visitors was a concern in previous studies, however we have new proposals on that which should allow visitors to be included, giving a more comprehensive sample frame.

3.7 The definition of 'residents' is therefore important. We assume that in a city such as York, the 'resident population' is the population of the City of York Council area, including those who pay council tax to City of York Council and those who live within the area but are exempt from council tax. Anyone else is defined as a visitor, and this potentially includes domestic (UK) and overseas visitors.

3.8 In the case of a suburb centre such as Horsforth, anyone resident in the local authority area as a whole (Leeds City Council) has the potential to pay for improvements through council tax or an equivalent payment vehicle. However, we expect residents of the suburb of Horsforth to have a particular interest in their local facilities. Horsforth has a Town Council based on the Horsforth parish area, which is able to raise funds for its activities through a 'precept' on top of council tax. Therefore in the survey questionnaire it is useful to identify residents of Horsforth, visitors who are resident elsewhere in Leeds (City Council area), and visitors from outside Leeds.

3.9 Whilst most of our attention in developing this study has focused on users, defined as people who are pedestrians at the study site at some time during the study period (in effect 5 years from the present), it is theoretically possible to investigate non-use value – which is the value that individuals may place on the improvement scheme even if they themselves never use it (Laird, Geurs and Nash, 2009). Motives for non-use values include: altruism (e.g value to friends, relatives and others); bequest (value to future generations); and indirect benefits (e.g. gains to community cohesion or economic stimulus). Anyone who is a resident of York or Horsforth could theoretically place some non-use value on the scheme, as could anyone else with a connection of some kind to the study site. We have considered whether to try to include non-users in the sample, and concluded that:

- it would involve *either* running the whole survey as a random sample household survey – which would probably reduce the efficiency of the survey by involving a large number of people who rarely or never use the street in question and have very low WTP;
- *or* running two different types of survey within the time and resources available, which would reduce the sample size on each – we would not recommend this.

3.10 For this study, therefore, we plan to focus on users' WTP. To summarise, the users will comprise residents and visitors, and the payment vehicle offered will depend on resident/visitor status.

Sampling Method

3.11 We plan to recruit a sample of users on street in the two survey locations, where the following variables will be collected:

- frequency of visit;
- gender;
- age;
- income;
- employment status;
- residency (resident/visitor, and for residents: distance of home postcode from centre);
- purpose of visit;
- duration of visit;
- main mode of access.

3.12 We aim to recruit a sample which matches the relevant population with respect to these variables. Larger sample pedestrian count data will be used to check the proportions where available. Also recruitment of residents will be monitored and compared with the resident population characteristics of each survey location available from census data (e.g. gender (below), age, income, employment status), although the proportions among users and the proportions among residents will not necessarily match exactly due to different rates of use, and the presence of visitors.

Table 3: Resident male & female populations

Site	Male	Female
York		
Number	87,137	93,957
%	48.1%	51.9%
of 200 respondents	96	104
Horsforth		
Number	8,983	9,945
%	47.5%	52.5%
of 200 respondents	95	105

Aggregation

3.13 Once the survey data is analysed, evidence about WTP variation by respondent characteristics will be used as the basis for aggregating to give an estimate of total WTP for the scheme. The corresponding quantity data on user numbers by characteristics will be derived from larger-sample pedestrian counts and local authority data as necessary.

3.14 WTP will be summed over 5 years of payments. Discounting will be applied in line with WebTAG/HMTreasury guidance. The present value of benefits (PVB) which emerges from this can be compared with scheme cost. Benefits to motorised traffic (positive or negative) will typically be a part of the overall VfM calculation too.

4. Survey Design

Approach

4.1 The survey design aims to minimise the biases which can arise in stated preference work, by paying close attention to:

- *realism* – presenting respondents with realistic options they can comprehend and accept, including plausible changes to the city/town/suburb in which they live;
- *strategic bias* – avoiding tempting respondents to 'game' the survey – in particular, any payment mechanism should be plausible, otherwise respondents will assume they will get a free ride;
- *information* – using visualisations to help ensure that respondents are fully and consistently informed about the scenarios they are asked to choose between, and using the introductory stage of the survey to build up respondents' familiarity with: streetscapes & components; their preferences over streetscape designs and attributes; and the relevant payment vehicles.

4.2 The survey includes a small number of very simple questions at the recruitment stage, then the majority of the questions as part of a hall test held at a nearby venue in the city/town/suburb centre concerned. The hall test will comprise:

- introductory information – to introduce respondents to the topic in general and the concepts needed later (for the WTP part);
- prioritisation work – to build respondents' familiarity and allow them the opportunity to exercise their judgement over different townscape attributes and packages of attributes – this stage also generates data that is useful in checking the plausibility of the WTP results;
- WTP experiment – the part of the survey in which the trade-off questions involving money payment are asked.

Recruitment Stage

4.3 Recruitment of respondents will be carried out among pedestrians at the two street locations identified in Section 2:

- York, Micklegate;
- New Road Side, Horsforth.

4.4 A recruitment protocol will be used to on street prior to bringing people to the full SP exercise within the Hall Test.

Hall Test & Questionnaire Development

4.5 questions at the start to harder, more focused questions, including the SP choice questions, then another set of background questions to 'warm-down' at the end. This makes for an efficient use of time in the hall test environment.

4.6 Thus the stages of the hall test are:

1. Introduction
2. Priority questions
3. SP questions
4. Background questions

4.7 The Introduction will include questions about frequency of visits, purpose of trip, where priority questions start to focus on the attributes we want to include in the SP – i.e. to introduce the respondent to the attributes they will be asked to trade off in the next stage, and serve to raise the respondent's awareness of and familiarity with the topic.

4.8 Priority questions ask for feedback on the current level of key attributes. For example, we will ask 'how satisfied are you with the current level of [attribute]?' and then ask the respondent to rate that on a scale that is shown to them.

4.9 Other questions that can be asked at this stage are of the type: 'what attributes are most important to you'?; and 'what attributes are most important to improve'?

4.10 The data arising from priority questions gives some support to the SP results, e.g. if pedestrian priority is the most important issue for an individual, they should have the highest WTP for that issue. Also dissatisfaction with the status quo should be linked to higher WTP (ceteris paribus). This data is useful for 'debugging' the SP.

Attributes and Levels

4.11 The attributes and their levels that would be included in the present study are shown in table below.

Table 4: Attributes and levels in the WTP pilot study design

Attribute	Level 1	Level 2	Level 3	Level 4
Pedestrian Priority	Mixed Traffic	Shared Space	Pedestrian Only	Pedestrians, Cycles & limited motor vehicle access
Level of Activities	Low	High		
Kerbs	Near Level	Raised		
Surfacing	Good Quality Material, Colour Contrast	Good Quality Material, No Colour Contrast	Low Quality Material, Colour Contrast	Low Quality Material, No colour contrast
Lighting Furniture	Normal or Basic	Heritage		
Cost	Range			

4.12 The most important attribute to be varied in the SP questions is called *pedestrian priority*. This can take 4 levels, defined as follows:

i) *mixed traffic* – this is the status quo at both sites, where the roadway is open to all forms of motorised traffic at all times of day, whilst pedestrians have priority on side pavements;

ii) *shared space* – a package which overall reallocates space and priority towards pedestrians without barring any vehicle type – comprising wide useable pavements, near-level surfaces, informal measures or potentially changed rights of way to reduce traffic speed below 20mph, within an attractive streetscape design;

iii) *pedestrians, cycles and limited motor vehicle access* – exclusion of most motor vehicles from the street during daytime, with the exception of blue badge holders (as in other streets in central York, e.g. Davygate);

iv) *pedestrianisation* – this is the complete exclusion of motor vehicles from the street during daytime (per Leeds Briggate and arcades).

4.13 Note that ii), iii) and iv) are all 'townscape improvements' or 'pedestrianisation' of some form, whilst i) is the status quo or comparator. Also that 'pedestrian priority' is a composite attribute.

4.14 A much longer list of detailed attributes of the pedestrian environment can be provided, covering:

- rights of way;
- traffic levels and speeds;
- roadway/pavement levels;
- surfacing materials;
- design (many detailed elements combine);
- width of useable pavement;
- barriers (guard rails);
- clutter;
- signs (for vehicular traffic or pedestrians);
- benches;
- street lighting (for carriageway, or pavements);
- use of pavement space, e.g. tables outside.

4.15 Within the confines of this SP pilot survey, it is not possible to test how WTP responds to all attributes, certainly not all combinations of levels. What this study is designed to do above all is to provide WTP for a credible package of well designed streetscape improvements, hence the focus is on the package versus the status quo.

4.16 In addition, some attributes may be switched in and out to test respondents' sensitivity to variations around that package. We propose to explore sensitivity to:

- near-level surfaces (minimised kerbs – the remaining kerb line provides a guide for all street users as to the difference in rights of way, and is useful for visually impaired people navigating the street) versus traditional deep kerbs;
- surfacing (materials used – high vs low quality, i.e. natural stone per Leeds Briggate vs tarmac or concrete slabs; and contrast – high or low contrast between the pedestrian versus vehicle priority zones in the street)
- quality of lighting stands – heritage vs basic; and
- level of activities – denoted by tables outside on the pavement vs none.

4.17 It is important for the credibility of the questions that each option presented to respondents is a feasible combination of attribute levels, and that the do-minimum fairly reflects the current qualities of the streetscape. This has been carefully considered for each of the two survey locations (Table 5). Thus, for example, Micklegate currently has heritage lighting over the pavements, whilst New Road Side, Horsforth has basic lampposts positioned over the roadway – hence it there is a feasible option to improve Horsforth but not York on that attribute.

Table 5: Feasible combinations of attributes and levels

Pedestrian priority	York	Horsforth	Kerbs		Surfacing				Lighting		Level of Activities	
			Near level	Raised	Material Lo, Contrast Lo	Material Lo, Contrast Hi	Material Hi; Contrast Lo	Material Hi; Contrast Hi	Basic	Heritage	High	Low
Status quo – mixed traffic	✓	✓	×	✓	✓	×	×	×	H✓ Y×	H× Y✓	×	✓
Shared space	✓	✓	✓	×	✓	✓	✓	✓	H✓ Y×	✓	✓	✓
Pedestrians, cyclists & limited motor vehicle access	✓	✓	✓	✓	✓	✓	✓	✓	H✓ Y×	✓	✓	✓
Pedestrianisation	✓	✓	✓	×	✓	✓	✓	✓	H✓ Y×	✓	✓	✓

Payment Vehicle

4.18 For the payment vehicle in the SP questions we have two options: either the option offered by Walker (1997), which is to describe a generic payment vehicle costing (e.g.) £10 a year for 5 years, and to indicate that this might be an increment to council tax if the respondent is a council tax payer, a reduction in benefits, etc; or to focus solely on council tax and hence council tax payers. The latter wastes potential respondents, and we favour the Walker option.

4.19 Walker's questions were:

'If you have supported the proposals for High Street, you will find that the traffic congestion, noise and air pollution you experience today will be much reduced. However, do you value less traffic in the High Street enough to be willing to pay for it? You should know that there will be significant costs to bring the plan in and to police the new restrictions.
(to locals) *This might be financed by a new local tax. The details of the tax are not known yet, but it might be a sales tax, or a surcharge on your Council Tax, or be taken off your wages/grant/benefit.*
(to visitors) *As a visitor you might be charged an entrance fee into the street.*
Whichever way you would definitely have to pay something out of your own pocket. You might say that the amount of tax you would be willing to pay is the value to you of less traffic in the High Street. How much would you be willing to pay?

4.20 We propose the following wording:

(to residents) *This might be financed through local taxation. The details of the tax are not known yet, but it might be a sales tax, or a surcharge on your Council Tax, or a deduction from your wages/grant/benefit.*

4.21 Alongside this, we propose the following wording for visitors:

(to visitors) *The details of how this work would be financed are not known yet, but it might be partly through the cost of access to York city centre/Horsforth New Road Side – probably through public transport fares or parking charges.*

4.22 Based on a review of bid levels and estimated WTP in previous relevant experiments (see the 'Literature Review and Assessment of Approaches' report, Atkins and ITS, 2010) we intend to offer bid levels in the range £1 to £30 per annum for the 'improvement' scenarios, and £0 for the status quo.

SP Experimental Design

4.23 A D-optimal efficient design has been generated using the set of attributes and levels. Though, the main criterion is level balancing a compromise has been made in order to impose certain constraints on the appearance of the levels of different attributes in a choice set, as above.

4.24 The design produced has choice sets that consist of three alternatives; one of them being the status quo. Each respondent would be presented with eight choice sets and asked to choose one of the three alternatives, and then to choose between the remaining two (see example of a choice set in Table 6 below). This design reduces the number of choice sets a respondent has to evaluate (eight versus approximately 16 otherwise) and thereby minimises the fatigue effect. Two separate designs for the two locations have been prepared to suit the local current scenario. On each 'improvement' option in the SP experiment, a randomly generated figure between £1 and £30 per annum will be shown for the payment amount (bid level).

4.25 Table 6 shows an example of the choice set offered to respondents on one SP 'card'. The SP 'cards' themselves will be presented as a set of three images of the streetscape on a colour computer monitor, with some variations between the images. The only words shown (to the right of each streetscape image) will be the payment amount in £ per annum, and the name of the scenario (Option A, etc). There are expected to be 8 cards in total within the SP stage of the questionnaire.

Table 6: Example SP choice set

	Option 1 (Status Quo)	Option 2	Option 3
Pedestrian Priority		Mixed Traffic	Pedestrians, Cycles and Buses Only
Kerb Positioning		Near Level Kerbs	Raised Kerbs
Surfacing		Normal Surface	Contrast Coloured Surface
Lighting Furniture		Normal Lamp posts	Heritage Lamp posts
Level of Static Activities		High Activities eg. Tables Outside	Low Activities eg. No Tables Outside
Amount to be paid for the improvement, per annum	£0	£12	£24
Which option would you choose among the three			
Which option would you choose between the remaining two (excluding your first choice)			

Use of Visualisations

4.26 A key element of SP survey design will be the use of visualisations to describe to the participant how the options could look against the status quo. Quality is therefore important, where elements of continuity between each must be retained, including;

- Weather;
- Land Use (Shops, vacant units etc..)
- Light (Brightness / Contrast), and;
- Angle of view.

4.27 The following figure provides an example of a visualisation for the Horsforth site, where the status quo (to the left) can be compared with an improved urban realm scheme based around the concept of shared space (as defined within DfTs Shared Space Project – Stage 1 Appraisal of Shared Space report (2009)).

Figure 8: Example Visualisation

5. Piloting

5.1 The survey design will be piloted with staff and students at the University of Leeds and Atkins who are familiar with the two study locations before implementation. This is planned for week commencing 8th March.

5.2 Feedback from the pilot programme will be used to tighten both the wording, sequence and overall delivery of the questions, along with the range and quality of visualisations developed for the study.

5.3 It is also important that The Department feed back into the survey programme development in order to ensure that the locations, survey dates, questionnaire and other elements fit within the objectives of the study.

6. Survey Delivery

6.1 Staff placed on-site at each chosen location will recruit potential respondents, and carry out a short questionnaire in-situ to determine applicability in terms of the sampling strategy. If suitable, respondents will be led to a nearby indoor venue from where the survey will be administered electronically.

6.2 It is important that the venue is appropriate to the delivery of the questionnaire, and therefore a local town-hall has been chosen in both cases. This can be found within a two minute walk from each location, assisting with recruitment of individuals.

6.3 For each survey response, a £5 incentive will be given.

Survey Dates

6.4 Surveys are planned to be undertaken at both chosen locations back-to-back in the week commencing Monday 15th March 2010. It is proposed that two days of surveying takes place at each location in order to capture the agreed sample size of 200 respondents per location, with a third day (being Saturday 20th March 2010) retained as contingency. This also provides the opportunity to increase the sample of non-residents if required.

6.5 Permissions for the confirmed dates below have been discussed with York and Leeds City Council respectively.

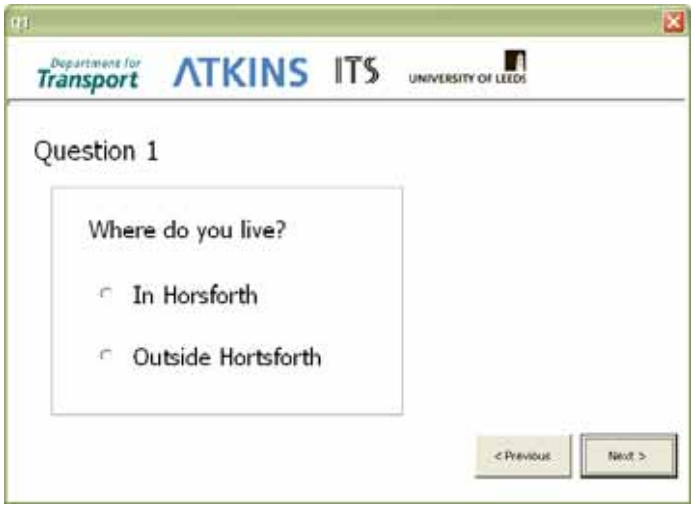
- York – Thursday 18th and Friday 19th March, and;
- Horsforth – Tuesday 16th and Wednesday 17th March.

Resourcing

6.6 The coordination of the event and the Hall test will be undertaken by the study management team. Two survey specialists will also be on-site to recruit potential respondents, and ensure sampling strategy is implemented and monitored throughout the survey duration.

6.7 The survey programme will be delivered both electronically and by paper, where the hall test will utilise a range of electronic input forms to ensure both reliability of results and consistency of delivery. Paper resources are required for on-street recruitment in line with the survey specification.

Figure 9: Example Electronic Question



Quality Assurance

6.8 The computerised survey delivery will ensure consistent approach to each and every survey undertaken.

6.9 On site support, if requested by respondents, will be available from Atkins' pedestrian movement and public realm specialists. Leeds ITS staff will support delivery by attending on the first day of implementation to check that the survey is carried out according to the specification .