People and Place: capturing the range of impacts relevant for transport policy

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1. Introduction

1.1. In June 2018, the Department for Transport (DfT) published a consultation on priorities for a new strategy to develop transport modelling and appraisal. As part of the consultation process, a number of workshops were organised around some of the themes identified in the consultation. This document reports on the workshop on the "People and place: capturing the range of impacts relevant for transport policy" theme.

1.2. The objective was to gather views on priorities for expanding the WebTAG guidance regarding three sub-themes:

- Healthy people and places
- Journey improvements
- Location attractiveness

1.3. The workshop was held in London on 27 September 2018 and was chaired by Prof. Peter Jones of UCL (University College London). Participants represented a range of stakeholder organisations with particular interest and/or expertise in the theme of people and places in the context of transport appraisal, including universities, consultant and local and national governmental institutions. The attendees were as follows: Iven Stead (DfT), John Nellthorp (ITS Leeds), Gerard de Jong (ITS Leeds), James Laird (Peak Economics), Tom Worsley (ITS Leeds), John Swanson (SDG), Terry O’Neill (Temple Group), Colin Smith (DEFRA), Ryan Taylor (TfL), Tom Millard (PJA), Like Jiang (ITS Leeds), Andrea Barry (TfN), Bruce McVean (City of London), Lucy Saunders (TfL), Paulo Anciaes (UCL), Andy Cope (Sustrans), Bianca Letti (NIC), Matthew Dillon (ARUP), Manuel Ojeda Cabral (ITS Leeds), Bridget Fox (CBT), David Metz (UCL), Paul Cobain (TfWM), Pedro Abrantes (HE), Rhys Wheeler (HE), David Simmonds (DSC), Henry Kelly (DfT), Jack Snape (TfN), and Ian Raymond (Merseytravel).

2. Format of the workshop

2.1. The workshop started with three motivation presentations, from John Nellthorp, Gerard de Jong, and James Laird, introducing the sub-themes of healthy people and places,
journey improvements, and location attractiveness, respectively, describing the scope of these sub-themes (i.e. what are the relevant transport impacts and whether they are already covered in WebTAG) and the state of research on methods to assess them.

2.2. The chair then asked the practitioners in the room about their opinion on the methods for transport appraisal in use in their organisations, and if they adequately cover impacts on people and places. The objective was to gather views on the state of practice in this field.

2.3. The workshop was then split into three breakout groups to discuss the three sub-themes separately. The group discussions were facilitated by Peter Jones (healthy people and places), Tom Worsley (journey improvements), and John Swanson (location attractiveness). There were two sessions in each group, to discuss the following two questions in related to each of the three sub-themes:

- Priorities – which transport impacts should be added to appraisal guidance and which impacts already covered in guidance require better methods of modelling and appraisal?
- Practicalities - what are the major problems in improving the guidance on those impacts?

2.4. This note summarises the main points made by the workshop participants and the areas of agreement and disagreement on the four aspects described above, i.e. state of research, state of practice, priorities for the future, and practicalities.

3. Healthy people and places

3.1. State of research

3.1.1. The motivation presentation on ‘healthy people and places’ impacts stressed that most of these impacts are related to pedestrian movement and can be split into two main groups:

- Negative impacts caused by motorised traffic (e.g. exposure to noise and air pollution, accidents, and delays)
- Positive or negative impacts caused by urban design (e.g. ease of movement along and across the street, navigability, street environment, and availability of places to stop).

3.1.2. The speaker also presented recent developments in methods to estimate the economic value of interventions such as the reduction in community severance caused by busy roads and improvements in the urban realm.

3.1.3. Areas where knowledge is still insufficient include:

- Exposure to noise for individuals in their workplaces or using the streets
- Morbidity aspects of inactive travel
- Users’ satisfaction with street quality
- Stress caused by accident risk (which is an impact different from accidents per se)
3.1.4. Given the interrelationship between several “people and places” aspects, the speaker believed that WebTAG could adopt a more holistic “public health perspective”, covering impacts such as noise, air pollution and active modes.

3.1.5. The speaker also identified both a gap in the evidence base and a lack of practical tools for forecasting demand for active modes to support economic valuation. The ‘propensity to cycle’ toolkit has been very successful, so a similar tool could be created to estimate propensity to walk.

3.1.6. The speaker talked in some detail about the strengths and limitations of commonly used methods such as stated preference methods and hedonic pricing and suggested that given the nature of some of the impacts on healthy people and places, approaches based on concepts such as life satisfaction and subjective wellbeing could be a viable alternative to cover the shortcomings of existing methods.

3.2. State of practice

3.2.1. Among the practitioners in the room, there was a consensus that health impacts are already reasonably well captured but there was interest in their organisations for widening the scope of the impacts included in appraisal, with participants suggesting aspects such as morbidity, long-term effects, mental health, and benefits of using green space.

3.2.2. Practitioners generally supported the idea that transport appraisal should go beyond aspects of movement (of people and goods), and consider also the impacts of transport schemes on public places (including streets and areas surrounding stations). It was felt that despite some recent developments, the values of good-quality places and of improvements in the urban realm are still not well captured in transport appraisal.

3.2.3. Several participants mentioned biases in current practice, such as:

- Estimating benefits of active travel but not the costs of inactive travel
- Deriving values based on what individuals want (usually expressed through stated preference surveys), rather than on what individuals and society need
- Methods tailored to the assessment of large projects, and not always applicable to smaller interventions
- Detailed guidance for assessing health impacts in urban areas but relatively little information for the case of non-urban areas.

3.3. Priorities

3.3.1. The group discussions on the ‘healthy people and places’ sub-theme identified two main gaps in existing methods:

- Some impacts already have a solid framework of analysis and a considerable evidence base, but the framework needs to be expanded and the evidence base needs to be fully exploited in order to be applicable in practice.
• There are impacts that call for more than a simple change in perspective, and require whole new concepts and appraisal methods, because there is no consensual definition of what the impacts are, and poor knowledge about how to quantify and value them (and whether this is possible or desirable).

3.3.2. One example of impacts that already have a solid conceptual and empirical base which nevertheless requires further development is transport-related noise. The standard approach is the measurement of the negative impacts of noise on health. But several participants felt that this is not the only relevant impact of noise. Participants mentioned several additional impacts that could be considered, and for which there is almost no evidence, such as how transport prevents people from enjoying the positive elements of “soundscapes”, including the sounds of nature, children playing, or neighbours chatting.

In addition, appraisals tend to consider only the impacts on residents in areas surrounding noisy transport infrastructure, neglecting the impacts on other people using the area (e.g. workers, tourists), and focus on impacts of people at home, not walking or using public spaces. There is also a need to look beyond noise levels, and consider perceptions about those levels.

3.3.3. Another area with a solid conceptual and empirical base which could nevertheless benefit from further development is the assessment of impacts on physical activity, which was felt by some participants to suffer from a similarly partial point of view as the assessment of noise. Current appraisal methods are designed to capture the active travel benefits of interventions that improve conditions for non-motorised modes (e.g. walking, cycling), and not the costs of reduced physical activity caused by interventions that improve the circulation of motor vehicles in detriment of non-motorised modes. It was felt that more research is needed on how transport schemes affect the use of different modes of transport, and the consequences on the individuals’ physical activity levels. Participants also mentioned that there is some academic literature on the associations between physical activity and subjective wellbeing, but few practical methods to address these associations in the context of appraisals of specific transport interventions.

3.3.4. One area that requires whole new concepts and methods is the assessment of the value of “place”. It was felt that WebTAG and other transport appraisal frameworks rely on a concept of transport as movement and are not well suited to assess the uses of transport infrastructure (e.g. streets, stations) as places where people spend time. So there is a need to have a better understanding on the impact of transport schemes on public spaces and then on how people perceive those places and how that affects their wellbeing.

3.3.5. A related aspect is how the quality of places, as perceived by their users, is affected by what one participant called “traffic dominance”, meaning the psychological and social impact of the presence of motorised vehicles in streets and other public places, over and above the problems caused by collision risk, noise, air pollution, and community severance. The participant mentioned that the type of vehicles that may use the roads in the future (‘smart’ and environmentally efficient) may solve all these problems, but they
will still have an impact on people using the surrounding spaces just by being “metal structures moving around” on the streets.

3.3.6. It was also noted that increasing the focus of transport appraisal on people, either by expanding existing knowledge or creating new concepts and methods implies giving more attention to equity issues. It was felt that current appraisal frameworks are designed in order to give priority to either the groups that benefit or the groups that are negatively affected by a given intervention. A more balanced perspective is needed.

3.4. Practicalities

3.4.1. One of the implications of extending or reformulating WebTAG to address the aspects identified in the previous discussion is the need for more complex modelling than what is routinely done now.

3.4.2. For example, one participant mentioned that the assessment of how people are exposed to noise in different modes of transport at different times of day requires a rigorous assessment of the mobility patterns of the population. Similarly, another participant noted that to derive a more comprehensive assessment of the impact of transport schemes on physical activity, enhanced methods are needed to forecast the individuals’ levels of physical activity during a period (e.g. a whole day or week), rather than on a trip basis, taking into account the modes of transport used during that period.

3.4.3. The assessment of the value of good-quality places is also dependent on the development of more sophisticated methods to estimate and forecast how many people use a place and the impact on their quality of life.

3.4.4. The point made by the speaker in the motivation presentation was further developed in the group discussion. It was generally agreed that the assessment of the more subjective aspects of health and wellbeing requires methods that go beyond stated or revealed preferences.

3.4.5. There was also some discussion on the practicalities of attending to equity issues in the appraisal of healthy people and places. A theme that emerged was the need to give more attention to spatial aspects. Participants mentioned aspects such as:

- A better delimitation of the area affected by the interventions
- Network effects of interventions in one area on surrounding areas
- Imbalances between geographic areas having the positive and negative impacts.

According to one participant, improving methods to assess equity within appraisal is important but is not enough: equity considerations need to be brought forward in the planning process, at the strategic level, and as an element informing option generation.

3.4.6. There was also a consensus that the development and application of new or improved methods that are more complex and have a wider scope than the ones currently in use would be more successful if it was the result of inter-department and interdisciplinary
efforts. For example, one participant noted that approaches used by DEFRA to assess the benefits of green space are highly relevant for the study of the benefits of public spaces in cities.

4. **Journey improvements**

4.1. **State of research**

4.1.1. The motivation presentation on journey improvements stressed that the value of travel time is very important for appraisal - more than for modelling and forecasting. However, there is an increased recognition that travel time has both a negative and a positive component. The positive component has become relevant due to the growing number of IT-driven opportunities for productive uses of travel time. The speaker thought that this moves the policy debate from reducing travel time to travel time efficiency (which can be increased, for example, by investments in Wi-Fi on trains).

4.1.2. The speaker also discussed the suitability of the methods currently in use to estimate the value of travel time. It was noted that the values that are obtained by stated preference methods are probably the difference between the values of the positive and negative components of travel time. However, there is still insufficient knowledge on how to disentangle those two components. The speaker suggested one solution could be to include the positive component of travel time as a separate element in cost-benefit analysis, requiring bespoke surveys to estimate its value.

4.1.3. Considering the value of both positive and negative components of travel time also creates a dilemma, as the higher potential for using travel time in public transport trips could be seen as implying a lower priority to investments that improve travel speeds of public transport, compared with those that improve speeds of private vehicles.

4.1.4. The chair of the workshop agreed that these are pertinent questions and that it is important for appraisal guidance to be clear that what is usually called “value of time” is in fact the “value of travel time savings”.

4.1.5. The speaker also mentioned methods to value improvements in freight transport and stated that the current cost-saving approaches are appropriate. However, more stated preference evidence is needed to value the reliability of freight transport.

4.2. **State of practice**

4.2.1. The general opinion among practitioners was that advances have been made in the assessment of journey improvements, although there was some disagreement on whether current methods are already good enough. For example, several participants mentioned that their organisations already include journey quality in appraisal, most commonly by using multipliers of travel time to account for crowding in public transport. However, one participant thought that these multipliers could be refined.
4.2.2. Reliability is also in some cases already accounted for in transport appraisal. For example, two participants mentioned that their organisations have simple lookup tools to value disruption. But there was some disagreement regarding the potential for using sophisticated models to capture reliability. One participant mentioned that reliability could be captured by modelling the probability of having ‘bad days’ (i.e. delays, overcrowding, or mass trip cancellations). In contrast, another participant noted that models tend to perform poorly in forecasting extreme peaks and troughs in transport demand.

4.2.3. A common theme in the discussion was that a broader perspective of reliability is needed, encompassing the resilience of the transport system in face of unexpected events affecting travel demand or supply.

4.3. Priorities

4.3.1. Participants agreed that, despite the developments in the opportunities for productive or enjoyable uses of travel time, travel time savings are still an important impact of transport interventions, and should be object of appraisal. The main question is whether it is more desirable to save travel time in “bad” (i.e. economically, socially, or environmentally unsustainable) transport modes or to improve the conditions under which people travel in “good” transport modes.

4.3.2. There was general support of the idea that journey improvement is more than simply shorter or longer travel times. Travel time reliability is as important as travel time itself. One participant mentioned the importance for passengers of having a “consistent experience” of travel time. Most participants agreed that there is still a limited understanding of the causes and effects of travel time reliability and how policy interventions can improve it, especially in the case of road transport.

4.3.3. Most participants supported the view that the values of time used in appraisal should be modified based on aspects of journey quality such as comfort and convenience. However, it was felt that the evidence base on these aspects is still relatively small. For example, more research is needed on crowding in public transport, something that is not easily captured in travel demand models. One participant mentioned that bus crowding is a particular evidence gap.

4.3.4. There are also many gaps on the wider impacts of improvements (or deteriorations) in journey quality. One example is safety, which is currently appraised in terms of the personal and property costs of accidents. Several participants thought that the long-term effects of stress and trauma caused by accidents are not well captured. One participant mentioned that WebTAG already recommends values for trauma of experiencing a rail accident (taken from Rail Safety and Standards Board guidance) and another that WebTAG recommends values for human costs, described in the guidance documents as “pain, grief, and suffering” – although both participants agreed that more research is needed to derive more robust valuations.
It is also important to look at the social and behavioural aspects of accidents involving pedestrians and cyclists. For example, accidents may have an impact on travel demand. One participant pointed out that witnessing or learning about accidents involving cyclists may lead some people to make fewer trips by bicycle. However, there is little empirical evidence on these aspects, and no established methods to account for them in appraisal.

4.3.5. There was also a consensus that freight transport is a relatively neglected topic in transport appraisal. Some participants stressed that given rapid changes in patterns of production and consumption, transport planners need to understand how freight transport uses the road infrastructure and how new infrastructure, improvements in the management and operation of that infrastructure, and regulations, benefit not only the freight industry but also the whole community, through the impacts on producers and consumers. It was also mentioned that reliability is key for freight operators.

4.4. Practicalities

4.4.1. In the discussion on the practicalities of improving the appraisal of journey improvements there was some consensus around the idea that the main issues related to the application of values of travel time are not methodological but empirical and presentational. Empirical because values derived in a particular geographic area at a particular time do not always transfer well to other contexts. Presentational because it was felt that WebTAG does not explain clearly what “value of travel time” means and what it measures.

4.4.2. Potential methodological issues were acknowledged, including:

- Accurately forecasting uses of travel time. This issue could be solved by building an evidence base on how people use travel time in different modes under different conditions
- Isolate the opportunity cost of travel time from the value of productive/enjoyable travel time uses.
- Double counting journey quality benefits as other types of benefits (for example, safety, personal security, or reduction of noise).

4.4.3. Participants also commented on the use of multipliers of travel time to represent different aspects of journey quality in different modes of passenger transport:

- There was some support for updating the multipliers recommended by the Passenger Demand Forecasting Handbook for the value of travel time spent in crowded conditions for rail trips.
- There was also some discussion on the scope for deriving multipliers for car trips by modelling the value of driving in roads with different levels of congestion – and if the necessary research effort is justifiable.
- It was also noted that there are currently no recommended multipliers for bus trips.

4.4.4. It was generally recognized that improving the appraisal of journey improvements requires more complex modelling and appraisal methods, especially to capture the wider
impacts of those improvements – some of them may occur only in the medium or long term.

4.4.5. Freight transport is a particularly complex area. It was recommended that appraisals should consider not only the preferences of freight operators but also the impacts on the sender and recipient, other road users, and other stakeholders. One participant mentioned that it is also important to consider how other policies, such as clean air zones, impact on freight transport, and suggested that in some cases, policies that directly or indirectly restrict freight transport may be beneficial for society.

In practice, the development and application of more sophisticated methods for appraising freight transport is challenging. One participant identified three major hurdles to overcome: data collection, forecasting, and economic valuation. Another participant suggested that, due to the complexity of the topic, the production of appraisal guidance on the quality of freight transport requires very specialist expertise.

4.4.6. There was also some support for an increase in the scope of the aspects covered in the appraisal of passenger transport. For example, it was suggested that the impacts of improvements in travel time and journey quality could be assessed not only for current users but also for non-users.

4.4.7. It was also mentioned that there is a wide potential for different types of journey improvements in the future, due to advances in travel modes and information technologies. The assessment of these improvements would therefore benefit from better methods for generating the options that are included in the appraisal.

5. Location attractiveness

5.1. State of research

5.1.1. The motivation presentation on the ‘location attractiveness’ sub-theme explained that transport has potential impacts on the character of the locations it serves. This is because the changes in the transport options available in one location, and the associated changes in the total number of trips starting or ending in that location, often lead to changes in land use and in the attractiveness of the location for people and businesses, materialized in the number and diversity of the opportunities, facilities, goods, and services available in that location.

5.1.2. The speaker mentioned some examples of the use of linked transport-land use models and methods to capture the benefits from increased attractiveness of trip destinations. However, it was felt that this area is still fairly thinly researched and has been dormant for some time – it is much less established than the “healthy people and places” and the “journey improvement” areas.
5.1.3. The speaker also thought that the ‘rule of a half’ as an approximation of the value of new trips does not capture the positive and negative spill-overs of transport investment in the origins and destinations of those trips.

5.1.4. One workshop participant remarked that there is now very clear evidence that investments in transport tend to ‘buy’ accessibility, not travel time savings, as individuals use improved transport to travel to further places. This means that land use is a key component in the appraisal of transport schemes.

5.2. State of practice

5.2.1. The opinion of practitioners was that WebTAG is not up-to-date in regards to the measurement of the benefits associated with trip generation and suppression, as guidance does not consider current trends towards different commuting, shopping, and leisure patterns (for example, flexible working and work/shopping from home). In some cases, suppressing a trip generates a benefit – something that current guidance does not acknowledge.

5.2.2. It was commented that the lack of solid WebTAG guidance on the impacts of transport on land use results in reluctance to consider these impacts. However, some participants mentioned examples of the use of transport-land use models in their organisations. Nevertheless, it was felt that the current practice of trialling different approaches in parallel in different organisations is inefficient, so a convergence in methods would be welcome.

5.2.3. The general opinion was that it is important to capture the value of transport on land use, and that means widening the scope of current approaches, as these approaches have the following biases identified by participants:

- They consider the impact of transport on land use but seldom the feedback effects of land use on transport (for example, how land use changes affects transport revenues).
- They are more suitable to assess residential location than business location.

5.2.4. Some participants felt there was some confusion about the indicators of the benefits of increased location attractiveness, as some government departments use land value uplifts and others use logsums (which are based on demand models).

5.3. Priorities

5.3.1. In the group discussion on priorities regarding the location attractiveness sub-theme there was widespread consensus that the rule of a half is a poor measure of the value of new trips.

5.3.2. It was also felt that there is a lack of solid evidence on the multiple interactions between the transport system and patterns of land use and incomplete guidance on how to assess these interactions - transport and land use are mostly treated separately in WebTAG.
There is a need for more suitable approaches to integrate transport and land use and appraise packages of changes involving both.

5.3.3. Participants also alerted for the fact that it is not enough to capture the benefits for locations. It is also necessary to show that projects have an impact on people living or using those locations, such as for example:

- Local economic growth and what one participant called “thriving communities”.
- Social aspects such as reduction of structural unemployment. It was felt that these impacts could be better estimated. One participant mentioned that the valuations used by the Department for Work and Pensions could be applied in this context.

5.3.4. Several relevant distributional aspects were also mentioned:

- Appraisal is usually limited to the assessment of how projects generate benefits at trip destinations. However, the same projects may lead to costs at trip origins. This is for example the case when improved transport leads people to stop doing an activity (e.g. shopping) in their local area and start doing it in another area.
- The additional economic activity generated by transport in one area may be displaced from another area. However, it was noted that is not necessarily a zero-sum game.
- Projects that disproportionally increase jobs in deprived areas may be more desirable that projects with a more equal distribution of generated jobs.

5.3.5. More generally, attending to the relationships between transport and land use requires judging the extent to which the anticipated impacts of projects are aligned both with their economic and strategic cases. Participants agreed that economic case narratives (which tend to focus on journey time savings) can differ from strategic case narratives (which discuss changes in jobs and housing). It was mentioned that disconnecting the strategic and economic cases contributes to a perception of “rigidity” in WebTAG. Some participants thought that WebTAG could be slightly modified to address this, but others thought that a wholly different approach is needed to appraise major transformational schemes. This approach could focus on benefits from land use changes, rather than on travel time savings.

5.4. Practicalities

5.4.1. In the discussion about practicalities, there was a lack of consensus about the most suitable indicator to measure location attractiveness. Some participants noted that trip generation and attraction, or house price value changes, can be proxies for location attractiveness. Others suggested that it is also necessary to considering how people perceive the increased attractiveness (for example, in terms of accessibility and quality of housing and local environment).

5.4.2. There was also a discussion about the risk of double counting (for example, the benefits of location attractiveness and economic agglomeration). It was suggested that the scope of analysis and the risk of double counting could be clarified in advance, in guidance documents.
5.4.3. There was a general recognition that measuring the impact of transport on land use changes is very complex, as it requires capturing multiple cause-effect relationships at different time scales and isolating the effect of transport schemes from other factors affecting land use.

5.4.4. It was also pointed out that transport interventions can lead to a relatively quick change in transport modes used by individuals, but not to changes in decisions to change residence and job location. It may take up to 20 years for the full impacts of transport on land use to appear.

5.4.5. This time-lag effect is a problem, as there is a lack of data to show transformational and behavioural impacts resulting from transport schemes over time. Some of this data would need to be gathered before suggesting any major changes to WebTAG.

5.4.6. A related issue is the commercial sensitivity surrounding data. A good proportion of relevant data is generated by private companies, especially land developers. The information in the Passenger Demand Forecasting Handbook is also protected. Some participants believed that opening up data and commercial models could produce better outcomes for all. There was also a suggestion for DfT to adopt a data access model akin to the one of Ordnance Survey, where data is accessible, with conditions.

5.4.7. There was also disagreement on whether the additional benefits captured are big enough (or the current evidence base small enough) to justify the extra effort put in developing (and then applying) new methods to capture those benefits. Some participants felt that the existing methods are sufficient to derive a broad estimate of the impacts of transport and land use. Others felt that better methods are needed, because the potential benefits of changes in land use are substantial, as transport can have a large impact on where people live and work.

5.4.8. Participants also mentioned several possible solutions to reduce the effort in assessing the relationships between transport and land use:

- Use simple models, at least at the stage of drafting the strategic case for schemes.
- Re-use existing models, because a large part of the country has already been modelled.
- Use versatile models, which can have scheme-specific components within an underlying unified base.
- Use new types data sources, which allow for faster and cheaper modelling.
- Use results of evaluation studies – however, it was noted that models are still needed to assess counterfactuals (i.e. the “do nothing” alternative).

5.4.9. There was also support for cross-department cooperation and joined-up efforts across sectors, for example, with the housing, environment, and labour market sectors. It was suggested that the work done in the field of spatial economics (for example, spatial models that take into account transport costs) could provide interesting insights on methods for appraising transformational schemes, but there was also scepticism about this among some participants.
5.4.10. One participant mentioned that the problems regarding multiple parallel efforts in different organisations, discussed in a previous section, could be reduced if DfT could specify performance criteria to benchmark models. However, not all participants agreed with this and the idea of the ‘rigidity’ of WebTAG re-emerged. Some participants believed that WebTAG “sets the floor” but also inhibits further development of appraisal and contributes to a compliance culture.

5.4.11. Participants agreed that learning from international experience is also important although there was disagreement on the relative merits of WebTAG when compared with similar guidance in other countries. Differences in decision-making processes also complicate any comparisons. It was also commented that the majority of the literature on transport and land use is US-based. Some participants questioned the suitability of applying this to the UK.

6. **Overarching issues**

6.1. Before closing the workshop, the chair made a summary of common issues identified in the separate group discussions. This was followed by a final plenary discussion reflecting on these issues and on the implications of addressing them. This section of the report combines the ideas discussed in this final session with conclusions derived from the sections described above.

6.2. An overarching issue across the discussions on the three sub-themes was that current appraisal methods to assess people and places often look only at “one side of the coin”: either the positive or the negative impacts of transport schemes. For example, appraisal tends to looks at:

- The negative impacts of noise – and not the positive impacts of “soundscapes”
- The benefits of active travel – and not the costs of inactivity
- The cost of opportunity of travel time – and not the benefits of productive or enjoyable travel time
- The benefits at trip destinations – but not the costs at trip origins and at alternative destinations

6.3. Capturing some of the impacts on people and places also requires going beyond current appraisal paradigms and developing new concepts and methods, in order to capture aspects such as:

- The value of “place”
- Benefits of travel time use
- Benefits of trip suppression (due to working/shopping from home)

6.4. Widening the scope of appraisal to include impacts on people and places increases the risk of double counting and calls for new approaches to isolate the value of the activities that people do in places or while travelling from the value of being exposed to the surrounding physical environment when doing those activities.
6.5. An issue that emerged in all discussions was that the distributional impacts related to people and places currently do not get the attention they deserve. These impacts have two dimensions: a social dimension (i.e. imbalance in the distribution of positive and negative across social groups) and a spatial dimension (i.e. positive impacts that imply negative impacts elsewhere).

6.6. Another conclusion is that moving forward requires more complex methods, both to start estimating the wider indirect impacts of transport interventions and to assess the direct impacts in more detail than it is currently done.

6.7. Overall, the major disagreement point among workshop participants was about the pragmatics of using complex methods. Is it realistically possible to identify all the multiple cause-effect relationships between transport, health, environment, and land use? And if yes, are the additional benefits and costs captured with the new methods big enough to justify the extra modelling effort?

6.8. Discussions on the topic of complexity lead in several instances to discussion about more fundamental issues on transport appraisal guidance, namely whether the best approach is the incremental improvement of WebTAG, or if there is a case for a completely new style of transport appraisal guidance. This was also evident in discussions in two of the groups (healthy people and places and location attractiveness), where some participants raised the question of whether transport appraisal should focus on schemes or on policies.

6.9. There was consensus that enhancing WebTAG and adding complexity requires joined-up efforts. For some participants this meant simply the harmonisation of methods used by different transport policy-makers. Other participants suggested that this is not enough, and more bridges should be built within and between the public and private sectors, which could be achieved for example, by opening-up data and software.

6.10. Some participants were optimistic that the increased availability of “big data” allows for more robust revealed preference analyses to value the direct and indirect impacts of transport schemes. However, this optimism should be tempered with (at least) two concerns. The first is that to address impacts on people and places, methods based on preferences need to be balanced with methods focusing on subjective wellbeing and life satisfaction. The second is that the success of modelling and appraisal methods is dependent on improvements in methods for option generation - the stage that one participant identified as the most neglected in transport decision-making.

6.11. Improving WebTAG also requires learning from experience, i.e. putting more effort on the evaluation of transport projects, to derive a richer understanding of their impacts, which can be used to inform appraisal. There is a need to only to produce more evidence but also to build a database bringing together evidence that already exists but is scattered.

6.12. Because impacts on people and places have wider consequences, there is also a need to learn (and use) work done in other governmental departments and other sectors, such as environment, health, housing, and labour markets. This could be fruitful to assess policies that affect all these sectors, such as urban regeneration.