

Letter from:
Local Government Technical Advisers Group (LGTAG)
Transport Planning Society
Chartered Institution of Highways and Transportation
Royal Town Planning Institute

Letter and supporting Position Paper to:

Stephen Fidler ([REDACTED]@dft.gov.uk) Director DfT Local Schemes

Tom Aldred (c/o GreenBookReviewInbox@hmtreasury.gov.uk)

With Appendices from LGTAG, CIHT, TPS and RTPI

June 2020

Dear Stephen Fidler and Tom Aldred

Delivering changes to Transport scheme assessment methodology

The challenges in using the current system for transport appraisal are well documented. Overall, it is failing to ensure that funding is allocated to the schemes which would achieve the Government's and our key objectives in particular addressing climate change including decarbonising transport, supporting a better regional balance, and improving health.

At this time of profound change there is widespread agreement that we need to move on, and urgently, rather than continue to support and in effect "require" car-dependant development. The key forecasts and assumptions we have used are no longer valid in the past and now in the post-COVID world: we need to make sure that money goes to the projects which will best achieve society's overall objectives. Indeed Covid 19 has revealed some of the future characteristics that people might prefer: cleaner, quieter, safer environments, a sense of neighbourliness with local access to facilities.

In brief, the current appraisal system is based on translating a scheme's impacts into money values through the DfT's traditional version of social cost benefit analysis. It then summarises the value for money of a transport scheme or package in one number – the BCR (Benefit to Cost Ratio). The BCR has dominated decision making, but is only based on a limited number of artificially and inconsistently generated money values. For example, only one dominates most decisions – driver time savings especially for peak hours. In any case most of these disappear within a year or two and should not be the basis of any judgement. This has meant that a scheme improving public realm and prioritising walking, cycling or public transport may be rejected because it delays drivers, even if those same drivers would support it. The recent example in Calderdale, where a publicly supported sustainable package had a poor BCR because of predicted delays to cars has shown this only too clearly.

What we need to do is move towards a system where we test the effectiveness of our plans and developments in achieving clear and agreed objectives, rather than a complex process with poorly justified money values and forecasts and based on predictions which claim to know what the situation will be in 60 years. The increasing uncertainty needs to be recognised. The best way to know what the future will be like is to work actively towards creating it. There are various names for such a process: "Vision and Validate" or "Decide and Provide" are two recent examples. The DfT experimented with such methods in the 1990s but stayed with "Predict and Provide" even though there are fundamental flaws in this approach.

In the current Treasury 5 Case model the economic case has become dominant, but it is not a true measure of costs and benefits. The first steps to putting appraisal on the right path would be to take the first of the 5 cases and make it the key to assessing a scheme's value. Thus, any transport intervention would need a new and enhanced Strategic Case assessment. The

focus would be on positively achieving the key local objectives as agreed. Effectively this would create a set of criteria; a first draft would be:

Schemes will proceed to the next stage of appraisal only if they make a significant contribution in both the short and longer term to:

- reducing carbon emissions
- healthy ways of travelling
- safety and security for users and non-users
- improving the local built and natural environment
- creating sustainable patterns of development including housing and local facilities.

Neutral net impact or negligible contributions to the above will not be sufficient to proceed further.

Generating traditional types of benefit for specific users (such as time savings) would not be included in the appraisal at this point.

In addition, schemes will not proceed if they encourage or perpetuate travel behaviour which:

- locks in carbon emissions in the short and medium term
- competes with healthy travel modes such as walking or cycling
- causes danger and severance
- contributes to local environmental damage such as air pollution damages local environments
- depends on planning which locks in unsustainable travel.

This approach needs to be combined with a longer-term review of the methodologies currently in use, including modelling assumptions and valuations. Much of what is done can already be used to support the new approach in a robust and evidence-based way. After the 2018 consultation, DfT recognised many of the changes needed, but progress has been slow.

Deciding what we want to achieve, and working out how get there, is what will produce the right mix of transport policies, programmes and accessible development in the right place. Of course, it should be robustly and carefully designed and appraised, but against our shared objectives, not to comply with a flawed and outdated economic theory. We therefore call on the relevant Government departments to work with us on developing and issuing new transport related appraisal guidance reflecting the above reforms and advising that the use of the BCR as a decision-making tool is not acceptable. In the first instance we would welcome the opportunity to meet with yourselves and discuss this in more detail, with a view to potentially setting up a Task & Finish Group jointly with Government departments to move this forward.

We also attach a Position Paper on Transport Scheme Assessment and Funding giving further details of the issues with the present system and ideas of how we could go forward.

Yours sincerely

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Position Paper on Transport Scheme Assessment and Funding

1. Introduction

1.1 This paper has been prepared by a group of professionals from the Royal Town Planning Institute (RTPI), The Chartered Institution of Highways and Transportation (CIHT), The Transport Planning Society (TPS) and the Local Government Technical Advisers Group (LGTAG); it has also been prepared in consultation with officers from the Local Government Association (LGA).

1.2 All these groups have, for many years, had major concerns about the lack of an overarching national transport policy and strategy framework and the way schemes are appraised. This applies whether the bodies involved are spending their own resources or applying for funding from Central Government. Within the authorship of this paper we have had involvement for over 50 years with strategy and scheme development, modelling, appraisal, cost benefit analysis (particularly), bidding for funds and delivering schemes on the ground and seeing and evaluating real benefits, or otherwise, from such schemes.

1.3 While this work is being carried out in the middle of the Coronavirus pandemic we are aware that the Government are more open to consider possible changes to methods and funding than for some time. A specific stimulus for LGTAG was a short discussion between Mary Farrar of Calderdale Metropolitan Council and Stephen Fidler of DfT on a specific example of how the current system could prevent a locally well supported package with local economic benefits and sustainable travel outcomes. TPS and CIHT have been having similar conversations with DfT.

1.4 We fully recognize that robust methods and reliable data should be used to assess the most appropriate schemes for the appropriate area of the country. They should also give some indication to the Treasury as to the cost effectiveness of spending both within (at least) regions in achieving over-arching objectives in areas such as climate change, regional balance, health and social equity, as well as transport.

1.5 This paper provides some the background on how the present systems of scheme assessment developed, the flaws in the system, our initial thoughts on what we believe is required, and some possible options on a way forward.

2. Background

2.1 Transport Planning as a subject started in earnest in the UK 50-60 years ago largely so that a better understanding could be developed on the need, likely use and value for money for government sponsored transport interventions. A critical aspect of the need for Transport Planning at the time was a recognition that there was likely to be a rapid and continuing increase in demand for road (and indeed aircraft - e.g. the Roskill Commission) traffic and hence traffic congestion and 'wasted' time.

2.2 A key component in this rise in demand for private transport was income, the other was user cost. Once cars were purchased, extra travel was cheap. Ownership was of course income related. Meanwhile fares rose as public transport use declined and this negative cycle became apparent quite quickly. What also became apparent was the impossibility of catering for the predicted demand in almost all of our cities without rebuilding them. Talk began of "managing demand" and thus in the 1970s most urban motorway plans then being developed by Local Highway Authorities across the UK were shelved, not just in London. However, this did not affect inter-urban schemes, despite the pressure this would inevitably put on those same cities and a large number of smaller towns and villages. The national road programme did reduce following the UK Sustainable Development Strategy and the SACTRA report in 1994, the Traffic Reduction Acts, the Integrated Transport Plan of 1998, and the successes of Travel Planning initiatives in the early 2000s, but has since begun to grow again. It is important to note that it is not predicted, or targeted, to solve congestion or environmental impacts.

2.3 Accompanying the earlier forecasts of US levels of car ownership and use, was the development of a system for assessing the value of transport schemes, particularly road and air. This was based on social cost benefit analysis and the idea that all the costs and benefits can be measured and monetised so that the value of a scheme or package of policies can be summarised in one number – the BCR (Benefit to Cost Ratio). The idea of cost benefit analysis was in the first instance well intentioned (if somewhat theoretical). The aim was to provide a rational basis for selecting the best value schemes within a fixed budget for a specific mode. However it was not meant to provide an absolute measure, and certainly not one which would allow cross sector or cross modal comparisons.

2.4 It was also obvious that the costs were not just for construction or maintenance. Transport is perhaps the most extreme example of an activity whose impacts outside its users' experience are far greater than the costs perceived by those users. These third party (external) costs are very wide ranging and include direct impacts like accidents, community severance, landscape, pollution and climate change as well as congestion itself. There are also equally important longer-term impacts such as the location and number of homes, workplaces, shops, hospitals and other places people need to go. What happened was that only some of the costs and benefits could be measured, and only some of those costed. The ones which could be given a £ sign went into the BCR and the ones which couldn't were, in the first instance, largely ignored. This led to criticism from the start, certainly it was a recognised problem by the early 1970s.

2.5 To predict the likely use of any intervention an understanding of people's behaviour in response to a new service or cost changes was critical. Perceived value of time and financial

journey cost were and have consistently been used to model or predict travel changes and to develop new infrastructure. Generally individuals will be willing to pay more for time savings depending on their income/wealth or if they are on 'business' trips. This was particularly evidenced in the choice of air travel.

2.6 Considerable work has been done by Government on quantifying how much individuals valued travel time, however, the figures presently used in transport modelling and assessment do not well represent behaviour for real users of road and rail and there are other factors which affect individual choice and these vary by mode. There is, for example, no account of the fact that small time savings less than a minute are not used or perceived by car users. This has been known since the original research in 1997. Yet they are often a major part of scheme economics. The methods for determining value of time are mixed – stated preference surveys for non-work time but some real world costs for business.

2.7 This reveals another major problem, the whole system is very inconsistent and even more importantly leads to undesirable outcomes. Even the items included in the BCR use an assortment of different techniques to generate a value for them. Accidents differ from air pollution and differ again from climate change. Health is considered in cycle and walking schemes, where they form most of the benefits. However, in road schemes there are no balancing disbenefits from encouraging an inactive lifestyle. The major part of the carbon emissions from road vehicles is assumed as an unalterable “given” and thus not in the BCR at all. Only marginal changes are considered and thus the key problem is nowhere in the assessment.

2.8 Why does this matter? A good example is where schemes which promote active travel and use road space and/or signal timings to favour walking, cycling or bus, or improvements to the public realm, will cause delays to cars and lorries. The time savings are an established part of cost benefit analysis. Public realm is not; benefits to non-motorised users and the environment are negated by these time “losses” either in whole or in part. Yet we know that any time losses (or indeed savings) will essentially vanish in a year or two, absorbed in a wider matrix of choice with totally different values.

2.9 What has happened is that shared aspirations, at local, regional or national level have, because of the absence of a clear strategy, been led by the methodologies described above.. We need to be led by what sort of future we want to create, then find the best way to achieve it. This can be a rigorous process, which was considered in the CIHT Futures report in 2015 and is now well documented in a number of examples, including the transport strategies developed by TfGM and Transport Scotland.

2.10 As a group of professionals, while we would like to ensure that modelling transport demand reflects real behaviour as well as possible, we are more immediately concerned about Social Cost Benefit Analysis as the key determinant of a scheme's value. We share the view that we need to select and properly fund measures which will contribute most to the wellbeing of the public at large. We suggest that the setting of clear objectives, and then considering which options stand the best chance of meeting them, would be preferable. We can use many of the data collection and analysis, and public engagement tools that we already have. Robust tests of cost effectiveness would replace the inconsistent and often counter-productive current system.

2.11 It is also notable that in order to try and justify schemes that are being developed for meeting real needs, LAs have to spend considerable resources to use consultants' experience and imagination to tailor various assumptions to generate the required BCR. In some cases, this is required by arm's length bodies such as LEPs or regional funders - to be consistent with DfT.

2.12 The economic theory that has underpinned the Social Cost Benefit Analysis, that has been carried out for the last 50 years or so, has been overly dominated by the over valuation of travel time. Where other factors are included, such as carbon, they are poorly represented and underrepresented to the detriment of overall decision making.

3. Present problems with scheme assessment

3.1 LGTAG, TPS and CIHT responded to the last consultation on modelling and assessment by the DfT in October 2018 in a remarkably similar vein making the same points in slightly different ways. RTPI did not respond to that consultation but did to a 2016 consultation on wider economic impacts again making some of the same points. LGA officers were contacted during LGTAG's preparation of 2018 response and were supportive of the general thrust but did not consider that they had adequate expertise to add to such a response from a body with one of its main purposes to advise them - LGTAG. RTPI members similarly have much less detail experience of the intricacies of Webtag and particularly CBA than CIHT, LGTAG and TPS but are certainly supportive of the main points raised by the other three professional organisations.

3.2 The three responses are attached as Appendices A, B and C. While, as stated, we all made very similar points in our responses to the consultation, LGTAG and TPS majored on the various problems of the present system of modelling, assessment and funding in Introduction and Summary sections, before answering the detailed questions of the consultation; CIHT made a very telling passage within a very short introduction before answering the consultation questions – *“----there is a widespread feeling among our members that current systems of decision making are not leading to desirable results. Governments have repeatedly declared their intentions to create a healthy society, fight climate change, reduce poverty, strengthen local communities and tackle many other vital issues but the schemes that are eventually built do not reflect those goals.”*

3.3 LGTAG and TPS also put forward the view that the whole predict and provide system, and particularly the excessive weight given to the monetary value of time savings, resulted in the wrong schemes coming forward. LGA are of the same opinion. Associated with this fundamental issue:

- All 4 organisations, and particularly LGTAG as well as the LGA, were and are highly concerned about the costs to the public purse of extensive analysis often requiring expensive and elaborate modelling and consultancy to be able to (artificially) create a favourable benefit/cost ratio.
- All 4 organisations recognised that the whole system of CBA was unintelligible to the public or more importantly the decision makers in Central or Local Government (the politicians) and the last thing any of the organisations wanted was further revision to the system which made it even more complicated.

3.4 While these three points are probably the most important, as can be seen from an in depth reading of Appendices A, B and C, there is a remarkable degree of agreement between the three bodies. RTPI and LGA officers fully support all the identified shortcomings of the present system raised by the other three. LGA staff and LGTAG members are obviously slightly more concerned about delivery of policy and funding choices as it is their direct responsibility.

4. Possible future options

4.1 It is notable that up to date Local Development Plans have been made compulsory for Local Authorities (LAs) and these are subject to extensive consultation and an Examination in

Public (EiP). Local Transport Plans used to be required by Government but are currently not. They are not currently subject to approval by Government where produced nor subject to any inquiry process. It is not unusual for them to be completely separate to the Local Plan. The Better Planning, Better Transport Better Places report published in August 2019 by the CIHT, with support from the RTPi and TPS, recommended that the two plans be integrated and subject to a common inquiry process. This would ensure the effective integration, and hopefully delivery, of better places.

4.2 Perhaps the biggest transport objective is sustainability and reaching a carbon neutral situation as soon as reasonably practical. From this it would seem appropriate that any intervention, or package of interventions, which does not decrease CO₂ significantly should be ruled out at Strategic Case level. An alternative would be to include the cost of all the carbon being produced by the users, whose time savings are being counted as a benefit, as a real cost of the scheme. Similarly for any area already close to pollution limits (including high levels of respiratory illnesses) or above them should have schemes ruled out or have high costs attached if they fail to address those problems. They should not be prioritised over those that do. It should also be noted that background levels in rural areas need pollution reduction to ensure urban areas do not suffer.

4.3 A not dissimilar argument could be applied to modes that might decrease active travel and a parallel approach should be applied, valuing the negative aspects of encouraging and supporting car dependency. It should be noted this is not anti-car. In the long run, the best way to achieve less road congestion is to make journeys which people feel obliged to make by car sufficiently attractive and affordable by sustainable means, and the places they need to travel to sufficiently local to where they live. Local authorities often have policies like these in place. The transport appraisal system too often seems to run counter to these policies.

4.4 It is important that the societal costs of interventions are applied to all transport schemes and strategies in terms of immediate rejection or suitable loading of their negative effects. This was recognised as an issue in the 2008 NATA Refresh, but is often ignored, and is rarely at the heart of any appraisal. Again, many authorities have established and well supported policies in this area and again they are hardly ever represented in appraisal. Such treatment should be applied in the development of a National Transport Strategy as well as local and regional transport or development plans.

4.5 In the development of Plans we recognize there will be a need for some mathematical modelling of behaviour but it is important that as much actual practical evidence is provided to show that the interventions suggested really work as intended on the ground. However any modelling should include scenario testing, recognise the considerable uncertainty in the future, and be accepted as only one small element of the evaluation. The consideration of a range of the available interventions of clearly different types and their effects would be a useful filter for the Treasury to ensure that money is well spent throughout the country.

4.6 As mentioned above, different areas of the country have different priorities and evaluation of the local societal benefits. Mechanisms need to be found to ensure funding and decision making for most Transport interventions (or interventions in other services) are locally or regionally decided. Furthermore, for this to work effectively to deliver long term integrated strategies there is a need for 15-20-year programme linked directly and closely to the Local Plan strategy and included in the Infrastructure Delivery Plan all of which are tested through the EiP.

4.7 Apart from central funding to regions - for the regions or local authorities' desired interventions, local businesses have a role and particularly benefit from transport interventions; business taxes or rates (reviewed on the basis of impact on the area) should

provide at least part of the funding analogous to the Business Improvement District (BID) funding presently available.

5. Concluding comments

5.1 We consider in the decision-making arrangements for developing, assessing, funding and implementing schemes and programmes that any such scheme/programme being developed should:

- a) Be part of a coherent Transport and Planning strategy
- b) Meet the real needs and priorities of the area and its people (but not necessarily individuals)
- c) Contribute to decarbonisation and healthy living
- d) Have as few overheads in preparation/design/justification as is strictly necessary
- e) Be part of a package that is known to deliver the sort of improvements required on the basis of real evidence
- f) Be possible to finance and demonstrated to provide good value for money in terms of meeting the various different objectives for the area.

It is suggested that the following could be part of the new system to replace the present system:

- i. All schemes should be subject to a rigorous planning framework as part of an integrated package similar to the process for Development Plans with at least a 15-year horizon - tested with both models and real world hard evidence. That the plan should be based on agreed forward funding (provided locally or nationally) for five years with funding indications for 10 and 15 years.
- ii. Guidance on assessment would be developed and provided centrally but would be based on nationally agreed objectives on carbon, pollution, sustainable mode hierarchy, local environment, safety, congestion etc. but any assessment would be used in a local context. Such assessment would need to be fully understandable to non-experts and not entail undue overheads.
- iii. The assessment against strategic quality of life objectives would replace the current Strategic Case in the 5-case model and be the overarching gateway to any more detailed analysis. That gateway would have to include “showstoppers” as suggested for WebTAG by the DfT’s own consultants at the time of the NATA Refresh. The key is that they would be respected as such.
- iv. Within this framework, decision making on all schemes should be delegated to the lowest level of government possible so that local people with local knowledge should decide their priorities with appropriate funding. Schemes within the planning framework would be assessed locally by the appropriate authority (Region or Local Transport Authority); any Regional authority would be required to ensure, by representation, that local issues were properly addressed in the Plan and scheme approval.
- v. Testing of the validity of value for money could be performed on a sample of schemes by the Treasury assisted by the DfT and Regional Transport experts.

LGTAG/TPS/CIHT/RTPI 15-6-20

LGTAG RESPONSE ON DFT CONSULTATION:

Appraisal and Modelling Strategy Informing Future Investment Decisions

Moving Britain Ahead

1. Introduction

1.1 The Local Government Technical Advisers Group thanks the Department for the opportunity to comment again on possible changes to evaluation methods of assessing transport schemes. As a professional/technical organisation we represent a large number of local authorities in the country, these include those with highway and transport responsibilities such as Transport for London, London boroughs, Metropolitan authorities and Unitary authorities. Our membership has been well consulted directly and through our Transport Committee and Council and the response is well supported with no dissenting voices on matters of principle or the relative detail in the answers to the consultation questions.

1.2 We raise a number of major issues on the overall system of policy formulation, modelling, appraisal and funding methods for both national and local transport infrastructure development and maintenance. Individual authorities will naturally endeavor to attract funding from any available funding stream announced by Government for their areas even though they often know other schemes or strategies would be more likely to provide greater economic and social benefit to their areas.

1.3 LGTAG would be pleased to meet officials in the DfT dealing with all these issues and also with national politicians if it could be helpful to deliver better transport outcomes for the businesses and people of Britain.

2. Summary/ General

2.1 LGTAG have commented several times in the past on national and strategic policies and programmes to both the DfT and the House of Commons Transport Select Committees;

most of these are available and downloadable from the LGTAG website or are available on request to us. A list of our main points, most of them previously raised, are as summarised below:

1. The country needs a National Policy and Strategy for transport to deliver the needs of businesses and individuals and be supported by all authorities with a locus in planning our future.
2. We should not be adding to our infrastructure (and maintenance requirements) before we can properly maintain our existing assets and systems.
3. Schemes should not be countenanced unless they deliver nationally and locally agreed objectives. This would obviate the need to take a number of schemes forward to appraisal or in many cases even to modelling. Although the Strategic Case is mentioned in Webtag it does not seem that this is often properly addressed before a solution is put forward to meet an improperly assessed problem and then the 'solution' is appraised without a full range of possible interventions considered. There is a need to 'Vision & Validate' rather than 'Predict and Defend'.
4. Systems of evaluation and appraisal should reflect the real needs of the country and local area, be commensurate with the scale of the transport infrastructure involved and be understandable and transparent to the public and decision makers; scheme overheads at national and local level should (therefore) be minimised.
5. LGTAG believes the Appraisal Framework produces generally a helpful way of expressing the advantages and disadvantages of a scheme however the framework needs to be developed or improved to give a less biased assessment than is normally provided by the scheme promoter – this particularly applies to the 'Strategic Case' element of the framework and must represent properly perspectives from local and national viewpoints.
 - It must be recognised that generic or headline need for 'new homes' 'reduced congestion' 'improved air quality' need to be more formally prioritised according to local need.
 - New bypasses that provide short term journey time savings may fail to provide as much benefit as may infrastructure supporting increased homes, better air quality etc.
 - Greater specificity is required as to the primary, secondary and tertiary objectives.
6. LGTAG fully recognise that appropriate modelling or analysis of the use of any new transport facility is necessary to ensure a sensible overall design and hopefully to study if the intervention will address any real problems identified.
7. The linking of a modelled analysis of use of any new facility with an 'economic appraisal' is highly suspect especially for large road schemes. (To explain this comment, it is noted that the economic appraisal is largely based on time savings between a scheme and a 'Do Nothing' or 'Do Minimum'. This is normally a small difference between two very large figures each based on a large number of, sometimes inaccurate or unrepresentative assumptions – e.g. speed flow curves with no limitation of capacity,- - this is mathematically very unsound). It should also be noted that peoples' behavioural response to, for example, a time saving (required in a transport model), is very different from a national resource cost of time in the evaluation of benefits.
8. The calculated 'benefits' (see 7 above) from (Strategic) road schemes are usually mainly from peak hour car traffic and, even after recent alterations, still 30-60 years in

the future. Most policy authorities want to discourage peak hour car traffic (so time savings for this group have little societal value) and the effects 30-60 years in the future are totally unpredictable and meaningless.

9. If the time or accident savings included in the economic assessment of schemes are important in evaluating the best schemes, then there should be a large shift in expenditure from large road and rail schemes towards traffic reduction measures (including parking enforcement), accident remedial schemes, bus lanes, pedestrian improvements, travel planning, subsidies to bus services, traffic signals etc. A number of studies have been carried out over the years clearly demonstrating that large strategic road and rail schemes have substantially less benefits in terms of time and accident savings than single or packages of such smaller scale schemes.
10. Efforts to evaluate health, exercise, environment, air pollution, global warming etc. benefits are to be welcomed but are they really amenable to conversion to monetary values? New priorities on tackling the health related aspects of car dependency demand greater appreciation i.e. air quality impacts on the 40k premature deaths and the cost to the NHS of obesity and Type 2 Diabetes from poor exercise that cycling and walking would address.
11. More effort now seems to be being applied to potential 'real' economic benefits in terms of increased business activities; we have grave doubts about whether these are additive to 'time saving economic benefits'. This issue was discussed in the 1998/9 SACTRA report. Furthermore inter urban transport investment is likely to have much less benefit in such terms than investment within urban areas.

3. Answers to consultation questions

3.1 Bearing in mind the 11 points raised in our section 2 above, we have endeavoured to provide our response to the 13 questions in the consultation as follows:

Priorities:

1 Do you agree that these themes reflect the most pressing priorities for development of our Appraisal and Modelling guidance? If not, what other themes do you think we should be exploring?

As outlined in section 2 above we believe a more fundamental review of overall transport and planning policy objectives is required together with much greater devolution of funding and decision making to local regions, towns and rural areas. Nevertheless we have made some comments on the five themes as below:

- ***People and place: capturing the range of impacts relevant for transport policy-***

Delegating funding and decision making to local regions and urban areas, as mentioned, would ensure that the People and Place are reflected with genuine local knowledge and avoid unnecessary work on what are really local matters. If any background analysis work is needed for local policy and decision makers to consider reflecting best local practice this could be well worthwhile. Any journey experiences need to reflect the most common local journeys and most available modes for all i.e. walking, bus journeys etc. As mentioned in our section 2 we have great concern about the over importance attached to time savings and the value of time. Improving transport reliability demands redundancy and finer networks not more spending on enlarging strategic roads. We recognise the long term potential of increased automation in motoring. However there are far greater and more immediate changes including

dockless and eBikes and in tandem with that the deferral of car buying in cities by those aged under 35.

• *Reflecting uncertainty over the future of travel –*

We agree that there is a high degree of uncertainty regarding future travel patterns, as mentioned above, and that this is due to the interaction of a number of factors. LGTAG has for example noted that initial forecasts regarding the benefits of home working have been overstated, also changes both locational and frequency of grocery shopping are changing travel patterns. Additionally, the decline in HGV traffic coupled with increased use of LGV's may also be related to increased internet shopping where goods are transported to the door by LGV rather than to the High Street in HGV's. We believe that the impacts have been to increase local journeys often adding to congestion. These changes in travel patterns and others including reducing numbers of young people choosing to learn to drive do not seem to be readily predictable and yet have occurred well within the accepted time period of the economic assessment for a project. Nevertheless, we would fully support work to be carried out into uncertainties but these must include the effects and mitigation of global warming.

• *Modelling and appraising transformational investments and housing –*

As mentioned we believe far better returns can be obtained by small scale schemes individually or as part of packages rather than 'Grands Projets'. However we have repeatedly supported the belated attention now being given to rebalancing the economy away from the south-east. Ways to increase the jobs in the regions including the north and reusing previously developed land together with improving the existing housing stock (and adding where required) would reduce the pressure and need for any further 'Expressways' such as the Oxford to Cambridge route and overdevelopment in south-east England.

We are concerned that the impact of facilitating and encouraging greater and ever longer distance commuting by car may be considered a positive outcome. Furthermore, if applied the outcome could be to render the reuse of better located previously developed land less attractive financially. For example the construction of an Expressway opening up previously greenbelt land for housing versus inner town / city regeneration, primarily because transport funding is the only funding available for a solution to a housing problem. However we accept that many rural roads do require improvement in order to reduce accident rates and we also accept that for inner-city regeneration the right transport investment can act as a catalyst.

• *Supporting the application of WebTAG and making it more user friendly*

Anything that can simplify, make more relevant and devolve decision making to the right level, in Webtag or other evaluation methods and guidance would be welcome. Webtag at present is a major drain on resources, creates an excessive overhead expenditure and is often unrepresentative as described in Section 2. LGTAG would be pleased to participate in any systems or discussions to improve the funding and evaluation of schemes with DfT, the Treasury and indeed Ministers, probably in conjunction with the LGA.

• *Developing and maintaining modelling and appraisal tools to meet user needs*

LGTAG fully supports work to improve our understanding of travel behaviour and modelling of transport to cover a full range of transport strategies. We are also aware, from experience, of some of the inevitable inaccuracies in modelling. As explained above it is essential the modelled results, if fed - into 'economic' evaluation and - 'economic assessments', do not become the primary decision making factor.

2 What considerations should inform the scope and priorities of our strategy, particularly over the first 18-24 months? People and Place: capturing the range of impacts relevant to transport policy today

Work by DfT staff to identify what has worked and best practice over a range of schemes would be absolutely invaluable work to improve understanding of the benefits, successes and indeed shortfalls of a range of schemes and types of schemes and packages throughout the country. This should include both capital and revenue schemes and all schemes not just those that may have been assisted with central government funding.

One area we consider could be further investigated is that of resilience, both in the sense of resilience that is built into the project design and also where a project may contribute to wider network resilience.

3 What should be our priorities for improving the appraisal of people and place and why? Please select up to three areas.

The first point to evaluate is the benefits as seen by end customers – businesses and individuals. This should be qualitative as well as quantitative. It is important that benefits and shortcomings are evaluated over short, medium and long term and what might have been done to enhance or change a scheme with hindsight.

Secondarily it is appropriate to evaluate schemes from a ‘professional’ point of view e.g. contribution to CO₂, NO_x pollution, noise, accidents, health, adverse effects elsewhere, etc.

Translating the learning experience from such evaluations into what might work in the future would be the third stage incorporating best guesses as to what the future scenario might include.

LG TAG is however concerned that adding more complexity into the process could increase preparation costs even further and the effect could be to create a “bigger black box” with little appreciation regarding the relationship of the numeric value and the actual outcomes.

4 What should our priorities be for improving our understanding and treatment of uncertainty in modelling and appraisal and why? Please select up to three.

Modelling and Appraisal should be clearly separate as explained in Section 2. For modelling we need a better understanding of individual and group behavioural responses to transport changes and what works to deliver outcomes that are sought. For appraisal we need to understand what people and businesses as a whole value in terms of outcomes rather than being preoccupied with time savings. Uncertainties need to be checked - possibly as scenarios.

However, LG TAG is concerned that whereas identifying uncertainty is essential, understanding the scale for many of the variables would be difficult and as the projection looks further to the future the scope for error must increase. Accordingly, focusing on a limited number of key variables may represent the best option. However, we are unclear how the interaction with optimism bias is to be handled; experience suggests that cost modelling utilising Monte Carlo analysis to quantify risk is beneficial for scheme promoters who are charged with managing the risk in the current funding arrangements.

Regarding transport modelling, simplification would be beneficial and use of alternative data sources could offer savings. In particular, the use of roadside surveys, which are both expensive and disruptive needs to be examined in terms of alternative data sources (such as mobile phones, the data from which needs to be procured by DfT on behalf of all highways authorities)

5 What do you see as the main challenges to adopting a more sophisticated approach to uncertainty in Business Cases and what suggestions do you have for overcoming these?

As mentioned we have grave concerns already about the complexity of the modelling and particularly appraisal methods and the lack of transparency and relevance for decision makers.

We have described above how we believe that delegation of decision making and funding would result in much better value for money from Transport Expenditure.

6 What should our priorities be for improving the modelling and appraisal of transformational investments and housing and why? Please select up to three.

All small schemes and packages are likely to show much better value for money in the traditional sense than 'Grands Projets'. We would particularly draw attention to the earlier analysis of the benefits of Travel Planning and the success of schemes that were implemented under LSTF which included both capital and revenue elements of expenditure.

Location and scale of housing provision is very much a planning matter but it is vitally important that the local infrastructure is provided: particularly walking, cycling and public transport within our (extended) cities and towns. As stated we also consider that rebalancing of the UK economy away from the South East would be helpful in which case large scale additional housing would be less necessary and could be better accommodated in generally well accessed brown field areas.

7 What transformational impacts do you currently find it difficult to represent in a scheme appraisal? What are the barriers to their inclusion and how would you suggest these are overcome whilst maintaining a consistent and robust approach? Supporting the application of WebTAG and making it more user friendly

As stated above a proper analysis of the 'Strategic Case' including properly identifying any problems requiring addressing and agreeing the national and local objectives is the starting point and then an assessment of the best transport schemes to meet the needs. Proper delegation to Regions, Conurbations and local authorities are more likely to identify measures likely to produce transformational schemes fitted to the individual areas of the UK.

Scheme appraisal certainly in the traditional economic pattern is unlikely to be required but modelling of behaviour and travel patterns is essential to test if transformational schemes would have the potential to deliver the required outcomes.

It is notable that in Wales there is the beneficial impact flowing from the Active Travel legislation. Appraisal and investment decision need to consider the way in which England is being left behind.

8 What are the main barriers and challenges to applying WebTAG? How do you think these could be overcome?

Three factors interact to present a barrier to some authorities and at least a challenge to most; Time, Cost and Resources.

Time –Completing a project appraisal is a lengthy and time consuming process. In particular the construction of an acceptable transport model is particularly time-consuming. Invariably additional data needs to be collected, the model constructed and then tested all of which consumes significant time and resources.

Cost – the overhead cost for carrying out Webtag analysis for an approval from the centre is very high and excessive for many authorities that have endured significant funding cuts over a number of years. The transport model is a particularly high cost element, invariably requiring, for most authorities, the employment of one of a few specialist consultants.

Resources / skills – for all except the largest authorities, the staff and specialised techniques to make the case for a scheme according to the complexities of Webtag mean that all too often expensive consultants, used to optimising assumptions and processes to deliver a favourable Webtag result, are needed.

Any measures to simplify or reduce costs would be welcome. Utilising new sources of data should offer opportunities to assist the development of transport models.

9 What more could be done to articulate the flexibilities in WebTAG and support scheme promoters apply the guidance?

As described we believe a radical change is required on how beneficial schemes can be developed to meet real objectives and how regions and urban and rural areas choose and prioritise the schemes likely to deliver the most public good. It is noted widely in LGTAG that the now defunct LSTF funding stream worked well and certainly DfT officials advice was well received. It is notable that Wales, London and probably Scotland have developed appropriate appraisal methods to deliver schemes helpful to their areas which are a lot less dependent on the Webtag economic assessment methods

10 How can we improve the way in which WebTAG is presented? Why? We are particularly interested to hear about how we can improve accessibility and clarity of the guidance. Developing modelling and appraisal tools that meet user needs

We consider the real requirement is how to change the system so that Transport and Planning authorities can freely develop the best strategies and schemes. However until this is done please do not complicate Webtag any further.

11 What should our priorities be for improving the development of modelling and appraisal tools and why? Please select up to three.

As stated there needs to be a separation between modelling and assessment particularly for the so called ‘economic’ analysis. While we have already touched on the mathematical failure of the assessment being on the basis of a small difference between two enormous values of (largely) time turned into cost, there is for example a logic for a behavioural value of time being used for choice of mode, destination or route. When assessing schemes in terms of time cost it would be more logical to use a societal value of time saving. For urban schemes time savings for car travellers in peak times would have very low societal values.

12 How can we best encourage innovation whilst maintaining a consistent and robust approach?

We are suggesting that a fresh analysis of existing schemes (see answers to 2, 3 and 4 particularly) and from this we are likely to see potential for real innovation. We are definitely not convinced that the present appraisal methods are either robust or consistent. Our experience from promoting schemes is we have to use consultants as they understand how models can be ‘adjusted’ to give the right answers in the appraisal. Minor changes to assumptions can often change a scheme’s ‘value for money’ dramatically. Despite a myriad of interventions over recent decades the overall ‘Place’ where people live across the UK fails to offer genuine and healthy options to car. This inter-generational failure has marked and ingrained impacts including life outcome for the more disadvantaged. The absence of Equality Impact Assessment and Health Impact Assessment of approaches to transport (especially in

the absence of a national Transport Policy) represents a loss to health and wealth across our towns and cities.

We would however wish to place on record our thanks to the imagination of Ministry economists when evaluating Soft or really Smart measures for the previous but now defunct LSTF funding stream. We also see the advent of big data as providing an opportunity to better understand (at scale) the complexity of movement and understand appropriate ways to cater for that need – perhaps through new and innovative approaches that are not state led (i.e. Air B'n'B, Uber, MoBike, Gaist, Red Ninja)

13 What new and emerging techniques and methods should we potentially explore and what specific problems might they solve?

We have expressed some major downsides with the existing system of both funding and appraisal and have suggested the general direction of where the UK should be going.

While we recognise that our systems of analysis may be very sophisticated (and arguably too sophisticated), as a country we do not deliver good transport measures to meet the public or business needs.

We recognise that there is a need to spend money wisely but as stated as a country we do not deliver good transport and the present system of assessment, funding and approval is certainly significantly responsible for this failure.

We understand there may be a nervousness of releasing control to regions and urban areas and potential loss of strategic control. However delegating responsibility will mean that schemes will reflect real needs and will have the by-product of ensuring the higher value small scale schemes get implemented rather than some of the 'Grands Projets' which tend not to deliver significant or even the claimed benefits.

4. Conclusions

While we have endeavoured to answer the detailed questions we would reiterate that we need a root and branch review of funding mechanisms for both capital and revenue, assignment of funding and approval systems and methods for deciding objectives, developing a full range of possible options and appraisal and decision making. TAG has long called for TotEx approach to Highways & Transport investment

We recognise the importance of ensuring that public expenditure does deliver the real needs for the public at the minimum reasonable costs to the taxpayer and alternative methods need to be established to deliver this. We also believe that Wales, Scotland and London have significantly different methods of scheme development and appraisal and learning from their experiences could be helpful.

As previously stated we would be keen to meet with DfT and Treasury officials and indeed Ministers to discuss possible ways to take this forward.

9-10-2018

Transport Planning Society

Response to the DfT's consultation on appraisal

Contents

- 1 Introduction and summary
- 2 Making progress
- 3 Response to specific questions

Annex 1: TPS and members' views

Annex 2: TPS Principles of Transport Planning

1 Introduction and summary

This response is in two sections:

- i) a review of the strengths and weaknesses of the current appraisal system and suggestions for how to improve it;
- ii) responses to the specific questions in the DfT consultation.

In overall terms the Society welcomes the DfT's engagement with practitioners and others and hope this will continue beyond the consultation period. We recognise that appraisal is full of difficult choices, including: how to represent non-monetised impacts in a robust way; how to represent uncertainty in forecasts for transport demand; how to include land use impacts; and how to deal with the problem that some of the key benefits from transport interventions, such as time savings, are very

rapidly traded in for other benefits which have hugely different (and usually greater) social and environmental impacts.

Overall our conclusion is that we have most of the tools we need to undertake transport appraisal but that some are over used and have a disproportionate impact on the results. On the other hand, some are underused or underdeveloped and this leads to a fundamental imbalance in decision making. This is in turn reflected in the type and scale of the transport interventions implemented in the UK, whether at local or national level.

For this reason the changes we propose are not a wholesale rejection of the current system but a radical rebalancing of the elements. For example we propose giving the Strategic Case a far greater role and aiming to achieve quality of life objectives rather than calculating precise benefit to cost ratios (BCRs). This is related to the issue that many schemes only offer making the future slightly less worse and this unsatisfactory outcome is not made sufficiently transparent to the public. In reality current appraisals also have huge uncertainties attached to both the forecasts on which they rely, and some of the methodologies which they employ. Whatever qualifications DfT place on their use, BCRs still dominate transport appraisal and this latest consultation provides the opportunity to address this in a comprehensive and productive way.

Scenario based traffic forecasts

Before discussing our proposals in more detail, the Society wants to emphasise that the methods of forecasting, and the most recent national road traffic forecasts¹, must be considered as an important part of this exercise. The move to more scenario based forecasts in 2015 was significant and had less impact on appraisal than it should.

For the first time this reported in detail the impact of varying of the underlying assumptions behind the forecasts. This was valuable for three reasons. First it allowed the impact of individual assumptions to become more transparent, in particular the change in patterns of travel reflected in falling car use (measured as driver miles) and trip rates across modes². Secondly it allowed, implicitly if not explicitly, the possibility that policy packages might influence how the assumptions (and thus the forecasts) varied. For example, what were the policy/pricing conditions under which car trips and mileage would continue to fall? Finally, if national forecasts could be produced on the basis of different scenarios, should this now be done at local level?

While the forecasts contain many interesting elements, for example that a rapid move to electric vehicles would cause a huge increase in congestion (due to a fall in costs per mile generating traffic), they recognise the overall uncertainty in predicting future travel demand. The issue here is how that should be reflected in the current system of appraisal.

Transport for better or slightly less worse?

In relation to strengths and weaknesses of the current system a key point is that appraisal should result in transport interventions which lead to a future which is recognisably better. At the moment many schemes present a “Do Minimum” which fails to deliver that better future and a “Do Something” which fails slightly less badly. This failure to deliver people’s quality of life objectives is apparent in the detail in many appraisals but somehow the implications are lost. Thus we have numerical predictions,

¹ <https://www.gov.uk/government/publications/road-traffic-forecasts-2018>

² See Charts 2 and 3 in:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674568/analysis-from-the-national-travel-survey.pdf

whether it is poor air quality³, lack of active travel and detriment to health, carbon emissions exceeding targets⁴, or communities suffering severance and poor access to jobs, healthcare and other facilities. However, no negative value is attached to missing the very clear opportunity, which most transport schemes offer, to help to address them. As is often repeated, it is taxpayers' money which is being spent. But "value for money" in this context is not an abstract principle: it should be apparent in the outcomes of the not inconsiderable amounts being spent.

In fact it seems that policies and associated schemes which might be beneficial are being overlooked, in particular those which, in transport terms:

- Rely on revenue rather than capital elements
- Focus on demand management rather than enlarging capacity
- Reflect rapidly changing lifestyles at both ends of the age scale and across geographic boundaries, for example in our major city regions.

In addition, the issue of uncertainty, both in forecasting and the calculation of the costs and benefits, is not adequately reflected in current methods. To be fair this is an issue the DfT recognises, particularly in a changing context driven by mobile internet access.

On the other hand these methods, as set out in WebTAG, aim to be robust across schemes and evidence based. These two aims are strongly supported by TPS, however we think they can be upheld while making a range of substantive changes.

The next section summarises the results of our discussions with members, our own appraisal events and seminars over several years, recent non-TPS organised seminars and conferences which members of the TPS Policy Group have attended, and the results of our annual member surveys. Results from the latter are set out in Annex 2.

2 Making progress

We summarise our proposals for reform in the points below. In essence we would like to see:

1 **Increasing use of scenario based forecasting**, using a range of possible futures⁵. These could easily use the current DfT scenarios as a first approximation, but with new combinations to produce a low and high forecast. For example continuing the fall in car driver miles from reduced trip rates and combining it with high fuel prices (this may even stabilise or reduce traffic).

2 **Within the Treasury 5 Case model⁶, a greater emphasis on the Strategic Case**, using it to produce, for example, pass/fail criteria. The Strategic Assessment should be an assessment against the strategy, not the production of vague high level objectives deliberately tailored to support the scheme being assessed. This is too often the case at present. DfT needs to be very clear in the absolute requirement for this to be done properly and for the strategy to lead the other four cases.

³ It should be noted that pollutants may reduce due to technological improvements but still not meet acceptable standards. For example in 2015, despite stricter environmental standards, over 40 UK cities exceeded or were at the WHO particulate limits.

⁴ See Committee on Climate Change www.theccc.org.uk: emissions from transport since 2013 are rising rather than falling, despite the use of more efficient vehicles (although it is clear some manufacturers' figures were kept artificially low in the test procedures and did not reflect real world outcomes).

⁵ For example see "Transport Futures" Glenn Lyons for CIHT, 2017

⁶ The other cases are: **Economic** (in transport the Business Case, where BCRs are produced); **Commercial; Financial; Management and delivery**.

The use of the term “Strategic Outline Case” in the Business Case guidance⁷ may have caused some confusion.

3 **The Strategy should guide option development**, which is again contained in WebTAG⁸ but in the real world is usually inadequate and most often uses minor variations on the preferred option rather than genuine alternatives. This does not meet WebTAG guidance, for example on the need for an Options Report, and DfT need to ensure that realistic and properly championed alternatives are prepared and tested, for example using strategic quality of life objectives, Multi-Criteria Analysis and cost effectiveness.

4 **Greater use of quality of life objectives and Multi-Criteria Analysis (MCA)**. In 1998 an objectives led assessment section and the Assessment Summary Table (AST) were introduced in the New Approach to Appraisal (NATA). However this did not replace the existing methods which continued to use modified social cost benefit analysis with Benefit to Costs Ratios (BCRs) and was never given equal weight in transport appraisal. Our recommendation is for greater use of MCA methods combined with cost effectiveness and less emphasis on partly (and unreliably) monetised social cost benefit. This is particularly useful at the Strategic Case level.

5 **In terms of the Business Case, the real world production of BCRs is itself seriously flawed**. At the September Appraisal Conference practitioners made wry comments about how they had to work very hard to achieve their client’s target BCR. Every practitioner knows that this is the norm and has rightly led to accusations that transport planners are “guns for hire” (or a less polite version!). The practise of competitive bidding and adversarial culture has led to a lack of transparency and public confidence. It is one of the motivations behind the drafting of the TPS Principles, which are attached to this response as Annex 2.

6 **Key elements of appraisal are undervalued and need to be mainstreamed** and this is affecting which schemes are approved. While the Strategic Case analysis should identify and filter out any schemes which do not meet objectives such as reducing carbon, improving air quality or promoting active travel reaching this stage, this is simply not happening. This was evidenced by practitioners during the Housing Appraisal seminar organised by UCL in August this year, and at the Landor Appraisal event in September. This would not be so damaging were it not the case that these same factors are downplayed in the current Business Case analysis. For example, while health benefits are a key component of the Business Case for walking and cycling⁹, encouraging the use of motorised travel is not seen as a disbenefit.

7 **Redefine the counterfactual (Do Minimum) against which transport schemes are assessed**. The bias against schemes with significant third party benefits derives from the use of a “Business As Usual” Do Minimum to which new transport schemes are compared. Too often the Do Something (i.e. implementing a scheme) results in marginal changes to most of these impacts, ignoring the fact that what is required to regain an acceptable future is a significant change. Thus money is spent on interventions which may achieve one type of benefit (for example time savings) while doing very little to achieve carbon reduction targets, improvements to air quality, improved safety and security, less community severance, or healthier people. While transport cannot solve these problems on its own, in many cases it has a major impact. It could at least stop contributing to them.

⁷ See para 1.17 in:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/85930/dft-transport-business-case.pdf

⁸ And in the Treasury Green Book, see para 3.6-3.9.

⁹ For example see WebTAG Unit 4.1, Social Impact Appraisal, Section 3

8 Use negative values for schemes which fail to address key objectives when different schemes could. In this context, there have been several suggestions as to how to give a negative value to the lack of progress against priorities such as those described above. For example, to avoid penalising improvements to street environments which delay traffic, the desired end state could be the baseline and speeding up traffic is a benefit only if it does not damage those streets¹⁰. Using the existing situation as the counterfactual is having the effect of penalising schemes which move towards a better outcome than the present day. This often occurs due to time disbenefits to motorised travel and is a major barrier to achieving change.

9 Recognise the cost of failure in the appraisal. Another possible way forward is to include the cost of failing to meet an objective in the disbenefits from a transport intervention. Thus a scheme which did nothing to reduce carbon would have the cost of the carbon not removed added to the cost of the scheme. The appraisals of most schemes currently use forecasts which predict a failure to meet carbon reduction targets. At the very least, the amount of carbon in excess of the target should be costed. Another example would be the case of transport schemes which encourage inactive travel. In this instance a proportion of the users would have be counted as not active, encouraged to remain so by the scheme, and their health disbenefits included in the calculation of the BCR.

10 Recognise the flaws in monetised social cost benefit. It must be stressed that this is related to the use of one traditional approach to economic theory: a variation on Pareto optimisation in social cost benefit with its roots in the 1930s. In this case very different factors are assumed to be amenable to monetisation (based on willingness to pay) and are traded off against each other to maximise the social benefit. As well as the obvious problems of monetising factors on a consistent basis (this is actually not even achieved in the present system¹¹) the classic criticism of this type of optimisation is that it can produce outcomes which no-one wants. There are others to do with willingness to pay or be compensated and mixing these values with others, such as business time savings. This is complicated by the fact that the monetisation can assymetrical – in other words once a situation has been optimised people in the new context may put different values on the same factors¹². For this reason the production of BCRs has to be viewed with the utmost caution. There are further issues with monetisation highlighted in following sections.

11 Revise guidelines for proportionality. While these criticisms of the economic assumptions mainly apply to major schemes, attention is also needed to the way in which some small and medium sized schemes are treated and sometimes expensively modelled. Some walking and cycle schemes provide examples. At the other end of the scale, some very large schemes struggle to find a rational basis on which they can be assessed or compared to other similar sized options. HS2 is probably one of these. This category is sometimes referred to as “transformational” and is so in the DfT consultation, but this seems too subjective. While all transport schemes have land use impacts, there is a question of scale and whether these extend outside the immediate transport corridor in which they are implemented. Thus key issues do not seem to be taken into account, for example the radical impact of HS2 on the relationship between Birmingham and London and how that will affect demand and land use. Strengthening the links between Birmingham and London may have detrimental impacts on other regions. Meanwhile the well understood problems of the rail travel time between cities such as Liverpool, Manchester, Leeds and Sheffield seem to have lower priority. Do they individually need to be closer to London or to each other?

¹⁰ For example see the “CREATE” project on urban mobility, 2018

¹¹ For example, time savings use a national equity value while noise has a non-linear value.

¹² This is not the only issue, for example the social distribution of who benefits is an obvious problem.

12 **Expand DfT guidance on level and type of appraisal required.** DfT already recognise the need for proportionality and in two contexts: for smaller schemes and for strategic assessment. We would like to develop this to include more Multi-Criteria Analysis for the latter, and then undertake a Strategic Case review without the need for a Business Case for small schemes. Instead, where there is a strategy in place, schemes should be assessed against their contribution to that strategy rather than an isolated monetary value. This approach should avoid the situation where a scheme which might, assessed individually in a Business Case, have a low BCR, is critical to unlocking other parts of the strategy or is simply one of a package of schemes which are required to achieve the objectives.

13 **Revise funding approaches.** There are two reforms TPS suggests. The first is less use of competitive bidding, this may appropriate in cases where innovative thinking is required but has become the norm for too much transport expenditure. The negative impacts have been commented on earlier. The second is greater devolution of funding, within the new context of a strategic framework, developed and owned locally, which can guide expenditure. Within this it is critical to allow flexibility between capital and revenue (both are needed but there is often a bias against the latter). While there needs to be due accountability for funding derived from central Government sources, this should be in the context of properly evidenced strategies. A good example is the current Transport Strategy for Greater Manchester¹³, itself part of a wider strategy encompassing elements such as health, sustainability and the economy.

14 **Understanding where the time savings go.** In terms of the benefits of transport schemes, journey time savings are the dominant influence in the Business Case. However, when travel times change, people tend to respond quickly by changing their choice of destination and mode. This is a continuing issue, for example walking to the local shops every day evolved into filling a hatchback once a week and that is now evolving into an internet order delivered to the door. Changes in retailing are a good example because they happen quite quickly, for example the trend towards supermarkets has become tempered by building a significant number of “local” stores for daily shopping and infrequent bulk buying over the internet. Economists may argue that the value of what the time savings are “spent” on must be at least equal to the time savings themselves, so it doesn’t matter for appraisal. In fact this is completely inappropriate in transport planning. The reason is that time savings only measures user benefits and transport is an area where:

- Third party costs are often greater than user costs
- Spending time savings creates other changes (especially land use) which have their own range of costs and benefits.

In this context one way forward would be to spend the time savings on extra travel in the traffic forecast and re-run the user costs. This should be mandatory in the guidance.

15 **Guidance on time saving values.** There is a continuing debate on how the values of time are reflected in transport appraisal. In broad terms TPS considers that there are a range of issues which mean that, while extracting them from traffic models may still be worthwhile, their use must always be heavily qualified. Using them as a basis for a BCR which depends on their value over 60 years (when most of them are used up in the short term) is likely to be seriously misleading. However, it is clear that different values apply to different modes and are also strongly related to size. The recent DfT research was informative, even in this time savings less than a minute were not included in the analysis. One reason for this is the way in which reliability is undervalued at present, and variation in travel time often eclipses time savings of a few minutes. In large scale modelling there are frequently major gains and losses at this small scale level. DfT advice on producing a table to show time savings by size (introduced in 2008) needs to be extended to exclude these in a road traffic context. Users

¹³ Available on: <https://www.tfgm.com/2040>

value time differently for different modes (and between waiting and travelling) and current guidance partly reflects but it needs to be fully incorporated. This should include time savings which are not valued at all no matter what their size. For example research has shown that commuters prefer to have some time between leaving their home and arriving at work – for a variety of reasons sometimes referred to as me time, catch up time or transition time¹⁴. This is entirely in tune with the widely accepted evidence that people have time “budgets” which they tend towards.¹⁵

16 **Recognising social impacts.** This leads to the issue of how the impacts of transport schemes are distributed amongst users and non-users of the transport system. For example, the increase in motorised mobility has led to land use changes and locational choices which have maintained and in some instances increased accessibility to goods and services for those who can afford the new mobility. For those who cannot the situation deteriorates if centres of employment, and outlets for retail, healthcare or leisure become fewer and larger and less accessible by non-private transport. Distributional impact was part of the intended 2008 NATA Refresh but is still not sufficiently represented in current appraisals. Stronger guidance is needed.

17 **Mapping change.** In terms of methodology to include such factors into appraisal, the use of accessibility mapping is particularly useful without a major modelling cost. Another of our recommendations is that this should be more widely used, and be mandatory at the Strategic Case level. It is particularly helpful in assessing suitable locations for new development, where access by sustainable modes or time catchment areas for different groups of people. Changes in accessibility are currently measured by time savings – this needs to be moderated so that higher values can, for example, be used where accessibility is currently low, either by area or by variables such as car ownership or access to rapid transit. This would begin to address some of the issues to do with the distribution of benefits which is a key weakness in current methods.

18 **Agglomeration and the opposite.** Wider economic impacts are increasingly being used in appraisal but they are extremely hard to identify at scheme level. Connectivity is seen as a good but has proved hard to define. In addition, transport schemes which encourage lower densities will have a negative effect. In the context of time savings being spent on extra travel (the implication of most research including the National Travel Survey) this is most likely to cause lower density. In this case the cost of disagglomeration needs to be attributed to these schemes. The original Wider Economic Benefits were renamed Wider Economic Impacts but in terms of the practical impact on most appraisals practitioners seem to assume the original title was correct. DfT needs to be clear in its guidance that economic impacts can be negative as well as positive, particularly between different types of users.

Conclusions

This list of issues which TPS wants DfT to address, with some proposals for remedial action, forms the basis for our submission. However, we elaborate on some of these issues in the context of the questions posed in the consultation document. Our responses are set out in the next section.

3 Responses to the specific questions in the DfT consultation

Chapter 4 People and place

¹⁴ For example see: “Technologies, social practices and travel – where are we heading?” presentation by Professor Glenn Lyons, Centre for Transport and Society, 2012, for more on driver activities see: “Traffic Restraint: What Drivers Think” London Planning Advisory Committee 1991

¹⁵ One of the first examples was “Travel time budgets and mobility in urban areas”, Yacov Zahavi, 1974

What should be our priorities for improving the appraisal of people and place and why? Please select up to three areas.

In line with our general comments above:

1. Appraisal methods for the future – increased use of accessibility tools for option generation and assessment. Accessibility tools should be genuinely multi-modal, including local access to services by walk or cycle. Accessibility tools can be used at a range of scales including the assessment of wider packages of measures designed to achieve a step change in accessibility and travel behaviour change.
2. Public health and wellbeing – the adoption of a multi-faceted definition incorporating physical activity, air quality, road danger reduction etc. This definition must be applied in appraisal to consider both positive and negative impacts, i.e. the health disbenefits of schemes that promote increasingly entrenched car-dependent lifestyles must be counted.
3. An overall approach to appraisal based on objectives which seek a better future (defined in a clear set of quality of life objectives) rather than marginal change. This needs to respect the needs of real people in communities as well as context free economic actors, as the current methods assume. While there is value in the latter approach, it should crowd out the former, in particular it is often seen as too difficult to measure so is downgraded in the appraisal.

Chapter 5 Reflecting uncertainty over the future of travel

What should our priorities be for improving our understanding and treatment of uncertainty in modelling and appraisal and why? Please select up to three.

1. Further research into the observed changes in travel behaviour is vital. This should consider (a) lifestyle and life cycle factors, (b) spatial determinants of travel opportunity including local access to service and facilities, and (c) users' preferred travel behaviour versus the limited travel opportunities available to them.
2. For the reasons set out above, we welcome the proposal for greater use of scenarios. The use of clearly defined potential future scenarios is easier to communicate to stakeholders, more in line with a vision-led approach to transport planning, and avoids spurious accuracy. This fits well with the DfT's development of scenario based forecasts, which could be taken further.
3. Recent research among professionals carried out by Glenn Lyons, both for CIHT and for TPS/CIHT through their role in professional qualifications, has revealed a need for what has acquired the title "constructive challenge". This needs to be adopted through out appraisal and links back to the need for a more principled approach. The widespread use of scheme led appraisals with no strategic context, and the idea of a "target BCR" used by some clients bidding for public money is a serious issue which needs to be addressed.

What do you see as the main challenges to adopting a more sophisticated approach to uncertainty in Business Cases and what suggestions do you have for overcoming these?

1. Freight and servicing – it is clear that technology will potentially have a greater impact on supply chains than passenger movements due to the cumulative impacts of automation in the whole supply chain and associated changes in production and servicing (3D printing, remote computing, AI etc). If transport costs fall substantially, freight movement could be more elastic than personal travel. Yet in practice a great deal of modelling and appraisal activity barely attempts to include explanatory models of freight and servicing. In the short-term, transport planners should be much more transparent about the limitations of their freight models, and there is a need for a much greater focus on research into the observed trends in freight and servicing. The significant environmental and severance disbenefits of HGV and LGV traffic

need to be addressed in this context, the TPS support for Lorry Road User Charging reflects both the need for economic as well as environmental efficiency.

2. There is a great deal focus on technological solutions and electrification of the vehicle fleet as the only solution to air quality. This can potentially lead to a danger of spurious accuracy in forecasts of air quality improvements, as well as creating a situation where the wider economic, social and environmental externalities of private motorised vehicle use are ignored. Electrification will be too late to achieve the carbon reduction targets needed to comply with CCC budgets. It also does not deal with the need to reduce within a time limit. In this situation the traditional economics approach of saying the price of carbon will just get higher as we need to make ever less feasible and more painful reductions into the 2020s. The better metric should be carbon tonne years rather than tonnes.
3. As stated earlier, the over emphasis on the BCR among most scheme promoters, a lack of genuine alternatives and dependence on definitive forecasts rather than scenarios and genuine “High” and “Low” travel growth is a major barrier. This is a particular problem for motorised road traffic where performance depends on the level of demand – if traffic grows it will slow down. For rail transport and walking improvements are more robust and can be for bus travel and cycling where sufficient priority is provided. One idea would be to provide an upper and lower estimate with no central BCR at all.

Chapter 6 Modelling and appraising transformational investments and housing

What should our priorities be for improving the modelling and appraisal of transformational investments and housing and why? Please select up to three.

1. There is a need to overcome the lack of understanding of travel behaviour in relation to local access, strategic transport options and travel demand management measures including parking restraint (there is a reasonably good evidence base in London but less elsewhere). The recent Transport for Homes report highlights some of the policy and process issues that lead to the continued incremental expansion of entirely car-dependent developments. In modelling terms we tend to (a) predict future travel behaviour based on observed behaviour in existing car-dependent areas thus replicating that behaviour from the outset and (b) try to demonstrate that we are resilient to the ‘worst case’ in traffic capacity terms (although we never apply the ‘worst case’ principle to other factors such as local accessibility).
2. A lot more can be achieved without the need for ever more complex LUTI models. Greater use of tools such as accessibility mapping by a range of transport modes is sufficient to illustrate the potential impacts of schemes on the short- and long-term location decisions of individuals and businesses.
3. It has been argued that capturing land value uplift is arguably a more direct way of measuring marginal changes in accessibility than notional time savings. But others argue that both time savings and land value uplift are simply proxy values for greater accessibility/connectivity. The DfT guidance on dependent development rightly acknowledges that, where used, the land value uplift approach needs to consider the non-transport factors that may affect value (e.g. utility requirements). More fundamentally, in welfare appraisal the value to society of development in one area compared to another area is not solely a question of financial value, e.g.:
 - Economic – e.g. development in an area of housing shortage with good public transport to a range of jobs is of much greater value than dispersed sprawl far away from the highest demand

- Health and social – e.g. development is more valuable when it offers a range of housing and tenure types, is adapted to a range of age and social groups, encourages healthy lifestyles, and is well-integrated with surrounding areas
- Environment – e.g. development is more valuable if it encourages less energy-efficient lifestyles and minimises local environmental impacts
- Distributional – e.g. increasing public transport accessibility in areas with low household car access will have a higher relative value than marginal gains in travel time to those with high household car access. The traditional economic context free “constant value theory” in this case works against identifying real world values.

What transformational impacts do you currently find it difficult to represent in appraisal? What are the barriers to their inclusion and how would you suggest these are overcome whilst maintaining a consistent and robust approach?

1. The analytical tools for evaluating transformational impacts cannot be based solely on lots of small time savings for users of one transport mode, in particular where these are marginal impacts relative to a Do Minimum scenario that is worse than the current situation. Transformational packages of measures are those that offer a high quality of life, e.g. through offering people (and businesses) a range of genuine transport choices. These are likely to result from urban transport packages rather than individual inter-urban schemes.
2. As TPS has previously argued in the last Wider Economic Impacts consultation, economic theory stresses the cluster benefits of physical density (resulting from high-capacity public transport links coupled with walkability) that lead to genuine productivity gains in high value knowledge-based economies.
3. The impact of land value down shift is rarely measured – this is not just an issue of no net gain (i.e. if a development was not located in one place it would take place in another). If activities such as housing and employment are badly located in relation to one another, better locations will be missed and the total uplift lower than could have been achieved. Alongside this will be situations where land values may fall in, for example, city centre locations requiring regeneration, if car based greenfield sites are developed.

Chapter 7 Supporting the application of WebTAG and making it more user friendly

What are the main barriers and challenges to applying WebTAG? How do you think these could be overcome?

There is a great deal of poor practise in relation to preparing:

- Strategic cases,
- option development and
- the Assessment Summary Table.

Better guidance and an emphasis from DfT, who are often consulted on modelling and appraisal, on producing these as an essential pre-requisite.

What more could be done to articulate the flexibilities in WebTAG and support scheme promoters apply the guidance?

There needs to be greater emphasis on the high level appraisal (see above) and much less on detailed modelling. Proportionality is inherent in current guidance but needs to be strengthened. We suggest workshops with different promoters and practitioners to refine further guidance on this and TPS would be willing to help organise such events.

How can we improve the way in which WebTAG is presented? Why? We are particularly interested to hear about how we can improve accessibility and clarity of the guidance.

As described above, much greater focus is needed on the early option generation and selection process. Too often only a very narrow selection of options are assessed, or in reality the option assessment reports are later adjusted to give the impression that more options were genuinely considered.

WebTAG needs to be clear that failure address either the Strategic Case or option development is effectively a showstopper and the appraisal will not be accepted. It seems that practitioners have a strong sense that innovation in modelling or forecasting is frowned upon, and that the Strategic Case means trying to find some generalisations which support the scheme in question, that option development means some small variations on the favoured scheme, and that the BCR is a sort of game with Government funding as the very considerable prize. TPS does not think this is a fair representation of what is in WebTAG, but given that these views are widely held, guidance needs to be particularly strong to correct any misapprehensions.

Chapter 8 Developing and maintaining modelling and appraisal tools to meet user needs

What should our priorities be for improving the development of modelling and appraisal tools and why? Please select up to three.

Given what we have set in detail in earlier replies, the headline priorities are:

- 1) Greater use of scenario forecasting and recognition of uncertainty
- 2) Greater use of accessibility and other mapping techniques to show overall impacts
- 3) Improvement to non-monetised impacts including carbon (which in our view has a fundamental flaw in its valuation).

How can we best encourage innovation whilst maintaining a consistent and robust approach?

Continue engagement with practitioners – DfT has made significant progress, including this consultation which TPS very much welcomes.

What new and emerging techniques and methods should we potentially explore and what specific problems might they solve?

As above:

- 1) Greater use of scenario forecasting and recognition of uncertainty
- 2) Greater use of accessibility and other mapping techniques to show overall impacts
- 3) Improvement to non-monetised impacts including carbon (which in our view has a fundamental flaw in its valuation).

Annex 1: TPS and members' views

The Transport Planning Society (TPS) is an independent institutional body based in England, established to facilitate, develop and promote best practice in transport planning and to provide a focus for dialogue between practitioners and others interested in the field. It is the only body focussing entirely on transport planning as a profession. It is supported by four long established professional institutions – ICE, CIHT, CILT and RTPI - all of whom have an interest in transport planning within their own core activities.

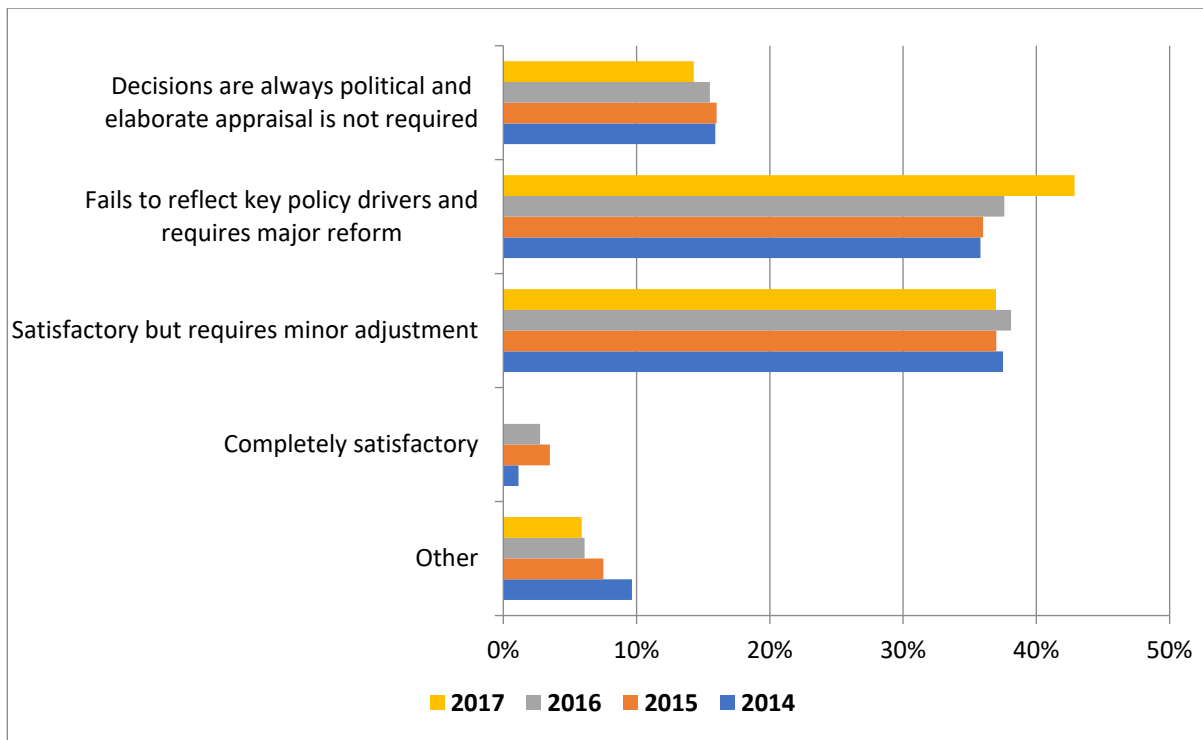
TPS administers its own Professional Development Scheme for transport planners, leading to award of the Transport Planning Professional qualification which is the only professional qualification uniquely aimed at transport planners. The Society has over 1300 professional members in the UK and

elsewhere. Many of our members are active in highway planning and management, including extensive experience of working with or within the Highways Agency. They are involved in transport modelling, forecasting and appraisal from a multi-modal perspective and increasingly in the analysis and development of transport planning in response to new technology and vehicle autonomy.

This response has been drafted by the Policy Group reporting to the elected Transport Planning Society Board. It builds on several initiatives, including the idea for independent commissioning of traffic modelling and forecasting, rather than scheme promoters, in 2017 and a Chatham House Rule seminar with DfT and practitioners focussing on reforming appraisal methods and “Vision and Validate” on 28th February 2018. TPS members attended the Landor Appraisal event on 19th September 2018.

In addition, a draft note was published on the website in August with a news item and social media publicity. Our annual member survey contains questions on current appraisal methods although these do not include forecasting. Below is a chart showing the results from the most recent surveys on their views.

Figure 1: TPS member responses on appraisal 2014-2017



Apart from the slightly concerning number who consider all decisions are political and appraisal is not required (included as a result of member replies) this provides an interesting snapshot of practitioners’ views. The range is considerable but overall illustrates the need for some change.

A supplementary question explores this in some detail. Again the options are selected from member feedback and changed in 2016. The results for the two years with identical questions are set out below.

Table 1: TPS survey results 2016-2017

Answer Choices	Responses	
	2016	2017

Replacement of time savings completely by land use or employment changes to capture long term impacts	23.2%	34.3%
Appraising changes in land values, land-use or travel behaviour resulting from transport schemes alongside time savings	56.1%	61.9%
Continuing to use time savings as the key to appraisal to avoid double counting	23.2%	12.4%
Removal of small time savings (below + or - 5 minutes) in the cost benefit analysis	37.8%	44.8%
Represent greenhouse gas impacts by comparison against targets, not marginal change	49.4%	50.5%
Counting positive and negative health impacts (e.g. the disbenefit of car dependency)	68.9%	70.5%
Reform of the use of non-resource costs (such as tax and developer contributions) in the cost benefit analysis	31.7%	23.8%

Annex 2: TPS Principles of Transport Planning

The principles of transport planning: the outcomes sought

Transport planning is all about creating connections between people and places, without which everyday life cannot function. However, this aim is complicated because:

- Transport is almost entirely generated by where people and places are located
- Connections are not always through physical travel
- The impacts of transport are often greater on non-users than users.

This is why we start our transport principles by setting out some key social, economic and environmental goals. Transport planners should develop and implement transport plans and schemes which:

1. Maximise connectivity for people and businesses while minimising the need to travel – thus reducing cost for users and non-users alike
2. Manage demand as an end in itself, for example by
 - a. working with spatial planners to minimise the need for movement of people or goods
 - b. supporting options that encourage the least damaging alternatives, such as non-motorised modes, sustainable goods transport and digital connectivity
3. Meet the key quality of life objectives of:
 - a. environmental, economic and social sustainability
 - b. health and wellbeing, safety and security for all users and non-

The principles of transport planning: how we behave

In striving to achieve the outcomes above, transport planners should carry out their work in accordance with the following principles:

1. ***Integrity:***

Provide robust, independent and honest evidence-based advice which always protects the integrity and objectivity of the profession.

2. ***Clarity:***

Explain clearly all the work we do, in particular to make the levels of uncertainty in all technical work, such as forecasting the future, transparent to experts and non-experts alike.

3. ***Make connections:***

Work across sectoral boundaries, especially with spatial planners, and give equal weight to demand management, the different ways of travelling, and non-transport solutions to transport problems.

4. ***Constructive challenge:***

Adopt an open minded, problem solving approach, be innovative, always fully consider alternative solutions, and not favour one type of investment (such as capital or revenue) over another.

5. ***Focus on People:***

Be led by clear quality of life objectives, to understand the impacts of transport plans and projects on individuals as well as society as a whole and to listen, understand and acknowledge the views of all those affected (whether users or non-users).

Chartered Institution of Highways & Transportation response to the DfT consultation on Transport Assessment Guidance

Theo Naidoo, Policy Officer, Chartered Institution of Highways and Transportation (CIHT),
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CIHT is a charity, learned society and membership body with over 14,000 members spread across 12 UK regions and four international groups. We represent and qualify professionals who plan, design, build, manage and operate transport and infrastructure networks. Our vision is for world-class transportation infrastructure and services. Our values are to be Professional, Inclusive, Collaborative and Progressive.

Introduction

1. CIHT welcomes this consultation on *transport appraisal and modelling strategy: informing future investment decisions*, as there is a widespread feeling among our members that current systems of decision making are not leading to desirable results. Governments have repeatedly declared their intentions to create a healthy society, fight climate change, reduce poverty, strengthen local communities and tackle many other vital issues but the schemes that are eventually built do not reflect those goals.
2. CIHT's recent work on *CIHT Futures*¹ interviewed transport professionals across the country and found that there were several ways that they felt current practices, including WebTAG failed or even inhibited them from creating better schemes, many of which are outlined below.

Q1 Do you agree that these themes reflect the most pressing priorities for development of our Appraisal and Modelling guidance? If not, what other themes do you think we should be exploring?

3. CIHT thinks that the themes broadly tackle the concerns of CIHT members with current appraisal methods but has some specific comments;
 - Public health must be considered more fully, either as part of the 'People and Place' theme or as an issue by itself. It's one of the areas where there is the most uncertainty yet the most opportunity to improve.
 - It is unclear why 'Modelling and appraising transformational investments and housing' is a single theme, as the issues facing major projects are separate to the ones facing even large new towns and are vastly different to the difficulties faced by the majority of housebuilding.
 - The most pressing priority for any guidance is to explore how it is used in the real world. There is more value in altering the implementation of WebTAG than there is in introducing more factors which will inevitably make it more complex
 - There is an overall goal of using the transport planning system to achieve the society that we want which requires moving from a 'predict and provide' model to a 'decide and provide' model.
4. CIHT believes that WebTAG should encourage better outcomes through supporting long term plans established by the government. For example, the Cycling and Walking Investment Strategy aims to make cycling and walking the default choice for short journeys, the Air Quality action plan aims to reduce, not just keep level, roadside emissions and the Inclusive Transport Strategy seeks to ensure that the needs of all users are considered. Any scheme assessed as viable through WebTAG should be able to meet those goals.

¹ Lyons, G. (2016) "*Uncertainty Ahead: Which Way Forward for Transport*", CIHT. Accessed at www.ciht.org.uk

5. This means addressing the reactive nature of funding which is dependent on often arbitrary benefit **cost ratio's** avoiding vested interests and challenging risk aversion which makes it easier for schemes which look similar to what has been done in the past easier to implement.
6. **CIHT understands that the question 'Is it DfT compliant?'** holds significant sway over local authorities, especially when central government funding is involved (even non-DfT). It is important to stress that WebTag is a tool to support decision making and not a replacement for local strategic planning and development

Q2 What considerations should inform the scope and priorities of our strategy, particularly over the first 18-24 months?

7. CIHT argues that improving the ability of WebTAG to evaluate the impact of sustainable transport schemes is vital, especially in terms of the active mode appraisal kit, the propensity to cycle tool, value of pedestrian activity and passenger transport. There is currently limited guidance and standardisation of approach which makes it difficult to make the case for investment, two examples from our members are;
 - New cycle and walking routes are in practice evaluated on cost per kilometre which makes it difficult to ever justify enhancing a complicated junction to make it safer to cross.
 - Treating increased revenue from fuel duty as a benefit inherently biases the process towards more polluting methods of transportation.
8. CIHT notes that when the new NPPF was consulted and launched that the Ministry for Housing, Communities and Local Government held numerous events explaining to planning officers the changes and showing them how the tools were intended to be used. It would be encouraging to see DfT take the same approach in working together with highways officers.
9. CIHT supports investigating how WebTAG can better understand induced demand, spatial planning and long-term implications for the transport network, as these will be key to moving towards a **'decide and provide' model.**

Q3 What should be our priorities for improving the appraisal of people and place and why? Please select up to three areas.

10. CIHT welcomes the focus on sustainable transport uptake (paragraph 4.10) and recognition of the work that has been done on active travel in recent years. Key to achieving those ambitions is understanding the value choice of transport mode has for end users, and that weight should be given to providing the ability to move freely and safely in multiple ways. This will help create developments which are accessible in multiple ways, be it on foot, bike or via public transport.
11. CIHT agrees that work on 'valuing attractiveness' (paragraph 4.2) will be useful to practitioners and believes that there needs to be a greater understanding that our local highways provide multiple functions separate to that of managing traffic. This can include social activity, individual leisure, exercise and more but all of which depend on a safe and attractive environment. There is particular conflict over high streets which require suitable space for traffic and parking as well as being places for pedestrians There must be a method of evaluating the impact of transport schemes on these multiple uses to fairly appraise the overall impact on people and place.
12. **CIHT considers that 'valuing journey improvements'** (paragraph 4.11) is an area that can benefit from further work. The weight currently given to the aggregate treatment of short duration time savings has been queried, as when beneath the normal variation in user journey time they are of limited real utility. Further time savings are biased towards user benefits and we have not sufficiently

priced third-party costs or the land use changes which may come about as a result. It may be more appropriate to look at journey reliability and predictability as benchmarks for a project's utility.

13. There will always be societal benefits that are difficult to model, and we should ensure that we are not relying on things that are easy to measure compared with what will give best results. This could be achieved in part by placing emphasis on 'Strategic Case' within the Treasury 5 case model and allowing greater use of quality of life objectives and less emphasis on 'partly monetised social cost benefit'.

Q4 What should our priorities be for improving our understanding and treatment of uncertainty in modelling and appraisal and why? Please select up to three.

Priority one: Move from regime compliance to regime testing

14. CIHT FUTURES argues that transport planning in the UK needs to be re-focused away from our current 'regime-compliant' pathway which extrapolates a future with limited appetite to deviate. This results in practitioners concealing uncertainty, putting misplaced confidence on historic data and reducing policy making to a single long-term decision.
15. Instead we need to shift to a 'regime-testing' pathway which emphasises the ability to change and the need to accommodate unknowns into decision making. This enables assessment of plausible policy paths that allow adaptation to unanticipated change, including around technology, demographic and political changes.
16. The regime-testing pathway introduces real options analysis (ROA) as an alternative to cost-benefit analysis. ROA examines building in the option to do something at a later date if circumstances become appropriate. A simple example was used to explain this in the workshops – a parking facility where ROA is used to consider the merits of designing the structure at some greater expense to be strong enough to accommodate vertical expansion (i.e., building additional floors) should future demand exceed projections.
17. The below table, compares the major differences between the two models.²

Regime Compliant	Regime Testing
Predicted and practical outputs	Plausible and preferred outlooks
Transport economic coupling	Access and economic coupling
Weak planning	Strong planning
Concealed uncertainty	Exposed Uncertainty
Justified decisions	Guided decisions
Cost-benefit analysis	Real options analysis
Predict and Provide	Decide and Provide

Priority two: Use Scenario Planning

18. CIHT FUTURES advocated for the use of scenario-based planning, and we continue to argue for greater use of these tools to expose uncertainty and the range of evidence.

Priority three: Adopt technology and reduce complexity

² Basford, L. (2018). Presentation given to CIHT Conference.

19. The costs of roadsides surveys and other data is increasingly expensive and that there should be a focus on using new, cheaper and more reliable data sets provided by technology that will help effective modelling.
20. That WebTAG is already highly complicated and not used to its full potential, or at all, by many practitioners. Therefore, a priority should be not making the tool any more complex than it already is except for major schemes or strategies.

Q5 What do you see as the main challenges to adopting a more sophisticated approach to uncertainty in Business Cases and what suggestions do you have for overcoming these?

21. CIHT suggests that adopting a more sophisticated approach to uncertainty is as dependent upon the overarching decision-making processes being followed, as on the specific statistical tools. The current approach in the UK seems to suit decision makers who need to project an air of confidence in the investment decisions being made – a certainty and solidity is offered by numerically derived decisions. This has seen the responsibility of professionals for outcomes be eroded and this issue should be addressed.
22. The familiarity with what are seen as ‘tried and tested’ approaches of this approach significantly contributes to its continued prevalence, as do existing skillsets within the profession and resource constraints. One of the findings from CIHT Futures was that transport professionals do not necessarily believe in the approaches they use but they feel compelled to follow nevertheless – leading to frustration. A lack of evaluation is likely allowing the status quo to be maintained.
23. CIHT states that there is a need to recognise the dynamics in play using a PESTLE analysis (Political, Economic, Social, Technological, Legal and Environmental) that prevent uncertainties from being fully recognised in current processes. It is already clear that in WebTAG that scheme promoters should evaluate uncertainties but in practice answers are framed to ‘solve’ that uncertainty without revealing it fully. WebTAG must stress that all uncertainty should be transparent and not just reframe the original answers.
24. CIHT believes that there is a strong call from transport professionals for change. Therefore, priorities need to be:
 - Clear guidance to help assist a culture change towards an approach which exposes uncertainty and allows assessment of realistic policy paths in order to present real options.
 - Improving skillsets; in terms of the need for creative thinking, willingness to collaborate, and ability to communicate with other professions.
 - Effective engagement with the public in the process of decision making; including groups that are not widely consulted with to truly model the impact on various demographics and communities.
 - Resources for local authorities to conduct appraisals. Opting for a full Monte Carlo approach may give statistically better results but that this should be weighed up against those analysis being performed at all.

Q6 What should our priorities be for improving the modelling and appraisal of transformational investments and housing and why? Please select up to three.

25. CIHT argues that the priorities in the consultation document do not sufficiently address the problems which we are seeing in current developments. The modelling and appraisal of housing developments does not sufficiently evaluate the downsides of private motor vehicle dependent developments and the consequences of that on public health, transport poverty, air pollution and congestion in

neighbouring areas. There needs to be work done on fairly evaluating the quality of life of residents and using that in the appraisal.

26. For example, in areas without sufficient public transport can present a barrier to low paid or part time work and can create issues around accessibility of employment. This is particularly important as DfT funding is used to enable housing schemes so improperly capturing the impact of transport on quality of life will skew the types of housing that is ultimately built.
27. CIHT members have suggested that it is difficult to model the negative effects of road building to unlock land for house building using current tools. This includes network effects from latent/induced demand.
28. CIHT argues that there needs to be joined up work between government departments, in particular DfT and MCHLG, to appraise the full impact of housing schemes to quantify the full range of benefits. WebTAG, the NPPF and PPG need to work together to deliver for the UK socially and Economically. CIHT will be producing guidelines on “Better planning, better transport and better place” in early 2019

Q7 What transformational impacts do you currently find it difficult to represent in a scheme appraisal? What are the barriers to their inclusion and how would you suggest these are overcome whilst maintaining a consistent and robust approach?

29. No further comment

Q8 What are the main barriers and challenges to applying WebTAG? How do you think these could be overcome?

- The main barriers to applying WebTAG highlighted by our members are;
 - Time: As completing a project appraisal is a lengthy process
 - Cost: Collecting and analysing data can be expensive
 - Skills: The skills required to use the tools are not always available within local authorities
30. In terms of challenges there is a widespread belief that WebTAG is difficult to use for sustainable transport appraisal and public transport (dedicated bus lanes etc) and therefore it is less widely used in that context.

Q9 What more could be done to articulate the flexibilities in WebTAG and support scheme promoters apply the guidance?

31. CIHT has over 14,000 members involved with the design, building and operation of transport infrastructure across 12 UK regions and we believe that outreach is necessary to fully implement any outputs from this consultation. We offer to work with the department to hold regional events which impart the latest knowledge and guidance to our members.
32. Scheme promoters can be supported in applying the guidance by stressing what the ‘decide and provide’ model has to offer in terms of transparency and achieving better results than currently used predict-and provide models.

Q10 How can we improve the way in which WebTAG is presented? Why? We are particularly interested to hear about how we can improve accessibility and clarity of the guidance.

Logos of the four organisations

33. WebTAG is a collection over a thousand pages of documentation, numerous data workbooks and at least four software packages costing thousands of pounds, all of which make it a highly specialised tool.
34. There needs to be consideration of who WebTAG is aimed at, as it is a lot of work to produce results that are only understandable to specialists. If the final product was understandable to residents, councillors and local **journalist's** users would receive far more benefit to adopting it. This would mean more use of plain English, a unified glossary for planning specific terms and a clear process for navigating the system
35. There is also a case to be made that any major update of WebTAG is accompanied by seminars similar to what has taken place with the NPPF to ensure that views are heard prior to its release.

Q11 What should our priorities be for improving the development of modelling and appraisal tools and why? Please select up to three.

- Usability, as most schemes do not currently use WebTAG
- Integrating planning and transport, as the demand for new housing is one of the biggest shapers of transport
- Understanding the benefits of sustainable and public transport.

Q12 How can we best encourage innovation whilst maintaining a consistent and robust approach?

36. No further comment

Q13 What new and emerging techniques and methods should we potentially explore and what specific problems might they solve?

37. Developments with simulation-based modelling and agent-based modelling could potentially be explored.
38. Moving to a regime testing approach which would demonstrate in built bias in the current transport appraisal system and allow for more innovation in delivering the transport projects the UK needs for growth and social inclusion.