

**MSA: Assessment Against Central Government  
Objectives**

**TAG Unit 3.9.1**

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Department for Transport

Transport Analysis Guidance (TAG)

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# 1 Assessment Against Central Government Objectives

## 1.1 Introduction

1.1.1 This TAG Unit provides guidance on completing the Appraisal Summary Table (AST) for major schemes in Local Transport Plans. The AST (TAG Unit 2.7.2) enables assessment against central Government's objectives. Much of the data required for completing this assessment will be available from the transport modelling that promoters undertake. For further guidance see MSA: *Cost Benefit Analysis* (TAG Unit 3.9.2) and *Modelling* (TAG Unit 3.1).

1.1.2 The AST has space to record the impacts of the proposal under the following objectives and sub-objectives:

**environment** - to protect the built and natural environment;

- to reduce **noise**
- to improve **local air quality**
- to reduce **greenhouse gases**
- to protect and enhance the **landscape**
- to protect and enhance the **townscape**
- to protect the **heritage of historic resources**
- to support **biodiversity**
- to protect the **water environment**
- to encourage **physical fitness**
- to improve **journey ambience**

**safety** - to improve safety;

- to reduce **accidents**
- to improve **security**

**economy** - to support sustainable economic activity and get good value for money;

- to get good value for money in relation to impacts on **public accounts**
- to improve transport economic efficiency for **business users, transport providers**
- to improve transport economic efficiency for **consumers**
- to improve **reliability**
- to provide beneficial **wider economic impacts**

**accessibility** - to improve access to facilities for those without a car; and

- to increase **option values**
- to reduce **severance**
- to improve access to the **transport system**

**integration** - to ensure that all decisions are taken in the context of the Government's integrated transport policy.

- to improve **transport interchange**
- to integrate transport policy with **land-use policy**
- to integrate transport policy with **other Government policies**

- 1.1.3 The top row of the AST has space for:
- a brief description of the proposal;
  - a summary of the problems in the initial year and in the forecast year for the do-minimum transport system, and how the proposal addresses those problems. For a highway scheme, for example, this should outline the causes of the problems on the road; an indication of the status and function (importance) of the route; the number of vehicles per day; and the percentage of HGV.
  - present value cost of the scheme to public accounts. The present value cost of the scheme, the cost to Government in cash terms and operating costs should be clearly outlined in the main body of the appraisal.
- 1.1.4 Information presented in the AST should be based on results provided by established techniques to assess the environmental, economic and social consequences of options. The approach is largely based on Cost Benefit Analysis (CBA) and the Environmental Impact Assessment (EIA). For highway schemes, supplementary guidance on the link between the advice of TAG and advice in the Design Manual for Roads and Bridges is provided in *Applying the Multi-Modal New Approach to Appraisal to Highway Schemes* (TAG Unit 2.6). The AST brings together information from these analyses to provide an unweighted overall description of the impacts. Prominence is not given to any one type of effect or to benefits expressed in monetary terms.
- 1.1.5 TAG specifies worksheets for most sub-objectives (including the TEE tables for the transport economic efficiency sub-objective). These provide an essential audit trail, documenting the results of the appraisal process and providing the link between the detailed appraisal work and the AST. Worksheets must accompany the AST for the preferred option, the lower cost option and may be requested for further rejected alternatives. Blank copies of worksheets can be downloaded from the TAG website. For all major schemes, the full ASTs and TEE tables should be used. The AST and TEE tables can be found in *Transport Appraisal and the New Green Book* (TAG Unit 2.7).
- 1.1.6 A summary assessment should be provided for each sub-objective, indicating the size of the impact and whether it is beneficial or adverse. Where standard monetary values are available they should be used.<sup>1</sup> Where impacts can be quantified but not monetised, the summary assessment is quantitative. Impacts that cannot be quantified are generally assessed on a seven-point scale (see the respective TAG unit for each of the sub-objectives). Note that these scales are not cardinal in nature. Each measures a different objective and they cannot be compared directly.
- 1.1.7 The AST should summarise all significant costs and benefits. The balance of this information allows Government to assess overall value for money using judgement about the relative importance of the various impacts. This assessment takes account of all factors, both monetised and non-monetised, as well as qualitative and quantitative information.
- 1.1.8 In forming this judgement, Government may wish to consult the analyses that have been undertaken to derive the information presented in the AST, worksheets and in the final appraisal report. Where submitted information is not readily understood, underlying material may enable the assessor to gain further understanding. Promoters should be ready to submit such information on request.

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<sup>1</sup> Promoters are also welcome to monetise other impacts if they can provide justification, and an evidence base for the monetisation. However the Department cannot guarantee that these monetisations will be accepted. They should also be shown separately to the economic analysis (i.e. in the other boxes in the AMCB table), and should not substitute the normal GOMMMS analysis of the impact.

## 2 Environment

- 2.1.1 Unless otherwise agreed with the Department, appraisals should follow the advice in *The Environmental Objective* (TAG Unit 3.3). For the environmental objectives, schemes that have obtained or will need TWA powers will have an EIA. The requirements of an EIA can be used to inform the scheme appraisal.
- 2.1.2 In assessing the environmental categories listed below it is useful for promoters to consider the 'whole life costings' of schemes from an environmental perspective. This should encompass issues such as disposal costs and the environmental records of supplying companies. Supplier responsibility for disposal should also be considered.
- 2.1.3 The environmental capital approach is used to assess the impact on landscape, townscape, heritage, biodiversity and water environment. *The Environmental Capital Approach* (TAG Unit 3.3.6) explains this procedure.

### 2.2 Noise

- 2.2.1 The approach identified in *The Noise Sub-Objective* (TAG Unit 3.3.2) for assessing traffic noise impacts of proposals should normally be used. This approach is based on traffic data for the transport network both with and without the scheme. Such data, covering changes in traffic flows should be available for most appraisals within the framework provided by the transport model.
- 2.2.2 If the change in road traffic brought about by a proposal is less than 20% (for a decrease in traffic) or 25% (for an increase in traffic), road traffic noise can usually be scoped out. Where traffic flow changes by more than this amount on any part of the network, the change in noise may be noticeable and should be quantified.
- 2.2.3 Even where general road traffic noise changes are scoped out for a public transport scheme, the assessment of noise must consider the effects of the scheme noise itself and any local sensitivities. These sensitivities may apply for rail based systems where wheel squeal may be an important issue or where there are new depot or interchange facilities.
- 2.2.4 Consideration of changes in noise emission alone means little and may be misleading. The approach relates changes in noise level to receptors of noise or the population affected. The nature of major schemes may imply small benefits to large numbers of people, but moderate to severe costs to a small number living near the scheme.

### 2.3 Local Air Quality

- 2.3.1 For major schemes, data on impact of the scheme on road traffic flows is likely to be available from the traffic model. In this case the methodology for plans specified in *The Local Air Quality Sub-Objective* (TAG Unit 3.3.3) should be used. This approach uses road traffic flow data to calculate changes in emissions and relates the results to populations exposed. Proposals which are expected to change traffic flows by less than 10% can usually be scoped out, unless particular local sensitivities exist. In many cases, no further appraisal will be required beyond this point.
- 2.3.2 Conditions in the study area should be indicated by the number of Air Quality Management Areas (AQMAs) declared within the study area. However, it is appropriate to consider the contribution of the strategy to the improvement in air quality in base year AQMAs in the future year. The indicator to be used is the number of AQMAs likely to experience a significant change in air quality. Separate estimates should be provided for the numbers of AQMAs experiencing an improvement and deterioration in air quality.

## **2.4 Greenhouse Gases**

- 2.4.1 The methodology for plans in *The Greenhouse Gases Sub-Objective* (TAG Unit 3.3.5) should be used in major scheme appraisal. The approach uses the Design Manual for Road and Bridges (DMRB) approach for road traffic emissions. Note that electrically powered rail systems may contribute to greenhouse gases at the source of power generation.

## **2.5 Landscape**

- 2.5.1 The approach for plans identified in *The Landscape Sub-Objective* (TAG Unit 3.3.7) should be used to assess the impact on landscape. Landscape features should be described (including any site designations such as Areas of Outstanding Natural Beauty), environmental capital appraised and the schemes' impacts described. An overall assessment score on a seven-point scale should be produced. Examples of effects that should be considered are land take effects and significant changes in traffic flows. Such changes may occur where travellers re-route through rural areas to access park and ride sites, for example. The Countryside Agency should be consulted throughout the design process of all schemes, and it is essential that their views are sought when the preferred option has been identified and is being fully worked up. The Department expects to see both evidence of consultation and the views of the Countryside Agency when the appraisal is submitted.

## **2.6 Townscape**

- 2.6.1 The approach for plans identified in *The Townscape Sub-Objective* (TAG Unit 3.3.8) should be used to assess the impact on townscape. Townscape features should be described (including any designations such as listed buildings), townscape capital appraised and the schemes' impacts described. An overall assessment score on a seven-point scale should be produced. Examples of effects that should be considered are land take and street scene effects, particularly for electrically powered light rail or guided bus schemes and changes in traffic. Design quality is an important element of public sector building projects and should be assessed during the scheme design.<sup>2</sup>

## **2.7 Heritage of Historic Resources**

- 2.7.1 The appraisal approach for plans identified in *The Heritage of Historic Resources Sub-Objective* (TAG Unit 3.3.9) should be used to assess the impact on heritage. Heritage features should be described (including any designations such as ancient monument classifications or listed buildings), environmental capital appraised and the schemes' impacts described. An overall assessment score on a seven-point scale should be produced. Examples of effects that should be considered are land take effects and changes in traffic affecting a historic resource. English Heritage should be consulted throughout the design process of all schemes, and it is essential that their views are sought in the process of option appraisal. The Department expects to see both evidence of consultation and the views of English Heritage when the appraisal is submitted.

## **2.8 Bio-Diversity**

- 2.8.1 The methodology for plans identified in *The Biodiversity Sub-Objective* (TAG Unit 3.3.10) should be used to assess the impact on bio-diversity. Biodiversity and earth heritage features should be described (including any designations such as Sites of Special Scientific Interest), environmental capital appraised and the schemes' impacts described. An overall assessment score on a seven-point scale should be produced. Examples of effects that should be considered are land take effects and changes in traffic affecting a Site of Special Scientific

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<sup>2</sup>Promoters should consult the CABE website: <http://www.cabe.org.uk>.

Interest (SSSI). English Nature should be consulted throughout the design process of all schemes, and it is essential that their views are sought when the preferred option has been identified and is being fully worked up. The Department expects to see both evidence of consultation and the views of English Nature when the appraisal is submitted.

## **2.9 Water Environment**

- 2.9.1 The methodology for plans set out in *The Water Environment Sub-Objective* (TAG Unit 3.3.11) should be used to assess the impact on water quality. The activities proposed and potential impacts identified should be reviewed, and the importance of the water environment within the study area appraised. The potential impacts of the proposal on important attributes should be appraised and a final assessment score on a seven-point scale produced. Examples of effects that should be considered are land take effects and changes in traffic close to an important water resource. The Environment Agency should be consulted throughout the design process of all schemes, and it is essential that their views are sought when the preferred option has been identified and is being fully worked up. The Department expects to see both evidence of consultation and the views of the Environment Agency when the appraisal is submitted.

## **2.10 Physical Fitness**

- 2.10.1 The methodology in *The Physical Fitness Sub-Objective* (TAG Unit 3.3.12) should be used. The impacts under this sub-objective will generally be small unless significant new opportunities for walking and cycling are an integral part of the scheme.

## **2.11 Journey Ambience**

- 2.11.1 The methodology in *The Journey Ambience Sub-Objective* (TAG Unit 3.3.13) should be used. It is important that changes in journey ambience are assessed for all users. For example, for public transport schemes, the re-allocation of road space to buses will likely improve journey ambience to bus users, but may reduce journey ambience to other users. Also, promoters should ensure that quality attributes of the scheme have been properly costed and are not wish lists of desirable features. Promoters should also ensure that double counting with other sub-objectives is avoided. Potential double-counting may occur under the Transport Interchange sub-objective or within the modal constant used in the cost benefit analysis.

# **3 Safety**

## **3.1 Accidents**

- 3.1.1 The methodology in *The Accidents Sub-Objective* (TAG Unit 3.4.1) should be used for appraising changes in the number of road traffic accidents. Accident savings should be considered in full. The impacts should be reported in the qualitative and quantitative columns, and should be monetised. The Department needs to see a clear calculation of accident benefits or disbenefits in the submission, starting from justification for the changes in accident rates in the modelled periods, to how this data was aggregated to a present value. The Department's COBA software should be used where appropriate.

## **3.2 Security**

- 3.2.1 The methodology in *The Security Sub-Objective* (TAG Unit 3.4.2) should be used in appraisal. Promoters should ensure that security attributes such as

CCTV and lighting are properly costed and that double-counting with other sub-objectives, in particular Transport Interchange, is avoided.

## 4 Economy

### 4.1 Public Accounts, Business Users and Transport Providers, and Consumers

- 4.1.1 Impacts on Public Accounts, Business Users and Transport Providers, and Consumers should be prepared following the guidance in *The Public Accounts Sub-Objective* (TAG Unit 3.5.1), and *The Transport Economic Efficiency Sub-Objective* (TAG Unit 3.5.2). The results should be summarised in the Analysis of Monetised Costs and Benefits (AMCB) table, in part filled from the Transport Economic Efficiency (TEE) table as described in *Cost/Benefit Analysis* (TAG Unit 3.5.4).
- 4.1.2 The Department's Transport User Benefit Appraisal (TUBA) software has been developed to calculate these impacts for single and multi-modal schemes. The Department expects the values produced by this software to be used in the TEE tables. Alternatively, the COBA software may be used for straightforward fixed trip matrix highway improvement schemes. This approach needs to be fully justified. COBA also produces results in the form of AMCB and TEE tables.
- 4.1.3 Appropriate modelling should support these analyses, demonstrating changes in traffic flows and costs. More detail is provided in *Modelling* (TAG Unit 3.1) where cost changes resulting from the scheme are relatively small, supporting modelling may be simplified. Such simplifications should in all cases be discussed with the Department. Promoters should consult *Major Scheme Appraisal in Local Transport Plans: Part 3 Detailed Guidance on Forecasting Models for Major Public Transport Schemes* (DTLR 2002).
- 4.1.4 *MSA: Cost Benefit Analysis* (TAG Unit 3.9.2) provides further details on these analyses, including issues relating to costs and benefits. *MSA: Decongestion Benefits* (TAG Unit 3.9.5) discusses highway decongestion benefits arising from public transport schemes, which may contribute to benefits to consumer and business users.

### 4.2 Reliability

- 4.2.1 The reliability impacts should be assessed using the methods in *The Reliability Sub-Objective* (TAG Unit 3.5.7). For public transport trips this approach assesses the lateness of trips. For highway trips the variation in travel time is assessed. For smaller schemes this data may be difficult to assess but in all cases reliability effects should be assessed qualitatively. Also the reliability impacts across all modes needs to be considered, for example some public transport schemes may improve public transport reliability at the expense of the reliability of other modes.
- 4.2.2 When considering the effects on the road network, reliability effects arising purely from modal transfer are likely to be small. For the public transport network reliability will be expected to increase as the degree of full segregation increases, except where capacity is at a premium. Promoters should note where specific reliability measures are included in the scheme, such as active monitoring of vehicle locations and other service control mechanisms.

### 4.3 Wider Economic Impacts

- 4.3.1 The advice in *The Wider Economic Impacts Sub-Objective* (TAG Unit 3.5.8) should be used in the appraisal of major local transport schemes. Where the scheme addresses a regeneration problem, and significant potential impacts on

- a designated regeneration area have been identified, an Economic Impact Report needs to be carried out (TAG Unit 3.5.8). These benefits should be quantified as an expected number of jobs created. If a monetary value is assigned to these jobs it must be shown separately in the AMCB table to the other monetised impacts. The evidence base behind the monetisation will determine whether any values are accepted within the central case of the scheme.
- 4.3.2 Where schemes are expected to affect rural economies, the Countryside Agency should be consulted and their views sought during the process of option appraisal.

## **5 Accessibility**

### **5.1 Option Values**

- 5.1.1 The qualitative procedure defined in *The Option Values Sub-Objective* (TAG Unit 3.6.1) is a satisfactory alternative to the more detailed approach, using guidance from SRA. Promoters should ensure that any adverse effects of the scheme are included, such as withdrawal of through services onto the national rail network following conversion of heavy rail routes to light rail, or reconfiguration of bus networks following the introduction of a scheme. The communities affected may be small but the impacts should be noted. Where schemes are expected to affect rural communities, the Countryside Agency should be consulted and their views sought when the preferred option has been identified and is being fully worked up.

### **5.2 Severance**

- 5.2.1 The methodology in *The Severance Sub-Objective* (TAG Unit 3.6.2) should be used for assessing severance. This approach is based on the estimation of numbers of people affected as set out in the Design Manual for Roads and Bridges Volume 11. Particular considerations include changes in traffic flows, changes in pedestrian facilities and the impact of rail crossings. For major public transport scheme appraisal, approximate estimates will suffice. Where schemes are expected to affect rural communities, the Countryside Agency should be consulted and their views sought when options have been identified and are being fully worked up.

### **5.3 Access to the Transport System**

- 5.3.1 Access to the transport system should be assessed using the approach set out in *The Access to the Transport System Sub-Objective* (TAG Unit 3.6.3). This approach specifies an aggregate indicator of the proportion of residents who do not own a car and do not live within 250m of a public transport service. This indicator does not include service frequency or ease of access to vehicles. In broad terms the cut-off point for frequency effects are an hourly service; increases in frequencies greater than one hour do not contribute to access. Where schemes are expected to affect rural communities, the Countryside Agency should be consulted and their views sought when options have been identified and are being fully worked up.
- 5.3.2 To assess ease of access to vehicles, appraisals may segment residents into those with and without some mobility impairment. A fully accessible low-floor light rail system or bus may offer a significant improvement in access over the existing services. However, the Disability Discrimination Act requires that all new buses are now fully accessible and that the full fleet of local public transport vehicles is fully accessible by 2017 (earlier for some vehicles). Therefore, provision of low floor vehicles may only be assumed to improve access until they are required by law.

## 6 Integration

### 6.1 Transport Interchange

- 6.1.1 The methodology in *The Transport Interchange Sub-Objective* (TAG Unit 3.7.3). for passenger interchange should be used. The interchange attributes of the proposed system will need to have been properly costed and should contribute to the overall objectives. They should not simply be wish lists of desirable features. Promoters should ensure that any disbenefits arising from the scheme, for example to existing public transport users, are included. Promoters should also ensure that double counting is avoided. Examples could be with journey ambience or security sub-objectives, or costs taken into account within the TEE transport interchange penalty.

### 6.2 Land Use Policy

- 6.2.1 The methodology in *The Land Use Policy Sub-Objective* (TAG Unit 3.7.2). should be used in the appraisal. In addition to a description of the impact, a three-point scale of beneficial, neutral and adverse is generally sufficient for the assessment.

### 6.3 Other Government Policy

- 6.3.1 The methodology in *The Other Government Policies Sub-Objective* (TAG Unit 3.7.3). should be used in the appraisal. In addition to a description of the impact, a three-point scale of beneficial, neutral and adverse is generally sufficient for the assessment.

## 7 Further Information

The following documents provide information that follows on directly from the key topics covered in this Unit.

For information on:	See:	TAG Unit number:
The appraisal process	<i>The Overall Approach: The Steps in the Process</i>	TAG Unit 2.1
Models used in transport appraisal	<i>Modelling</i>	TAG Unit 3.1
Appraising options against the environment objective	<i>The Environmental Objective</i>	TAG Unit 3.3
Appraising options against the safety objective	<i>The Safety Objective</i>	TAG Unit 3.4
The economic elements of transport appraisal (including transport economy efficiency, TEE tables)	<i>The Economy Objective</i>	TAG Unit 3.5
Appraising options against the accessibility objective	<i>The Accessibility Objective</i>	TAG Unit 3.6
Appraising options against the integration objective	<i>The Integration Objective</i>	TAG Unit 3.7
Appraisal Summary Table	<i>Transport Appraisal and the new Green Book</i>	TAG Unit 2.7
The links between TAG and DMRB	<i>Applying the Multi-Modal New Approach to Appraisal to Highway Schemes</i>	TAG Unit 2.6

## 8 References

Highways Agency *Design Manual for Roads and Bridges* (DMRB)

*Major Scheme Appraisal in Local Transport Plans: Part 3. Detailed Guidance on Forecasting Models for Major Public Transport Schemes* (DTLR 2002)

OPRAF (1999), SRA Planning Criteria – A Guide to the Appraisal of Support for Passenger Rail Services.

ITEA (Mar 2001) *Transport Users Benefit Appraisal User Manual, TUBA User Guidance with accompanying TUBA software*

## 9 Document Provenance

This Transport Analysis Guidance (TAG) Unit is based on Annex A of *Major Scheme Appraisal in Local Transport Plans: Part 1 Detailed Guidance on Public Transport and Highway Schemes* (DETR, 2001).

Technical queries and comments on this TAG Unit should be referred to:

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