

Addressing the inconsistencies in appraisal practice



ADDRESSING THE INCONSISTENCIES IN APPRAISAL PRACTICE

Why read this guide?

Appraisal is an important part of the decision making process. This guide is designed to help practitioners understand what appraisal is and why it is carried out. In doing this it points out some of the pitfalls and assumptions that are part of common appraisal practice.

Carrying out an appraisal properly is a challenging task. It is important to understand what is being done and why it is being done so that appraisal can play an appropriate role in making decisions about changes to transport infrastructure.

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Introduction

This document is one of the outputs of the DISTILLATE (Design and Implementation Support Tools for Integrated Local Land use, Transport and the Environment) research programme. DISTILLATE was funded under the EPSRC (Engineering and Physical Sciences Research Council) Sustainable Urban Environment Programme and is aimed at overcoming the barriers to the effective development and delivery of sustainable urban transport and land use strategies. This output is from DISTILLATE Project G - Enhanced Appraisal Methods.

During the development of the DISTILLATE programme, as well as from surveys carried out during the programme (as part of Project A - Organisational Behaviour and Barriers), appraisal was identified as a barrier to the development and delivery of sustainable urban transport and land use strategies by local authorities. Some of their concerns were technical aspects of appraisal (the dominance of travel time savings was the main one) as well as concerns about their ability to appraise some types of policy (including small schemes and behavioural and attitudinal measures) and to assess the distributional effects of proposals.

The following barriers were identified from the first and second Project A surveys and other stakeholder inputs:

1. Some impacts are not well represented in appraisal
2. We don't know what the impacts of certain policy instruments are
3. Appraisal/assessment methods for some policy instruments are not well developed
4. Appraisal can be time consuming, onerous and expensive
5. What should the relationship be between appraisal, VfM, and the choice of schemes to deliver policy?
6. The distributional impacts of projects are not easy to represent in appraisal

1 and 2 were felt to be important issues, but of more general concern and with much wider implications; it was therefore decided not to pursue these further. There were also a couple of more technical issues:

- A concern about the accuracy of valuations
- Philosophical concerns about the valuation of impacts

Again, these are important (and the subject of considerable academic interest), but of less immediate concern to local authorities and therefore not a priority for the project.

From the remaining barriers it was decided to look into:

- The development of a method for the assessment of small schemes (this became Product G2)
- The representation of distributional issues in appraisal (Product G3)
- The role of appraisal in decision making (Product G4 – this document).

This guidance note starts from first principles in attempting to introduce the concept of appraisal, what it can be used for and how it is used in practice. It makes a series of recommendations based upon the analyses presented. It uses a number of terms of art which are defined in the glossary.

All DISTILLATE outputs are available through the programme website:

www.distillate.ac.uk

1. What do we mean by appraisal?

In its widest sense appraisal is a structured way of considering the worth of a proposed course of action (the proposal) by studying its impacts. The output of an appraisal can be used to help decide whether to undertake the proposal (section 2). An appraisal methodology is likely to include methods for identifying the different impacts to be considered (section 3). It may include guidance on predicting the magnitude of each relevant impact (section 4) and how to judge the different impacts in the appraisal process (section 5). This may involve considering the relative weights to give the impacts (section 6). Other important considerations are how to take into account the different impacts a proposal might have on different groups (section 7) and how the results of the appraisal are used in the decision making process (section 8). An important consideration in all this is the how appraisal is used within the wider political and practical process (section 9). Figure 1 illustrates schematically the structure of this document.

In considering a proposal it is important to realise that it has to be compared with a situation in which the proposal is not carried out. The impacts are the differences caused by the proposal. This in turn requires a clear definition of the situation without the proposal, which is conventionally either a “do-nothing” base or a “do-minimum” base. The former assumes that nothing else is done, which may over-estimate the resulting problems. The latter assumes that committed policies are implemented, and hence that some underlying problems are mitigated. In either case the assumptions on the base need to be specified carefully to avoid over-estimating the impact of the proposal.

It is important to draw the distinction with evaluation, which is the process of assessing the worth of a proposal once it has been implemented. Here the issue of prediction no longer arises, but is replaced by concerns over which impacts are measured, and how they are measured. We do not consider evaluation further in this guidance document.

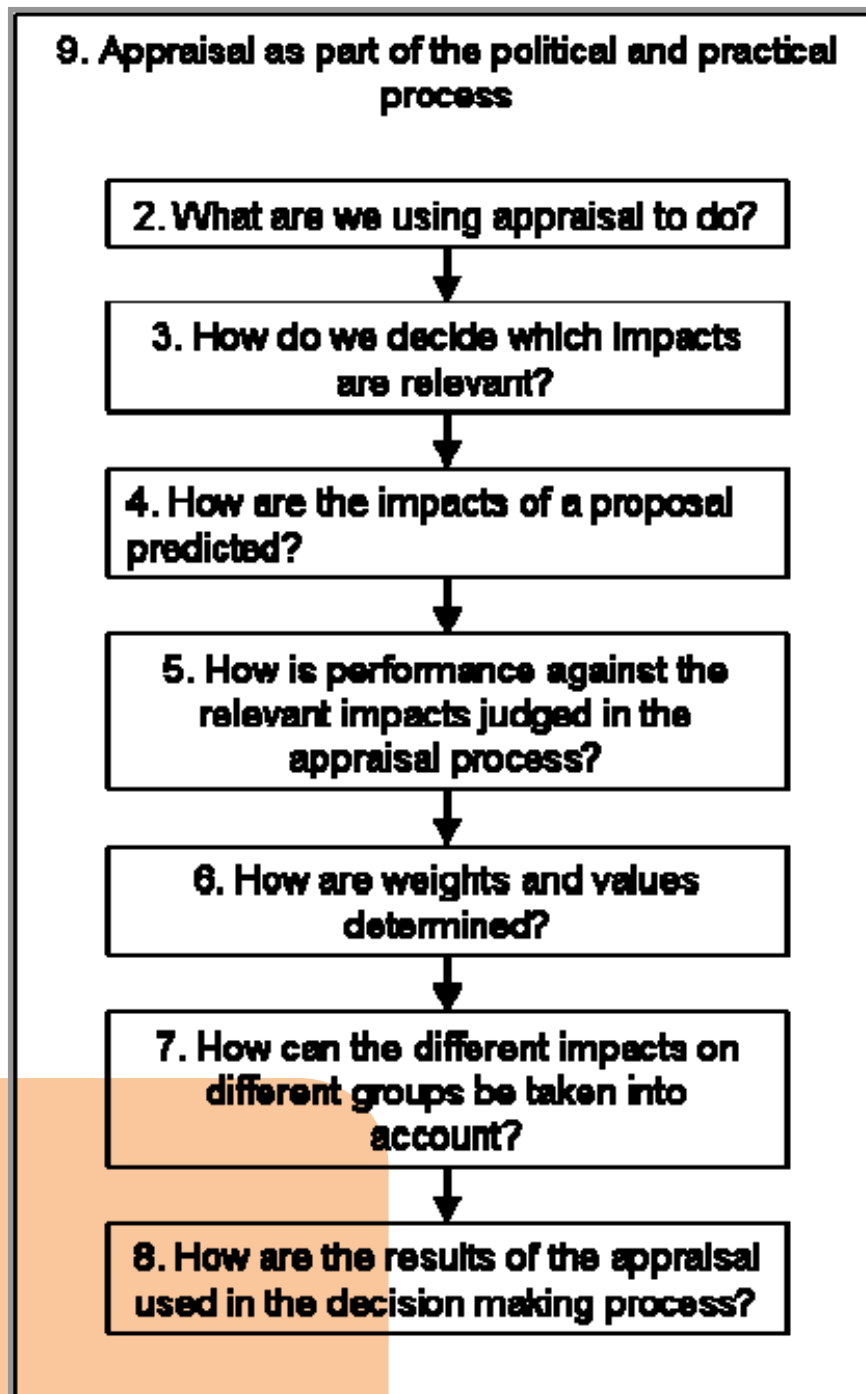


Figure 1 How the different sections of the document fit together

2. What are we using appraisal to do?

Essentially, the output of an appraisal should help make an informed decision about a particular proposal.

In this broad sense, appraisal can be used at a number of stages in the development of a proposal to assist in:

- a) Prioritising outline solutions to be developed further (particularly in shortlisting major projects for detailed development)
- b) Enhancing the design of an option for a given scheme
- c) Selecting a preferred option for a given scheme (typically for major schemes and other substantial policy interventions)
- d) Selecting a shortlist of schemes to be implemented within a given budget
- e) Selecting a preferred policy package (typically for a series of minor schemes of a given type), often within a given budget
- f) Deciding whether to proceed with a given scheme or not.

These applications will not necessarily arise in this sequence, but the scrutiny that an appraisal process receives will typically be greater for the later decisions in this list, since there is more to be lost by making what may be seen as the “wrong” decision. However, even the earliest decisions can be sensitive, particularly where a community sees its solution (e.g. a bypass) being judged as insufficiently worthy to justify further action. Perhaps the least contentious use is for (b), where if appraisal is used well it will help the designer to identify and overcome adverse impacts of the initial design. Unfortunately, this is the application for which appraisal is currently least widely used.

Recommendation/comment:

While, in theory, a “perfect” appraisal method should be applicable to all these situations, in practice the design of the most appropriate appraisal method may well depend on the applications for which it is to be used. It is therefore important to be clear on the purposes for which a given method is to be used.

3. How do we decide which impacts are relevant?

Appraisal requires a statement of how the worth of a proposal is to be assessed. This usually involves considering one of four ways of identifying the relevant impacts or measures of performance (which are not mutually exclusive):

- a) all the possible impacts of a proposal are considered
- b) the impacts considered are those which are related to the decision maker's objectives, which are typically descriptions of a desired direction of improvement (such as increased accessibility), and may or may not be converted into formal measures of performance
- c) the impacts selected are represented by indicators, which are numerical measures of performance against objectives (often referred to as outcome indicators), but can also include intermediate outcome indicators such as changes in mode shares or numbers of journeys
- d) the impacts selected are those which have been represented by targets, which are specific levels of desired performance against some or all of the selected indicators.

Several further questions arise depending on which approach is being used.

Arguably, all the impacts of a proposal should be taken into account as they may be important to some stakeholders. Assessing all the possible impacts of a proposal in this way provides a comprehensive assessment, but it can be challenging both to identify all the possible impacts of a proposal and to assess them all. Many of these impacts may be unimportant to the decision maker and therefore might be ignored (unless, as is the case with NATA, the appraisal methodology specifies otherwise). Some appraisal methodologies prescribe the different impacts that should be taken into account and how this should be done in order to avoid this problem, but this runs the risk of omitting some which might be important to the proposal being considered.

If impacts based on objectives are being used, it is important to ensure that the set of objectives specified reflect the full range of concerns of the decision-makers (see section 8). It may be that decision-makers wish to achieve certain objectives (e.g. reducing congestion, improving air quality) while avoiding certain constraints (e.g. adversely affecting the economy or increasing inequity). It is important to realise that these constraints are in reality also objectives and need to be reflected in the appraisal process. Where decision-makers feel that the "wrong" decision has been recommended, this can arise because their real objectives have not been fully reflected in the appraisal method; this in turn can happen because they have not been asked to articulate their objectives and constraints clearly. Such under-specification of objectives is a particular risk where the objectives have been specified by another agency or tier of government.

Indicators have the advantage of being quantifiable, and hence facilitating a numerical analytical appraisal process. They can be used to represent the impacts of a scheme but they will inevitably be a subset of the full set of impacts. If indicators are to be used, do they fully reflect the decision maker's objectives and constraints? There is always a risk that some objectives or constraints are overlooked completely. Even where all objectives are considered, it will be easier to specify indicators for those which are readily quantified (e.g. reduction of accidents) than for those which are more qualitative (e.g. improved townscape; a more robust economy). Where indicators are used for some objectives but not others, there is a danger that those

which are not measured will receive less attention in the appraisal. Even where an objective is represented by indicators, it will not necessarily be fully reflected. For example, protection of the environment can be reflected by a series of indicators of specific pollutants, but a pollutant (or another attribute such as noise) which is not measured will be overlooked. As another example, measuring accessibility in terms of the number of people within a given time of a given type of activity will implicitly overlook the effects on those who have much longer journeys, or wish to access other types of activity.

There is a particular risk in using intermediate outcome indicators, such as the number of bus or cycle trips. Unless increasing use of these modes is really an objective in its own right, using such indicators simply begs the question: why do we want to increase use in this way? If it is to reduce congestion or environmental impact, then it is crucial to determine whether the new bus or cycle trips arise because users are no longer travelling by car or, perhaps, because they are making new journeys, or no longer walking. True outcome indicators such as impacts on congestion and the environment will be much more reliable indications of success than intermediate outcome indicators of this kind. However, they may be far more difficult to measure and more indirectly affected by the initial intervention, meaning that the impact of the intervention may be much more difficult to identify. DISTILLATE guides on developing a monitoring strategy and selecting indicators provide further guidance (Marsden, 2008a and Marsden 2008b).

Targets specify the desired levels of achievement for given indicators. They have the advantage of specifying a set of clear quantified goals for a strategy, but they involve a number of implicit assumptions of which it is important to be aware. It is assumed that they will be based on a subset of the chosen indicators. The same considerations as for indicators therefore apply. Moreover, if targets are not set for certain indicators, this will imply that those indicators are given less (or zero) emphasis in the appraisal process.

Targets are often used as requirements for action at specific locations. This is the case, for example, with Air Quality Management targets which aim to achieve pollution levels below a given threshold on all streets. If setting such a target is all that is done, then implicitly improvements in the direction of the target are worthwhile only as long as the target has a chance of being achieved, and any additional performance against the given indicator which exceeds the target is of no interest, and hence of no value¹. This is equivalent to suggesting that there is a “step function” relationship between the level of an indicator achieved and the benefits which result. There is an important distinction to be made here between targets which apply to a limited geographical area or point (eg pollution levels on specific streets) and targets which are considered over a wider area (eg total greenhouse gas emissions from road transport in the local authority area). In the latter case any specific proposal may contribute to the overall achievement of the target, so any beneficial contribution by the proposal should be considered of value.

If a decision maker is approaching the setting of a target rationally, then the setting of a target implies that the benefits of achieving it outweigh the costs of doing so. Again, this is an important implication, and one which is often difficult to justify without developing and costing a strategy which would achieve the target. Finally, setting a range of targets implies that each is equally achievable, and that the benefit-cost ratios of achieving them are broadly equal. For all these reasons it may be preferable

¹ Note that this does *not* mean that such improvements are *actually* of no value, only that they will be treated as such if achievement of the target is the only criterion upon which success is judged.

to develop a strategy first in terms of a series of objectives and indicators, and then set targets in terms of the expected performance of that strategy. However, this may be difficult to incorporate into the political process which often involves a public statement of priorities before detailed consideration of whether these are feasible or not.

In practical terms it may be beneficial for an appraisal methodology also to consider aspects such as “buildability” or “practicality”. These should indicate whether the proposal could be implemented were funds to be made available. In theory these could be represented by other factors (eg cost), but because they could simply prevent a proposal from going ahead, they may be considered explicitly as additional factors to be borne in mind once a scheme has satisfied the initial appraisal.

Recommendations and comments:

Ideally appraisal methods should be flexible enough to encompass all impacts of concern to the relevant stakeholders. This implies the use of an open-ended list of impacts. Where this cannot be done, particular care is needed to identify any relevant impacts for the proposal in question which have not been included.

Appraisal can be based on objectives, but care is needed to ensure that these reflect the objectives of the stakeholders relevant to the proposal in question. The list of objectives should include the constraints which those stakeholders wish to avoid.

Appraisal is most frequently based on indicators, which have the advantage of being readily quantified. However, care is needed to ensure that the indicators selected reflect the full range of impacts or objectives of concern to stakeholders, and that the indicators for any impact or objective reflect it fully. Outcome indicators will typically be more appropriate than intermediate outcome indicators, since they reflect directly the objectives of concern. Further advice on the selection of indicators is given in the DISTILLATE guides on developing a monitoring strategy and selecting indicators (Marsden 2008a and Marsden 2008b).

The method developed in DISTILLATE for the assessment of small schemes has the particular benefit of encouraging users to specify the list of impacts which are relevant to their particular problem (Jopson et al., 2008).

There is an underlying incompatibility between the achievement of targets and the enhancement of performance, as represented in the appraisal process. This makes the combination of the two in a target-based appraisal fraught with danger. It should be avoided where possible.

Consideration of buildability should either be included in the appraisal method, or considered once a proposal has satisfied the requirements of the appraisal process.



4. How are the impacts of a proposal predicted?

Prediction of impacts can be based on a range of methods of increasing complexity, including:

- a) professional judgment
- b) libraries of information on performance elsewhere
- c) simple models and spreadsheets
- d) complex models.

In theory, more complex models will provide estimates of greater accuracy. However, they can be less transparent, both in terms of the process used to calculate the impacts and the assumptions made by the model analyst. Conversely, the simpler approaches are more transparent, and it is thus easier for the decision-maker to decide whether the resulting estimates are acceptable, although this will remain a matter of judgment. However, they will typically omit detailed outputs, such as link flows, which may be of importance in determining impacts.

Since any prediction process is uncertain, it is better to provide a range of likely outcomes for each impact, objective, indicator or target, by varying the assumptions made by the model analyst. Appraisal methods which assess the robustness of performance against such ranges of outcomes are therefore preferable. The particular case of appraisal against targets may simplify this task. If the scheme is predicted to achieve the target throughout the range of estimates, then it is acceptable, and no further sensitivity analysis is needed.

Recommendations and comments:

The accuracy of an appraisal depends critically on the accuracy with which the impacts are predicted. Unless the prediction method is known to be of an acceptable level of accuracy, it is preferable to introduce sensitivity and robustness testing into the appraisal, and to assess the sensitivity of the resulting performance to a range of values for the key indicators.

Simpler, more transparent predictive models make it easier to understand the sensitivity of impacts to model assumptions and inputs. Our sketch planning model, MARS, has been developed with this in mind (Pfaffenbichler et al., 2008). Our impact assessment tool for the Strategic Transport Model (STM) should also help to do this different land use scenarios (Ash, 2008). However, such models may not provide the level of detail needed for some appraisals.

5. How is performance against the relevant impacts judged in the appraisal process?

Again, there is a range of approaches to judging performance, including:

- a) satisficing, in which a scheme is assessed based upon whether it achieves at least a certain level of performance; this is typically the approach adopted with targets
- b) disaggregate appraisal, in which performance against each impact, objective, indicator or target is considered separately, and no attempt is made to aggregate them, or to consider trade-offs between better performance against one indicator and poorer performance against another
- c) aggregate appraisal, often referred to as multi-criteria appraisal, in which performance against all impacts or indicators is summed, often after being weighted to reflect the differing importance of different impacts or indicators (see section 6)
- d) cost-effectiveness, in which information about costs and resulting changes in indicator levels are combined to give information about how cost effective a proposal might be in helping to meet particular improvements in indicators
- e) cost-benefit analysis, in which all the impacts or indicators are assigned resource values, and a cost-benefit ratio is developed.

Satisficing involves the same assumptions as the use of targets, as discussed in the previous section. However, it can only be used where a simple yes/no answer is needed. If a scheme meets some targets but not others, it will be deemed not to satisfy the requirements, and therefore to have failed the appraisal. It is unusual to apply satisficing at the scheme level except for process type targets (eg. cost overruns). In practice it is more common to consider that a scheme which meets some targets has some value, and thus to adopt one of methods (b) to (d).

Disaggregate appraisal is the most defensible of the approaches, since it makes no assumptions as to the relative worth of performance against the different impacts or indicators. However, it leaves the decision-maker with what may be a long list of impacts, and the decision-maker will then need to judge their relative importance, implicitly or explicitly, in making a decision. Such a process will inevitably lead to different decision-makers reaching different conclusions. This is not necessarily a problem and may be wholly justifiable, but emphasises that it is important to see appraisal as an input to an overarching decision making process, not a decision making process on its own (see section 8). However, differences can be difficult to explain, unless all decision-makers also record the basis on which they have reached their decisions. Disaggregate appraisal can be used with impacts, objectives, indicators and targets.

Aggregate appraisal results in a single measure of performance in units of a pre-defined appraisal metric (which might, for example, be a percentage score). It therefore requires the use of weights for the different indicators, as discussed further below (see section 6). It thus provides a simple basis for comparing the merit of alternative solutions. However, it is dependent on the acceptability of the weights applied. It is possible to use the sensitivity tests discussed above (see section 4) to test robustness against a range of possible weights. Aggregate appraisal can be used with impacts, with indicators and with targets based on measures such as the extent of achievement of each target. It can also be used with quantified objectives.

However, aggregation will tend to mask distributional effects. Approaches to dealing with this are covered in section 7.

Cost effectiveness is in principle a simple extension of aggregate appraisal which applies a monetary estimate for the value of the appraisal metric. A judgment is made of the number of units of the appraisal metric which justify a unit of expenditure. However, this judgment is not clear-cut, and may vary between decision-makers. Once again it will be necessary for decision-makers to record the basis for their trade-offs between benefits and money. Cost effectiveness appraisal can be used with the same types of performance measure as aggregate appraisal, and the same limitations on appraisal of distributional impacts apply.

Cost-benefit analysis is a further development of aggregate appraisal which assigns money values to changes in levels of all impacts or indicators. It is thus critically dependent on the ways in which these money values are determined, as discussed below (see section 6). As with aggregate appraisal, it is possible to test the sensitivity of cost-benefit appraisal to the money values assigned, though this is rarely done in practice. Cost-benefit analysis can only be applied to indicators and quantified objectives to which money values can be assigned. It is incompatible with target-based appraisal unless it is possible to assign a monetary value to the achievement of each given target.

Both cost-effectiveness and cost-benefit appraisal introduce implicitly the concept of value for money. While cost benefit analysis provides a clear indication, through the benefit cost ratio, of the benefits achieved by each pound spent, this assessment is only as accurate as the money values used for different impacts. Cost-effectiveness appraisal is similarly dependent on the money value assigned to the aggregate metric. Some guidance suggests that decision-makers can assess value for money based on disaggregate and in some cases qualitative appraisal. While this is in principle possible, it requires an assessment of the money value of each impact considered, and the resulting assessment will be critically dependent on these values.

Assessing small schemes

As part of Project G (Enhanced Appraisal Tools) a method was developed for assessing small schemes (Kelly et al., 2008). This uses a simple assessment matrix which allows users to select a set of indicators appropriate to their circumstances, weight the indicators in terms of importance, assess the impact of proposed project(s) against the indicators, and finally combine the weighting and assessment to derive a final score that will give an indication of whether a project is worth pursuing, or a priority list where more than one project is assessed. Packages of measures can also be assessed. A pick list of potential indicators is provided derived from the NATA guidance (DfT, 2004d), national government guidance on local transport plans (DfT, 2004e) and other appropriate sources. Users are also able to add their own local indicators, which may reflect specific local or regional concerns. The actual method used to combine the indicators and provide an overall “score” is a simple linear additive one using the user’s own assessment of the weight that should be given to each indicator and the level of impact resulting from the scheme. The method has the advantage of transparency and users are encouraged to use the method to explore their own decision making process in an iterative manner. The method can also be used to show how a decision was reached and demonstrate the decision making process to stakeholders.

Recommendations and comments:

Like target-based appraisal, satisficing is unlikely to provide a satisfactory and acceptable basis for appraisal.

Disaggregate appraisal is the most defensible of appraisal methods, since it makes no assumptions as to the relative worth of different impacts. However, it leads to a more complex decision-making process and to results which will, justifiably, differ between decision-makers.

Aggregate appraisal offers a suitable balance between simplicity of decision-making and acceptability of assumptions, particularly if combined with sensitivity testing of the weights assumed for different impacts. Our appraisal method for small schemes is based on this approach, and allows the effects of different weights to be clearly identified.

Aggregate appraisal masks the distributional impacts of a proposal; ways of dealing with this are discussed in section 7.

Placing money values on aggregate appraisal metrics (in cost-effectiveness appraisal) or on individual impacts (in cost-benefit analysis) introduces further assumptions, which should ideally be addressed explicitly through further sensitivity testing.

Value for money as a concept is open to a range of interpretations. While it is a straightforward output of cost-effectiveness appraisal and cost-benefit analysis (subject to the caveats above on money values) it can only be applied to disaggregate appraisal by explicitly or implicitly assigning money values to all impacts. For clarity it is preferable to specify the type of appraisal method among those listed in this section, and define value for money, if needed, in terms of the outputs of the chosen method.



6. How are weights and values determined?

As noted above, aggregate appraisal requires the assignment of weights to different indicators. Such weights can be simple weighting factors, or they can use a more complex relationship between performance and score. For example, if noise were considered unimportant below 50dB, and particularly critical above 60dB, it would be possible to adopt a weight of zero per dB up to 50dB, x per dB between 50dB and 60dB and (say) $2x$ per dB above that level. The weights could be those which the decision-makers consider appropriate or they may well in turn wish to base them on stakeholders' values. There is a large literature on ways of determining the appropriate weights to use. As noted above, sensitivity to changing weights can be tested in some formal aggregate appraisal methods. It is important to note that, if it proves impossible to assign a weight to a given attribute, and it is thus not included in the aggregate appraisal, impacts against this attribute are implicitly treated as unimportant (of zero "value").

Similarly, there is a considerable literature on the valuation of resource costs and benefits for different indicators, and some research reports have listed the values in use in different European countries (Mackie and Kelly, 2007). However, there are a number of pitfalls in such valuations, including issues of accuracy and ethics, which have led some countries not to assign such values for some or all attributes. If a cost-benefit analysis is conducted solely for those attributes which are valued, this will imply that the other attributes are of no value.

Cost benefit analysis methods include assumptions on the period over which the appraisal applies, and the rate at which future benefits are discounted. Depending on the values chosen, costs and benefits which arise in the more distant future will be treated as of little or no value. One important effect this has is a reduction in the value of the impacts felt by future generations, which has equity implications (see section 7).

Recommendations and comments:

If aggregate appraisal is to be used, care is needed in selecting the weights to be used. Ideally a range of weights, reflecting the interests of different stakeholders, should be used, and the robustness and sensitivity of the appraisal outcome tested against that range.

If money values are to be applied, they need to be soundly based, or to be subject to similar robustness and sensitivity analysis.

7. How can the different impacts on different groups be taken into account?

The fairness with which the different costs and benefits of projects are distributed may be of crucial importance to the deliverability and political feasibility of a project but it is difficult to represent in conventional appraisal. For all the ways of judging performance outlined above (see section 5), the treatment of equity will be problematical as it concerns the distribution of impacts, rather than the impacts themselves. Aggregate methods are particularly inconsistent with distributional appraisal, since they mask the individual impacts. Different groups within society may be differentiated by (amongst other considerations):

- Age
- Ethnicity
- Gender
- Disability
- Income
- Employment
- Geography
- Road user type
- Journey type
- Current and future generations.

The effects of a proposal may differ by group, and different groups may have different susceptibilities to different impacts. These differences can be particularly difficult to predict using conventional models.

Including the distributional impacts in appraisal

While DfT and Treasury guidance both stress the need to take into account distributional issues in project appraisal (H M Treasury, 2003, DfT, 2004e), there is little detailed information or experience on how this might be achieved in practice. As part of Project G (Enhanced Appraisal Tools) a method was developed for appraising distributional impacts at both the scheme and strategy level. This looked at road space reallocation at the local level using an innovative approach involving local stakeholders (Jones and Paskins 2008a) and also at the cross sector impacts of transport related decisions (Jones and Paskins, 2008b). The tools that were developed will help local authorities to identify the relevant stakeholder groups in different contexts, measure current conditions and the likely impacts of policy measures on different groups and assess how the differing circumstances and concerns of these different groups might be taken into account.

Recommendations and comments:

An effective method for appraising distributional impacts needs to identify all of the impact groups of concern, and to be sufficiently flexible to allow additional groups to be added.

Such methods also need to identify the effect of each impact on each impact group, and to reflect the sensitivity of each group to each impact. It is difficult to conceive of such a method being combined with any form of aggregate appraisal.



8. How are the results of the appraisal used in the decision making process?

The role of appraisal in the decision making process may be absolute or only part of a wider decision-making process. The following situations may arise:

- a) The results of the appraisal are taken into account along with other inputs to the decision making process. In this case the outcome of an appraisal is an aid to decision making and is not the sole basis for decision making for any proposal.
- b) The results of the appraisal determine whether the proposal clears a hurdle in gaining approval; subsequently other inputs are taken into account
- c) The results of an appraisal are the only input in determining whether a proposal should go ahead at all.

An important consideration in the legitimacy of these different approaches is the way in which the appraisal technique itself has been used. It is observed in Deliverable G1 (Page et al., 2007) that, broadly speaking, appraisal can be used, for any of these three situations, in two different senses:

1. It can be used to decide the overall net “value” of a proposal by application in an “objective” way – that is by (as far as possible) an impartial application of relative valuations or weightings over the full range of different impacts. In this case, the valuations or weightings may be supported by research or empirical studies into the appropriate importance of the impact and the approach will attempt to cover all the possible impacts of the scheme. In this approach to appraisal, impartiality and comprehensive coverage are the guiding principles so that the appraisal can be presented as being as “objective” as possible. Appraisal in this sense is most often conducted with aggregate appraisal methods, though disaggregate methods can be used provided that the basis for the final judgment is made clear (see section 5).
2. Alternatively, appraisal can be used in a more interactive way to explore the consequences of using different ways of judging the performance of a proposal. This can allow prioritisation of different objectives (eg reduction in fatalities in road traffic accidents), but implies a more subjective assessment of the relative importance of different impacts and could be expected to lead towards a more subjective result. Appraisal in this sense is more commonly conducted with disaggregate appraisal methods. However, when conducted with aggregate appraisal methods the decision maker can explore the sensitivity of the result to the use of different weightings for different impacts and the possible omission of certain impacts altogether if they are not felt to be important (see sections 5 and 6).

In appraisal in sense 1, at least in theory, all the impacts of a scheme are considered in an “objective” manner, so it is difficult to argue that the result is “wrong”, unless there is some flaw in the method. However, in practice, given the range of impacts included, the approach will inevitably involve some element of judgment on relative weights and values, which may be implicit rather than explicit. Moreover, appraisal in this sense has traditionally ignored the distributional impacts of a scheme which could be seen as an additional “dimension” to the decision making process (see section 7). It could be entirely sensible to ignore the results of an appraisal, even in sense 1, if the equity impacts are unacceptable.

Nottingham “Turning Point” scheme - policy fit

An interesting case study of the use of appraisal and decision making at Local Authority and Central Government level is the development of the Turning Point scheme by Nottingham City Council.

The proposal to remodel the road network in central Nottingham was the subject of a major scheme (Annex E) bid for DfT support in May 2002. The key objectives of the scheme were:

- Reduce the barrier effect of the Inner Ring Road
- Improve the interchange and access to public transport
- Integrate with Nottingham Express Transit (Light Rail) line 1
- Re-allocate road-space for buses
- Re-allocate road-space for pedestrians and cyclists
- Improve management of loading and unloading
- Extend Clear Zone principles
- Reduce general traffic movements
- Coordinate with bus operator service re-casting

The proposal was developed to help deliver the aims of Central Government transport policy as expressed in the 1998 White Paper, “A new deal for transport: better for everyone” (DETR, 1998). All the above objectives were in line with the document and in support of their application Nottingham City Council cross referenced the objectives of the scheme against the Transport White Paper. As such the scheme had an excellent “policy fit” with the transport policy of Central Government.

Nottingham “Turning Point” scheme - appraisal

The submission for the Nottingham Turning Point scheme included a full appraisal of the scheme using NATA. The Appraisal Summary Table listed the major impacts as:

Objective	Sub objective	Assessment (+++ = strong positive, 0 = neutral, --- = strong negative)
Environment	Noise	++
	Local Air Quality	+
	Greenhouse Gases	+
	Landscape	0
	Townscape	+
	Heritage	0
	Biodiversity	0
	Water Environment	0
	Physical Fitness	+
	Journey Ambience	++
	Safety	Accidents
Security		+
Economy	Transport Economic Efficiency	---
	Reliability	++
	Wider Economic Impacts	+
Accessibility	Option Values	0
	Severance	+++
	Access to the Transport System	0
	Transport Interchange	++
	Land-Use Policy	Beneficial
	Other Government Policies	Beneficial

The only negative impact listed on the AST was on Transport Economic Efficiency (this is also given in a quantitative form as a net present value (NPV) and a Benefit to Cost Ratio (BCR)). The calculation of this impact involves adding together the benefits (or disbenefits) to different transport users, the costs of the scheme (always negative) and the other impacts on Government (eg tax revenues). This gave an NPV of approximately -£24M and a BCR of -1.65.

The reason for this was that the scheme involved diverting motorised traffic and therefore there were significant disbenefits to car and goods traffic which were not compensated for by any quantifiable benefits to public transport users and pedestrians. The scheme did have significant accident reduction benefits which were also monetised (NPV = £11.7M), but these were not enough to make the overall NPV positive.

Nottingham City Council lobbied for the scheme on the grounds of its excellent policy fit and were able to persuade the DfT to fund it despite its very poor BCR. The scheme received provisional acceptance in December 2002, full acceptance in December 2003, it was started in January 2004 and has since been completed. It is widely regarded as a success and has helped in the regeneration of this part of Nottingham.

Subsequently, DfT guidance on value for money has been revised and now suggests that any scheme which has an BCR below 1 would now have very little chance of being funded (DfT, 2004b). The scheme would also be very unlikely to perform well under any regional prioritisation process which is now used as a “first sift” of major schemes at regional level.

Issues raised by the Nottingham “Turning Point” scheme

This case study is an interesting example of a scheme which has an excellent “policy fit”, but faced significant problems in getting funded because of very poor value for money (VfM) under the definition used in NATA. This poses some interesting questions:

- Should Nottingham have looked for a scheme which had a good VfM and a good policy fit instead?
- Would it be justified to change NATA or develop a new appraisal process to ensure that schemes with a good policy fit score well even if this meant developing a different appraisal methodology every time transport policy changed?
- Should we try and incorporate more impacts into the NATA VfM calculations (even if this still means that policy fit and VfM are sometimes at odds)?
- Should we accept that NATA and VfM should only form a part of the input to a decision making process and it should not be accorded an overarching importance (as in the current guidelines on scheme acceptability)?

8.1 The use of appraisal in NATA

The New Approach to Appraisal (NATA) is used to appraise major (>£5M) schemes which require Department for Transport funding or approval. In NATA (DfT, 2004a) the Appraisal Summary Table (AST) summarises impacts, some of which are assessed by qualitative scoring, others by quantification and others by quantification and valuation (present value of benefits or costs). The aim is to assess whether the project represents value for money in terms of whether the “overall net value” (DfT, 2004a) is greater than the costs. It is not possible to directly compare all the different impacts to assess an overall net value but “the person assessing the ‘overall net value’ – the ‘assessor’ – is required to derive their own estimate by exercising their own judgement about the relative importance of the various impacts” (DfT, 2004a).

NATA therefore combines elements of disaggregate appraisal (different impacts are presented separately in the AST) aggregate appraisal (the decision maker is asked to combine the impacts using some estimate of relative value) and cost benefit analysis, because a subset of the impacts are valued and a cost benefit ratio is derived.

However, it is also clear that NATA can be considered as an appraisal methodology in sense 1 (above), that is, it attempts to consider all the impacts of a scheme and uses (as far as possible) “objective” weightings for the different impacts. Where weightings are not available, the guidance seems to suggest that the assessor (or decision maker) should make a disinterested assessment of the relative importance of the different impacts. However, there is little guidance on how this should be done.

Recently, NATA has moved towards the quantification and valuation of more impacts with noise and carbon dioxide emissions recently being added to the impacts which are expected to be valued in monetary terms. The recent NATA Refresh consultation (DfT, 2007a) suggests that the DfT are interested in moving further in the direction of greater quantification.

NATA is typically applied either in situation (a) or situation (b) above. For local authorities, the experience is more often of NATA being used in situation (b), as a hurdle which a proposal needs to clear. It is this experience, in particular, which leads local authorities to perceive appraisal as a barrier (see section 1).

DfT (2004b) guidance suggests that the Department will not fund projects with a poor value for money, is unlikely to fund projects with a low or medium value for money, but will fund most projects with a high value for money. Even though the assessor is encouraged to estimate the “overall net value”, the Department assesses value for money more narrowly in terms of those impacts which are considered in the cost benefit analysis. This implicitly means that economic value for money dominates the other public policy objectives.

This in turn means that there is a risk that a proposal, even when it reflects the wider transport policy objectives of the local authority as reflected in the AST, might be prevented from going ahead because of an unfavourable NATA assessment. In some cases this problem can be avoided by changing the design of the proposal, but as noted in our guidance on funding (Binsted and Brannigan, 2008a) this may make the solution less consistent with the underlying local objectives. While there is a logic in saying that national government funding should be based on national policy

objectives, it is inconsistent with the principles of integrated transport planning for these national objectives to be applied to some parts of the strategy and not others.

Including the cost of carbon in appraisal

Current Central Government guidance (DfT, 2006) on appraisal includes values to be used for estimating the damage arising from carbon emitted into the atmosphere. At the moment these are based upon the Social Cost of Carbon. The values to be used are given as (from DfT, 2006 in £ per tonne of carbon in 2002 prices):

Year	2000	2002	2006	2010	2020	2040	2060
Central Estimate	72.45	74.52	78.66	82.80	93.15	113.85	134.55

A litre of petrol produces about 0.63 kg C when it is burnt, taking the 2006 figure above means that this has a value of about 5 pence. In the recent consultation on NATA (DfT, 2007a), the DfT has proposed moving to an approach based on the Shadow Price of Carbon which is likely to have the effect of reducing this value.

Government guidance also advises that the value of fuel duty should be included in appraisal (DfT, 2004c). In April 2007 about 48.4 pence of the 91.9 pence pump price of unleaded petrol was duty (DfT, 2007b).

Considering the “benefit” of reductions in CO₂ and the “cost” of reductions in fuel duty together, it is clear that a measure which results in an overall reduction in fuel use (and therefore CO₂ emissions) will have a significant net “cost” associated with it. At first this appears to be inconsistent with the overall Government objective of reducing CO₂ emissions, but it comes about simply because of the relatively high tax on fuel for road transport. It suggests that other sectors ought to be prioritised for reductions in CO₂ before road transport. There is a logic to this approach but whether it would be seen as fair for road transport to carry significantly less of the burden of reductions in CO₂ emissions is another matter.

Fuel tax and mode shift

Including the cost of fuel duty in appraisal means that any proposal which results in a mode shift away from motorised road transport will tend to have a “cost” associated with it in appraisal (equal to the reduction in fuel tax paid minus the value of the CO2 emissions avoided). Of course, the proposal may well have a net benefit depending on the value of other costs and benefits. Also if there is a simple efficiency improvement (no mode shift) then there will be clear operating cost savings which outweigh the indirect tax revenues forgone. However, if there is mode shift away from private car towards (say) cycling or walking as a result of a project, then the indirect tax revenues foregone will easily outweigh the benefits from CO2 emissions prevented. Note that the benefits to the user from switching mode may be relatively small and are in any case subject to the rule of a half, that is, the benefits of a change in behaviour are only 50% of the total change in benefit times the number of people changing behaviour.

Recommendations and comments:

Appraisal is most effectively used in situation (a); that is where its results are taken into account as one input to the decision-making process.

Situation (c), in which the results of appraisal are the only determinant of a decision, is rarely defensible and should be avoided where possible. In other words, appraisal should be a decision-support tool rather than a decision-making tool.

Care is needed in using appraisal in situation (b) where the results form a hurdle for the proposal to clear. If the same agency both sets the hurdles and conducts the appraisal the process should be internally consistent. However, where, as with major schemes, the hurdle is set by a different agency, it is important to ensure that there is agreement on the appropriateness of the hurdle, and that it reflects the objectives of the agency conducting the appraisal. Otherwise appraisal will be seen as a barrier to progress, and objectivity will be discouraged.

Appraisal can justifiably be conducted in both sense 1 (an objective presentation of the value of a proposal) and sense 2 (an exploration of the performance of a proposal given a range of assumptions). However, appraisal in sense 1 is critically dependent on agreement among the stakeholders on the relative weights and values to be assigned to different impacts. Where this cannot be assured, appraisal in sense 2 will be preferable. Our method for the appraisal of small schemes offers a new approach to appraisal in sense 2 (Jopson et al., 2008).

The use of a NATA appraisal as a hurdle for local authority proposals to clear encourages the attitude that appraisal is a barrier to progress rather than a tool to stimulate better solutions. More emphasis needs to be given to the use of NATA as a design tool, while bearing in mind our other recommendations on NATA.

NATA is a combination of disaggregate appraisal, aggregate appraisal and cost benefit analysis. However, the default basis for assessing value for money is to rely solely on the cost benefit analysis output. Where the assessor estimates an “overall net value”, this requires weights to be assigned to the remaining impacts in order to assess the wider value for money of a given proposal. The move to placing money values on more impacts will not remove this requirement. Clearer guidance is needed

on how such weights should be determined, and how the assumptions used are presented.

More fundamentally, when applied to a particular proposal, the application of the money values prescribed by NATA may be inconsistent with the delivery of the priorities of a local authority. This, and the treatment of impacts which are not included within the cost benefit analysis, will make a NATA appraisal inconsistent with that local authority's appraisal of its own schemes. This in turn will mean that there will be an incompatibility between the objectives served by major schemes and by smaller projects within that authority's Local Transport Plan (for which NATA is not required). This is inconsistent with the principles of integrated transport planning. One way of addressing this would be to allow local authorities to modify NATA and the values within it to reflect their objectives, but this removes the ability to compare NATA results from different schemes across different local authorities.



9. Appraisal as part of the political and practical process

What is usually happening in the process of appraisal is that someone with expertise in transport uses formal and informal appraisal methods and presents evidence to decision-makers (who may be politicians). The acceptability of the appraisal process will be affected also by the allocation of responsibility for those decisions. It is possible to identify a range of situations:

- a) the analyst makes the decision having carried out the appraisal
- b) the analyst and the decision-maker cooperate to reach a decision possibly by using an appraisal tool in an interactive manner
- c) the analyst presents the appraisal to one or more decision-makers in a single authority which is solely responsible for the decision
- d) as (c), but the decision is the responsibility of two or more agencies who have jointly to reach a decision
- e) as (c), but the decision is taken by a higher authority, to whom the single authority makes recommendations (as happens for major schemes with DfT).

The DISTILLATE G1 deliverable on Enhanced Appraisal Tools (Page et al., 2007), notes that there are forces at work in the decision making process, in all except case (a), which include individual political and policy actors' experience and knowledge and their assumptions about the finance, context and 'buildability' of strategies and schemes. Properly used, appraisal tools are an attempt to rationalise this process. Appraisal, thus, aims to be an objective process: 'is X or Y an intrinsically worthy thing to do?' and appraisal tools are assumed to be 'objective'. However, this objectivity is quite limited, while the political decision-making process is not.

The DISTILLATE G1 report (Page et al, 2007) notes that the Social Policy literature agrees that a rational approach to decision making is rare. This is not to say that appraisal tools cannot be objective, but rather that their use within the political decision-making process is rarely objective. This is not intended to imply that individual actors deliberately misuse appraisal tools in decision making processes, but rather that the political decision making process is inherently focused on bringing about a desired outcome. Hence, there is a natural tension between what appraisal is trying to do and the political decision-making process, and any tool used within it is unlikely to be put to fully objective ends. The attempt to place money values on individual impacts, in an attempt to increase objectivity, is inherently incompatible with political decision making.

However, disaggregate appraisal, in which performance against different impacts is measured separately, can help to rationalise political decision-making. The use of disaggregate appraisal tools may lead to different decision-makers reaching different decisions. This is a desirable outcome, since it demonstrates the sensitivity of the appraisal to differing political judgments and priorities. It can, however, appear to challenge the technical abilities of the transport analyst. This challenge can be addressed if we think of the problem in terms of policy spheres. In the initial stages of appraisal the politician and other decision-makers enter the technical sphere, but when the decision is being made it is the technical actor who is entering the political sphere. In the technical sphere, objective prediction of impacts is paramount, while in the political sphere judgments on the relative importance of different outcomes dominate. An effective appraisal-based decision-making process needs to marry these two, rather than see them as in opposition.

The tensions between analyst and decision maker become more complex in case d) above, in which schemes have to be delivered in partnership. Here most pragmatic practitioners attempt to compare and contrast 'our' priorities with 'theirs' (i.e. the other members of the delivery partnership) in order to find some level of agreement on the impacts which are relevant and on their relative importance. Once again, the technical analyst can estimate the scale of the likely impacts, but in this case the different stakeholders need to agree on the weightings to be applied to them, or to consider a range of such weights. There are examples of partnerships coming together in this way to agree (and rank) cross-partnership priorities. This makes assessment of an integrated strategy or package of measures much easier. DISTILLATE guidance on partnership working provides examples of good practice in dealing with such situations (Forrester, 2008).

A further complication arises in case (e), where local authorities must go outside the local area budget in order to fund the scheme. This means that they are forced to, in effect, justify to someone who holds a national or other interest why a scheme often delivering solely local benefits should be funded from the national purse or another source. In such situations it is difficult to develop a partnership, since the local authority will be in competition with others for the agency's funds. Thus the analyst is left to conduct a technical appraisal without the benefit of a dialogue with the funding agency on the weights to be assigned in the decision-making process. This can lead to the situations described by local authorities in our surveys in which substantial staff resources are spent in developing proposals to satisfy the anticipated priorities of the funding body, only to find on submission that those priorities have changed. Our guidance to funding bodies is designed to reduce the abortive costs and frustration generated in such situations.

Recommendations and comments:

Where appraisal is used by decision-makers who are not the technical analysts, it is important to understand the tensions between the technical and policy spheres. While the analyst has prime responsibility for estimating the impacts of a proposal, it is for the decision-maker to decide on their relative weights. The independent assignment of money values to impacts is inherently inconsistent with the volatility of political decision-making.

Disaggregate appraisal methods can help to bridge the gap between the technical and policy spheres. Used appropriately it will lead different decision-makers to different conclusions. This is a desirable outcome, since it demonstrates the sensitivity of the appraisal to differing political judgments and priorities.

Where appraisal is used as part of a negotiation between agencies which are jointly responsible for a decision, it is also important to understand the attitudes of those agencies to the impacts which are important, and their relative importance. If these are clearly articulated, such agencies can work in partnership to generate an integrated strategy or an agreed list of priorities. Our guidance on partnership working provides advice on good practice.

Where appraisal is used to justify a bid for funding to another agency, the lack of a dialogue between the technical and policy spheres can often lead to significant abortive work on the part of the bidder, which will be further aggravated if the funding agency's priorities change. Our guidance to funding bodies is designed to reduce the abortive costs and frustration generated in such situations (Binsted and Brannigan 2008b).

10. Summary of recommendations and comments

2.1 While, in theory, a “perfect” appraisal method should be applicable to all situations in which proposals need to be prioritised, enhanced, selected or decided upon, in practice the design of the most appropriate appraisal method may well depend on the applications for which it is to be used. It is therefore important to be clear on the purposes for which a given method is to be used.

3.1 Ideally appraisal methods should be flexible enough to encompass all impacts of concern to the relevant stakeholders. This implies the use of an open-ended list of impacts. Where this cannot be done, particular care is needed to identify any relevant impacts for the proposal in question which have not been included.

3.2 Appraisal can be based on objectives, but care is needed to ensure that these reflect the objectives of the stakeholders relevant to the proposal in question. The list of objectives should include the constraints which those stakeholders wish to avoid.

3.3 Appraisal is most frequently based on indicators, which have the advantage of being readily quantified. However, care is needed to ensure that the indicators selected reflect the full range of impacts or objectives of concern to stakeholders, and that the indicators for any impact or objective reflect it fully. Outcome indicators will typically be more appropriate than intermediate outcome indicators, since they reflect directly the objectives of concern. Further advice on the selection of indicators is given in the DISTILLATE guides on developing a monitoring strategy and selecting indicators (Marsden 2008a and Marsden 2008b).

3.4 The method developed in DISTILLATE for the assessment of small schemes has the particular benefit of encouraging users to specify the list of impacts which are relevant to their particular problem (Jopson et al., 2008).

3.5 There is an underlying incompatibility between the achievement of targets and the enhancement of performance, as represented in the appraisal process. This makes the combination of the two in a target-based appraisal fraught with danger. It should be avoided where possible.

3.6 Consideration of buildability should either be included in the appraisal method, or considered once a proposal has satisfied the requirements of the appraisal process.

4.1 The accuracy of an appraisal depends critically on the accuracy with which the impacts are predicted. Unless the prediction method is known to be of an acceptable level of accuracy, it is preferable to introduce sensitivity and robustness testing into the appraisal, and to assess the sensitivity of the resulting performance to a range of values for the key indicators.

4.2 Simpler, more transparent predictive models make it easier to understand the sensitivity of impacts to model assumptions and inputs. Our sketch planning model, MARS, has been developed with this in mind (Pfaffenbichler et al., 2008). Our impact assessment tool for the Strategic Transport Model (STM) should also help to do this different land use scenarios (Ash, 2008). However, such models may not provide the level of detail needed for some appraisals.

5.1 Like target-based appraisal, satisficing is unlikely to provide a satisfactory and acceptable basis for appraisal.

5.2 Disaggregate appraisal is the most defensible of appraisal methods, since it makes no assumptions as to the relative worth of different impacts. However, it leads to a more complex decision-making process and to results which will, justifiably, differ between decision-makers.

5.3 Aggregate appraisal offers a suitable balance between simplicity of decision-making and acceptability of assumptions, particularly if combined with sensitivity testing of the weights assumed for different impacts. Our appraisal method for small schemes is based on this approach, and allows the effects of different weights to be clearly identified.

5.4 Aggregate appraisal masks the distributional impacts of a proposal; ways of dealing with this could involve the identification of different impact groups and consideration of the effect of different impacts on these different groups.

5.5 Placing money values on aggregate appraisal metrics (in cost-effectiveness appraisal) or on individual impacts (in cost-benefit analysis) introduces assumptions, which should ideally be addressed explicitly through further sensitivity testing.

5.6 Value for money as a concept is open to a range of interpretations. While it is a straightforward output of cost-effectiveness appraisal and cost-benefit analysis (subject to caveats on money values) it can only be applied to disaggregate appraisal by explicitly or implicitly assigning money values to all impacts. For clarity it is preferable to specify the type of appraisal method being used and define value for money, if needed, in terms of the outputs of the chosen method.

6.1 If aggregate appraisal is to be used, care is needed in selecting the weights to be used. Ideally a range of weights, reflecting the interests of different stakeholders, should be used, and the robustness and sensitivity of the appraisal outcome tested against that range.

6.2 If money values are to be applied, they need to be soundly based, or to be subject to similar robustness and sensitivity analysis.

7.1 An effective method for appraising distributional impacts needs to identify all of the impact groups of concern, and to be sufficiently flexible to allow additional groups to be added.

7.2 Such methods also need to identify the effect of each impact on each impact group, and to reflect the sensitivity of each group to each impact. It is difficult to conceive of such a method being combined with any form of aggregate appraisal.

8.1 Appraisal is most effective where its results are taken into account as one input to the decision-making process.

8.2A situation where the results of appraisal are the only determinant of a decision, is rarely defensible and should be avoided where possible. In other words, appraisal should be a decision-support tool rather than a decision-making tool.

8.3 Care is needed in using appraisal where the results form a hurdle for the proposal to clear. If the same agency both sets the hurdles and conducts the appraisal the process should be internally consistent. However, where, as with major schemes, the hurdle is set by a different agency, it is important to ensure that there is agreement on the appropriateness of the hurdle, and that it reflects the objectives of

the agency conducting the appraisal. Otherwise appraisal will be seen as a barrier to progress, and objectivity will be discouraged.

8.4 Appraisal can justifiably be conducted both as an objective presentation of the value of a proposal and as an exploration of the performance of a proposal given a range of assumptions. However, appraisal in the former sense is critically dependent on agreement among the stakeholders on the relative weights and values to be assigned to different impacts. Where this cannot be assured, appraisal in the latter sense will be preferable. Our method for the appraisal of small schemes offers a new approach to appraisal in this sense (Jopson et al., 2008).

8.5 The use of a NATA appraisal as a hurdle for local authority proposals to clear encourages the attitude that appraisal is a barrier to progress rather than a tool to stimulate better solutions. More emphasis needs to be given to the use of NATA as a design tool, while bearing in mind our other recommendations on NATA.

8.6 NATA is a combination of disaggregate appraisal, aggregate appraisal and cost benefit analysis. However, the default basis for assessing value for money is to rely solely on the cost benefit analysis output. Where the assessor estimates an “overall net value”, this requires weights to be assigned to the remaining impacts in order to assess the wider value for money of a given proposal. The move to placing money values on more impacts will not remove this requirement. Clearer guidance is needed on how such weights should be determined, and how the assumptions used are presented.

8.7 More fundamentally, when applied to a particular proposal, the application of the money values prescribed by NATA may be inconsistent with the delivery of the priorities of a local authority. This, and the treatment of impacts which are not included within the cost benefit analysis, will make a NATA appraisal inconsistent with that local authority’s appraisal of its own schemes. This in turn will mean that there will be an incompatibility between the objectives served by major schemes and by smaller projects within that authority’s Local Transport Plan (for which NATA is not required). This is inconsistent with the principles of integrated transport planning. One way of addressing this would be to allow local authorities to modify NATA and the values within it to reflect their objectives, but this removes the ability to compare NATA results from different schemes across different local authorities.

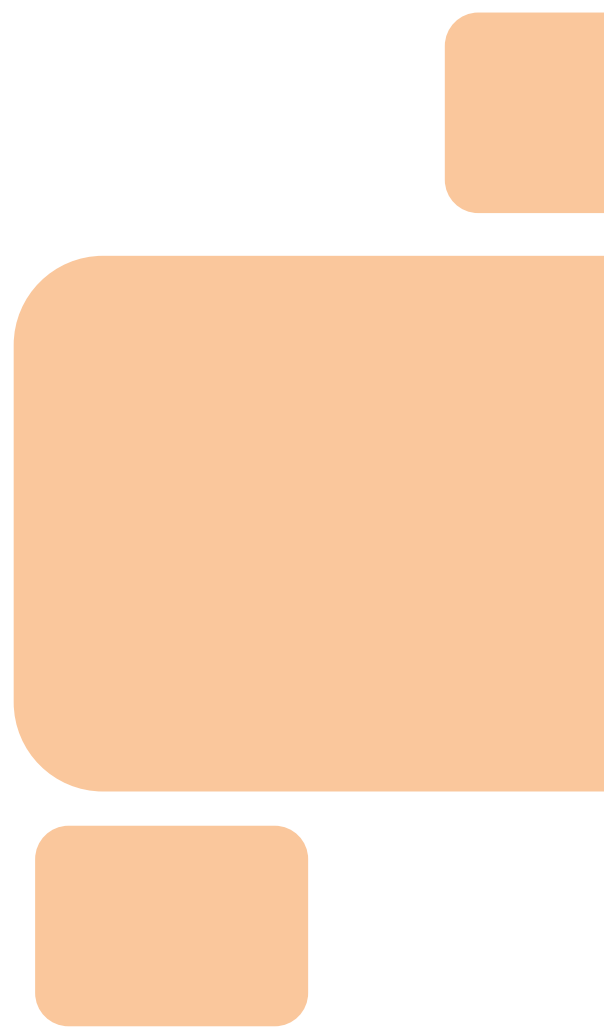
9.1 Where appraisal is used by decision-makers who are not the technical analysts, it is important to understand the tensions between the technical and policy spheres. While the analyst has prime responsibility for estimating the impacts of a proposal, it is for the decision-maker to decide on their relative weights. The independent assignment of money values to impacts is inherently inconsistent with the volatility of political decision-making.

9.2 Disaggregate appraisal methods can help to bridge the gap between the technical and policy spheres. Used appropriately it will lead different decision-makers to different conclusions. This is a desirable outcome, since it demonstrates the sensitivity of the appraisal to differing political judgments and priorities.

9.3 Where appraisal is used as part of a negotiation between agencies which are jointly responsible for a decision, it is also important to understand the attitudes of those agencies to the impacts which are important, and their relative importance. If these are clearly articulated, such agencies can work in partnership to generate an integrated strategy or an agreed list of priorities. Our guidance on partnership working provides advice on good practice (Forrester, 2008).



9.4 Where appraisal is used to justify a bid for funding to another agency, the lack of a dialogue between the technical and policy spheres can often lead to significant abortive work on the part of the bidder, which will be further aggravated if the funding agency's priorities change. Our guidance to funding bodies is designed to reduce the abortive costs and frustration generated in such situations (Binsted and Brannigan 2008b).



Glossary

Appraisal: A structured way of considering the impacts of a proposed course of action (eg. a proposal, scheme or strategy). The output of an appraisal can be used to help decide whether to pursue the course of action.

Evaluation: The process of assessing the worth of a proposal once it has been implemented. Here the issue of prediction does not arise; the issues concern impacts which are measured, and how they are measured.

Impact: One of the specific effects of the proposal eg a change in the levels of noise in the area around a proposal. Impacts can be specific to a geographical point or area (eg a change in pollution levels), or more general (eg emissions of greenhouse gases). Impacts are changes relative to a situation in which the proposal is not carried out. The impacts are the differences caused by the proposal.

Indicator: A particular quantified impact, selected as somehow representative and worthy of particular attention in terms of monitoring or reporting. Indicators can be output indicators (eg number of kms of cycle route constructed) or outcome indicators which are related more directly to particular objectives (eg air pollution levels which might contribute towards an objective of improving air quality).

Magnitude: The size of the impact of a scheme eg how many minutes of travel time savings will result. The magnitude of the impacts will vary between schemes

Objective: A broad improvement which might be a hoped for outcome of a proposal. An objective specifies the direction for improvement, but not the means of achieving it. An objective may be codified as a target level of an indicators which taken to represent the achievement of the objective.

Performance: Some measure of the worth of a proposal.

Proposal: The proposed course of action to be appraised, this may be a particular design for a project (eg a new piece of infrastructure), an initiative (eg a travel plan) or a strategy (a collection of schemes and/or initiatives considered as a package)

Scheme: A particular design for a project (eg a specific road alignment or traffic management design).

Strategy: A collection of projects and/or initiatives considered as a package. Often a strategy will be a combination of policy instruments to meet a given set of objectives.

Target: A particular level of an indicator which is taken to indicate success. Targets may be derived from scientific work external to the transport policy development process to determine what is an acceptable level (eg the air quality targets); from an aspirational policy; or from a study of what can be cost effectively achieved.

Weight: This applies to aggregate appraisals - what relative "value" per increment of magnitude to give to an impact, weights may be derived from subjective assessment of the importance of an impact or from studies to discern the absolute or



relative importance of different impacts. An example of the latter is the value of travel time savings which is commonly used in appraisals to weight travel time savings. Note that the “value” of a weight should vary with the units used for the magnitude of the impact. Note also that similar sets of weights should be used across different schemes or strategies if the outputs of an appraisal are to be comparable.

Worth: Some overall assessment of the benefit of a proposal. It may be expressed in terms of some measure of the net “value” of a proposal which may be expressed monetarily, but it does not have to be either of these.



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- Stockholm Environment Institute, University of York
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