

STAG Technical Database

Section 1

STAG Transport Appraisal

27 May 2008

Transport Scotland



---

## Table of Contents

1. STAG Transport Appraisal.....	4
1.1 Introduction .....	4
1.1.1 What is the Guidance.....	4
1.1.2 When to use STAG .....	5
1.1.3 What are the Key Concepts in STAG.....	6
1.1.4 How do the phases of STAG fit together.....	7
1.1.5 Why Participation and Consultation is important .....	12
1.1.6 What should be Reported .....	12
1.1.7 Integrity and Audit .....	12
1.2 History of STAG .....	13

## 1. STAG Transport Appraisal

The Scottish Transport Appraisal Guidance (STAG) provides a comprehensive source of advice on all aspects of the transport planning process from the earliest stages of transport planning, through appraisal and implementation to ex-post evaluation.

This Technical Database sets out in detail the methodology and reporting structure to be followed when conducting a STAG Appraisal. It supplements the Guidance document, which provides a high-level overview of the appraisal process. This Technical Database has been written specifically for practitioners who are conducting a transport appraisal. It is not intended to be read by those involved in transport or development planning at a higher level and who wish to develop an understanding of STAG; they are referred to the Guidance document.

The environment for transport appraisal is constantly changing, and this Technical Database will be updated regularly to reflect this. Updates are issued to registered Scot-TAG users; registration is available via:  
<http://www.transportscotland.gov.uk/scot-tag>.

### 1.1 Introduction

The Scottish Government's Purpose is to 'focus the Government and public sector services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth'. The Scottish Transport Appraisal Guidance (STAG) supports the Government's Purpose by allowing the contribution that can be made by potential transport interventions to be presented in a clear, consistent manner.

The Government's particular transport purpose is to focus investment on making connections across and with Scotland better, improving reliability and journey times, seeking to maximise the opportunities for employment, business, leisure and tourism. Additionally, to provide sustainable, integrated and cost effective public transport alternatives to private car, connecting people, places and work, across Scotland.

Transport is one of Scotland's most vital public amenities, influencing amongst others, the economy, communities, environment, and quality of life. A transport system that serves Scotland well is fundamental to achieving the Scottish Government's vision of a prosperous, inclusive and sustainable society.

STAG ensures that potential options to address evidenced based transport problems are identified and appraised in a consistent manner and that such options will contribute to the Scottish Government's Purpose and meet the transport needs of Scotland .

It is a requirement that an appraisal using STAG is undertaken by commissioning authorities and their agents when seeking Government funding, support or approval for proposals to significantly change the transport system.

The completion of a study, as documented in a STAG Report, allows the rationale behind a potential transport options to be presented in a clear, evidence-led manner and provides the information required by a decision maker to make an informed choice of the most appropriate options for design development.

#### 1.1.1 What is the Guidance

STAG involves the appraisal of generated options which could potentially address identified problems and opportunities against a range of criteria, including value for

money. As such, the STAG Report provides the Strategic Business Case for options taken forward.

The completion of a STAG study and the production of the STAG Report should precede any application for planning consent or the production of development management Transport Assessments in support of developments. This ensures appropriate consideration and reporting of the transport issues relative to the proposal being developed. To this extent a STAG Appraisal is complementary to a Transport Assessment.

### 1.1.2 When to use STAG

An appraisal using STAG is required when Government funding, support or approval is sought for justified proposals to change the transport system. Its use is encouraged in other circumstances when there is a need for changes to the transport system and may be applied to issues including:

- Considering public transport and road network coverage;
- Assessing measures to improve the reliability of the road network;
- Assessing issues in relation to the safety of the transport network;
- Access to services; and
- Land-use development.

The Guidance can be used to identify transport options to address identified or perceived problems or opportunities relating to a range of transport planning scenarios. The transport options may include but need not be limited to:

- Cycling and walking improvements;
- Public transport – rail, bus or other;
- Road schemes; and
- The development of transport and/or plans, policies and strategies.

STAG should not be adopted when considering issues relating to maintenance or renewal which will not significantly change an existing asset or impact upon the operation of this asset. However, it must be adopted when there is likely to be:

- The creation of a new asset
- A significant enhancement to an existing asset; or
- Any change to an existing asset which will materially impact upon the operation of the existing asset.

An appraisal using STAG is not required for network maintenance schemes which replace the layout of an existing asset broadly like for like and do not directly affect the operation of this asset.

All appraisals using STAG must encompass the principles of being objective-led rather than solution-led, present the appraisal of options against the Transport Planning Objectives, STAG Criteria and established policy directives and include proposals for Monitoring and Evaluation. The STAG Process should, however, be applied proportionately to the impacts of the issue under consideration. Help and advice is available from Transport Scotland on this frequently misunderstood point to ensure that the appraisal presents the information required by the decision maker in a timely manner that also represents value for money.

Practitioners should establish the clear rationale for using the STAG Process prior to starting a STAG led study. This will ensure that STAG is the appropriate tool for the study under consideration. This Technical Database outlines detailed guidance to aid

practitioners in completing the scoping exercise. Advice should be sought from Transport Scotland if practitioners require further clarity on the purpose for which they wish to use the Guidance.

### 1.1.3 What are the Key Concepts in STAG

There are a number of key concepts which underpin the Guidance:

**An appraisal using STAG allows the contribution of a potential intervention to the Government's Purpose to be presented in a consistent manner.**

**STAG is objective-led rather than solution-led** which avoids pre-conceived solutions being brought forward without considering other options which may meet the identified problems or opportunities.

**It provides best practice transport appraisal guidance** to be used to find transport solutions to identified or perceived transport problems and potential opportunities using an evidence base.

**The Transport Planning Objectives developed as part of a STAG study must capture the essence of the evidenced based problem or opportunity to be addressed or opportunity being undertaken.**

**It can be used in all transport appraisal contexts**, including transport and development policies, or strategies.

**It is one process** incorporating Pre-Appraisal, Part 1 Appraisal, Part 2 Appraisal and Post-Appraisal.

**It should be applied proportionately but comprehensively** – the whole process should be used; the level of detail required will be determined by the scale of the impacts of the transport issue being addressed.

**Robust Pre-Appraisal provides the foundation to the whole process** since it promotes the analysis of opportunities during Pre-Appraisal in parallel to the identification of transport problems.

**It does not prioritise between options** rather it is an aid to decision makers to allow them to make informed choices. STAG may provide an initial rationale for investment and it is important that the STAG outcomes are revisited as the Business Case for an intervention develops.

**Appraisal of the issues, as presented in the STAG Report should be completed before commencing the detailed design of the options taken forward using mode specific guidance.** It is recognised that whilst mode specific guidance may be used to inform the options considered as part of the appraisal, designs should not be progressed past this level until the appraisal is complete and decision makers make their informed choice of the options to be developed further.

**Appraisal of options and production of a STAG Report should precede any application for planning consent** or the production of development management Transport Assessments in support of developments. This ensures the proper consideration of the transport issues relative to the proposals being developed, and the presentation of these aspects in a clear manner. To this extent a STAG appraisal is complementary to a Transport Assessment.

**Outcomes should be reported clearly and concisely** – the STAG Report should document completion of each phase of the process comprehensively but proportionately.

**It embraces Scottish Government policy** across a range of areas.

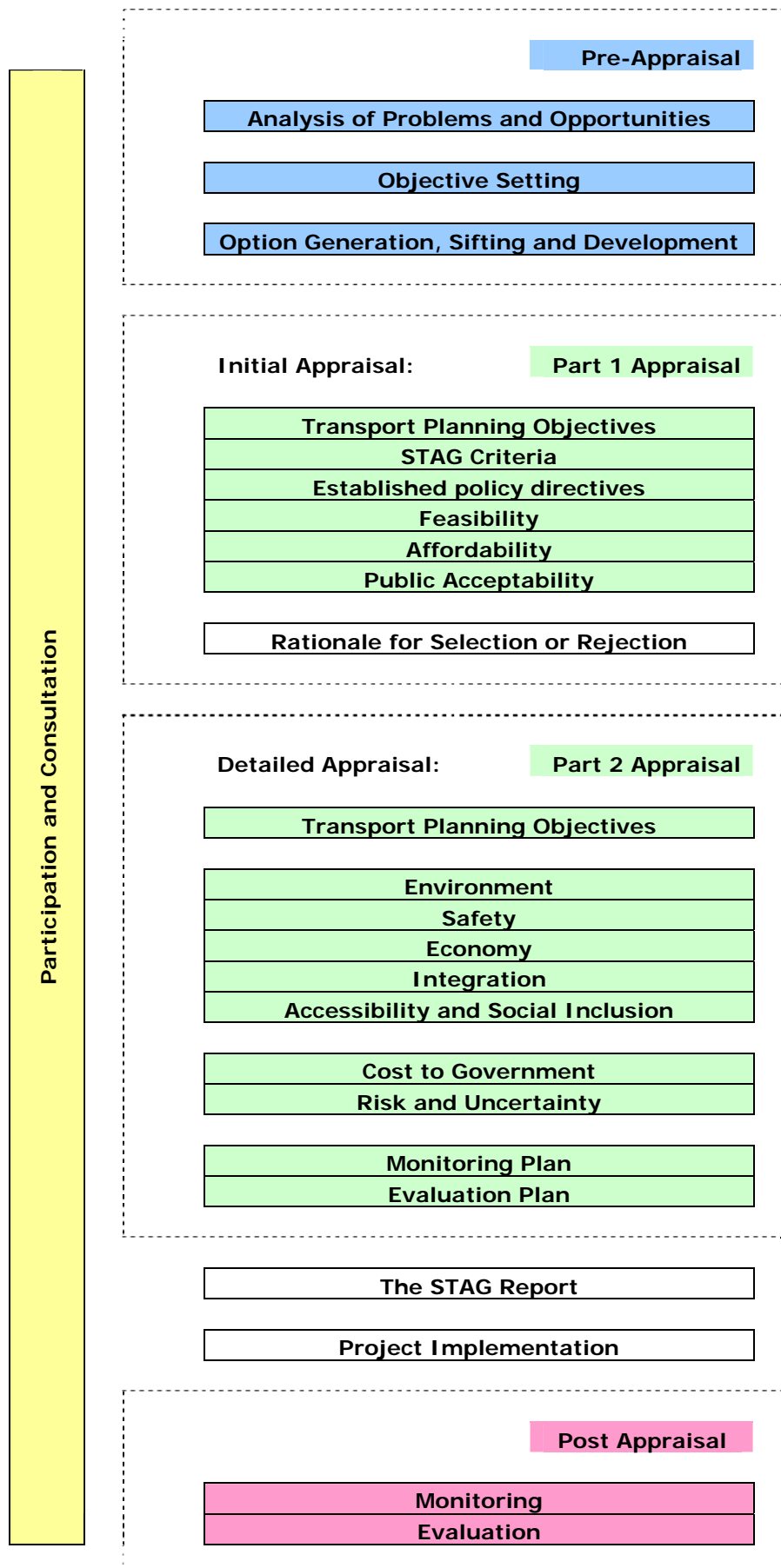
**It does not remove the need for practitioners to undertake their statutory obligations** - i.e. to adhere to all relevant and applicable Scottish, UK, and EU legislation.

#### 1.1.4 How do the phases of STAG fit together

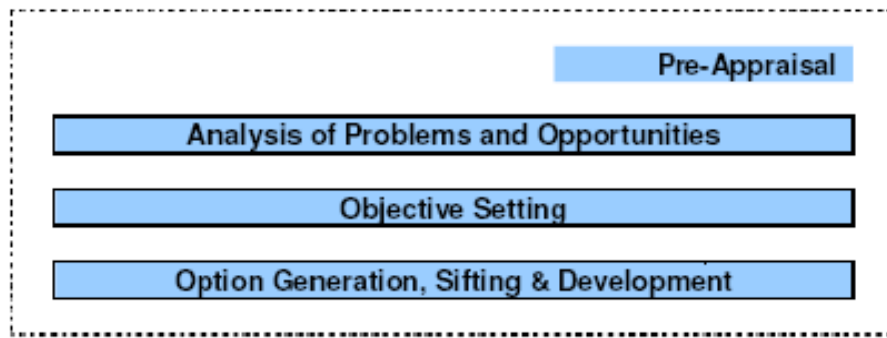
There are four key phases to the STAG transport appraisal process as shown in Figure 1.1.

These four phases should be viewed as continuous, from Pre-Appraisal (Analysis of Problems or Opportunities, Objective Setting and Option Generation, Sifting and Development) through to Part 1 Appraisal (initial qualitative appraisal). Those options which are not rejected in Part 1 are subjected to detailed quantitative appraisal in Part 2. Monitoring and Evaluation, the components of Post Appraisal should be recognised throughout the STAG study.

FIGURE 1.1 – The STAG Process



#### 1.1.4.1 Pre-Appraisal



The Pre-Appraisal process is the essential starting point and sets the rationale for undertaking a STAG led study. It includes the key tasks of:

- Analysis of Problems, Issues, Constraints and Opportunities;
- Objective Setting; and
- Option Generation, Sifting and Development.

#### **Analysis of Problems, Issues, Constraints and Opportunities**

Identified or perceived problems or potential opportunities with the transport system are the essential starting point for any STAG study.

The identification of problems should be accompanied by a full analysis of the opportunities available and supported by an understanding of the issues and constraints which are likely to affect the chances of any transport option meeting Transport Planning Objectives and alleviating identified transport problems.

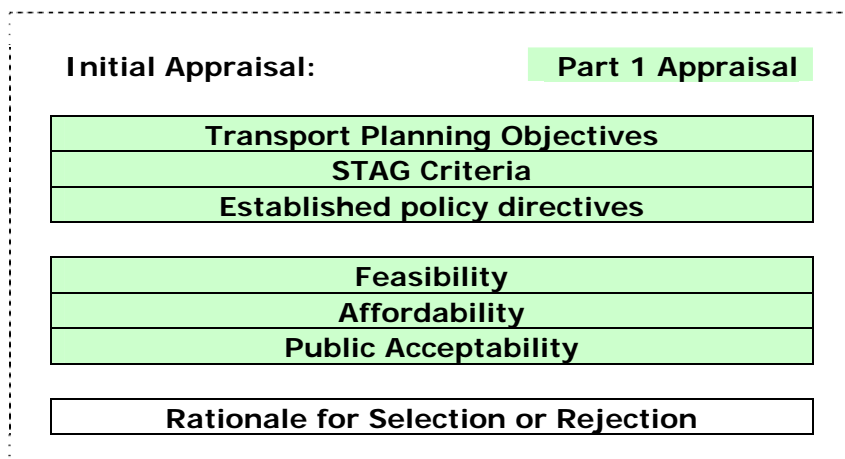
#### **Objective Setting**

Transport Planning Objectives should express the outcomes sought for the study under consideration.

#### **Option Generation, Sifting and Development**

The generation of options should be based on the widest possible set of potential options which could alleviate the identified or perceived problems, or potential opportunities.

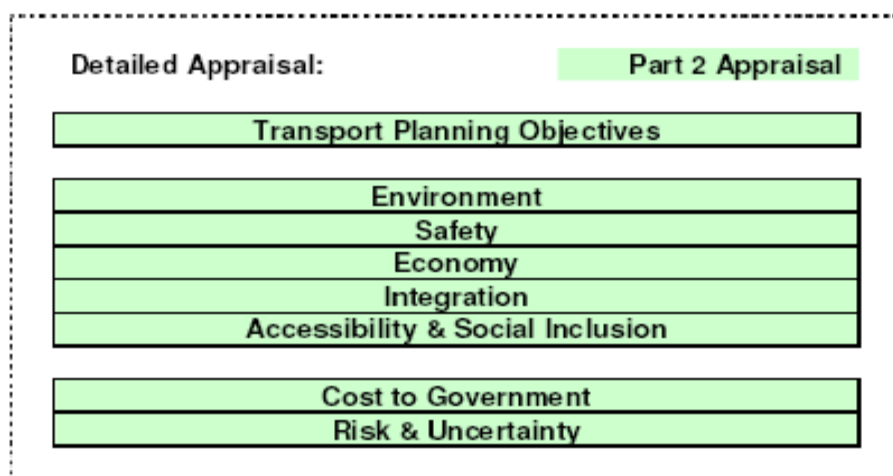
#### 1.1.4.2 Part 1 Appraisal



An initial appraisal of all options generated during Pre-Appraisal with specific consideration given to:

- Is the option going to alleviate the identified or perceived transport problems and/or maximise potential opportunities?
- Is the option consistent with the established policy directives?
- Is the option likely to meet the Transport Planning Objectives?
- What are the likely impacts against the STAG Criteria?
- Is the option likely to be: acceptable to the public, affordable and feasible to construct and operate?
- Is there a clear rationale for the rejection of options on completion of Part 1 Appraisal?

#### 1.1.4.3 Part 2 Appraisal



Detailed appraisal of the options which have been taken forward from Part 1 Appraisal with specific consideration given to:

#### **Transport Planning Objectives**

A detailed appraisal of options against the Transport Planning Objectives using quantitative techniques and analysis.

#### **STAG Criteria**

A detailed appraisal of options against the STAG Criteria (Environment, Safety, Economy, Integration and Accessibility) using quantitative techniques and analysis. In this guidance, accessibility has been extended to make particular reference to social inclusion issues.

#### **Cost to Government**

A detailed analysis of the total public sector cost of options, including investment costs, operating and maintenance costs and grant/subsidy payments.

#### **Risk and Uncertainty**

A detailed analysis of the risk and uncertainty associated with each option.

#### 1.1.4.4 The STAG Report

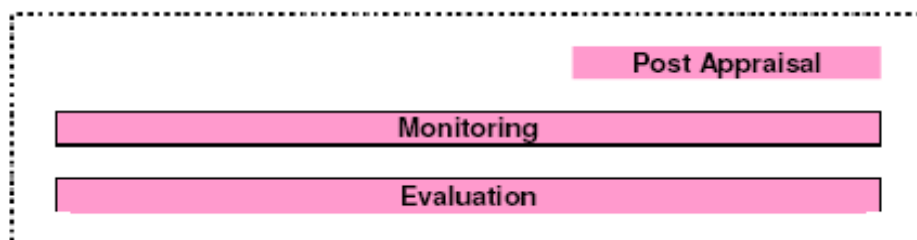
The successful completion of a STAG study as documented in the STAG Report, allows the rationale behind a potential transport intervention to be presented in a clear, evidence-led manner and provides the information required by a decision maker to make an informed choice.

An appraisal using STAG provides the Strategic Business Case for the options taken forward, and the foundations for the Investment Case elements of an Outline Business Case.

All reporting to the Scottish Government and/or Transport Scotland must be in the form of a STAG Report which must be structured in line with the STAG:

- Introduction;
- Analysis of Problems and Opportunities;
- Objective Setting
- Option Generation, Sifting and Development;
- Part 1 Appraisal;
- Part 2 Appraisal;
- Cost to Government;
- Risk and Uncertainty;
- Option Summary Table;
- Monitoring Plan;
- Evaluation Plan; and
- Conclusions.

#### 1.1.4.5 Post Appraisal



If an option is implemented and investment committed then it is essential that the project is monitored and evaluated to assess performance against the Transport Planning Objectives established within a STAG study, the STAG Criteria and any additional impacts identified during the Appraisal.

##### Monitoring

It is a requirement that, prior to implementation, a clear Monitoring Plan is prepared as part of a STAG study and reported in the STAG Report. Monitoring is a continuing process, involving information gathering and interpretation, to ensure that Key Performance Indicators (KPIs), developed to measure progress towards a set of agreed targets, are being met.

##### Evaluation

The term Evaluation is used to describe a specific one-off activity designed to investigate performance and causes in depth. Evaluation also uses performance indicators and

measures. It is a requirement that, prior to implementation, a clear Evaluation Plan is prepared as part of a STAG study and reported in the STAG Report.

#### 1.1.5 Why Participation and Consultation is important

Participation and consultation are key elements of a STAG study and should ensure that the interests of stakeholders are considered in an inclusive, open, transparent and appropriate manner.

In order for participation and consultation to be effective and contribute positively to the identification and analysis of transport problems and opportunities, it is essential that the following best practice participation and consultation attributes are adopted:

- **Explain the STAG process**, avoiding the use of technical terminology where possible;
- **Explain roles and responsibilities**, encouraging shared ownership of the work being undertaken;
- **Be open** so that those taking part understand the process and can see how their views are being taken into account;
- **Be proportionate** in relation to the identification of the transport problems to be addressed and the transport opportunities to be undertaken;
- **Start as early as possible** in the process and continue throughout to maximise stakeholder confidence in the process as it develops and to reach consensus, as far as possible, on outcomes;
- **Involve stakeholders** both in the identification of problems and opportunities and the development and assessment of solutions; and
- **Provide feedback** to contributors wherever possible.

#### 1.1.6 What should be Reported

The STAG Report is the means through which practitioners communicate the appraisal work undertaken: it should be written in a manner which will inform the decision making process. A STAG Report should provide a concise summary demonstrating that the process of STAG has been followed and the Guidance adhered to.

To seek to ensure that the STAG Report is comprehensive and proportionate, reporting guidance is provided throughout the Guidance, supplemented, where necessary, with the detailed advice provided in this Technical Database.

At the end of each section there is a list of key points which practitioners must use to ensure they are following the process as intended whilst assembling sufficient information to be included in the STAG Report.

#### 1.1.7 Integrity and Audit

This Technical Database includes detailed guidance on the requirement for integrity checks. The level of detail required will be determined by the type and size of the transport study under consideration and specifically the transport problems being addressed and/or transport impacts being assessed.

The Scottish Government and/or its agency Transport Scotland may seek a review or audit of STAG led studies where further confidence in the application of the process and/or outcomes is sought.

## 1.2 History of STAG

The STAG framework arose directly from the July 1998 transport White Paper, *Travel Choices for Scotland*, which established the new policy framework for transport in Scotland. The White Paper heralded important developments in policy with a clear focus on three key aims:

- A strong economy;
- A clean environment; and
- An inclusive society.

The draft version of STAG was issued for use and consultation in 2001 with the final version published for use in September 2003. The guidance was then subsequently updated and launched on 'Scot-TAG', a web based platform, in November 2005.

More broadly, the guidance outlined in STAG is centred on providing a transport appraisal process framework which is centred on outcomes against the five STAG Criteria, namely:

- **Environment** (maximising the quality of the built and natural environment for enjoyment by all);
- **Safety** (reducing the risk and incidence of accidents and improving the security of all transport users);
- **Economy** (saving people's and business's time and money and facilitating desired economic development);
- **Integration** (fitting the transport network together and ensuring a rational relationship between transport and land-use and wider policy);
- **Accessibility** and Social Inclusion (providing everyone, not just users but also non-users, with the means to travel to opportunities of all kinds).