# TRANSPORT ASSESSMENT GUIDANCE

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# 1    INTRODUCTION

**Purpose of the Guidance**

1.1    Most new developments and changes of use will have some form of transport implication. Given the policy significance of the links between land use and transport the likely transport impacts of development proposals need to be identified and dealt with as early as possible in the planning process.

1.2    The main objective of this guidance document is to assist in the preparation of Transport Assessments for development proposals in Scotland.  The planning and transport policy context are set out in Scottish Planning Policy (SPP).  This provides an outline of the framework for delivering integration of transport and land use planning, including the requirement for a Transport Assessment, for developments involving significant travel generating uses.

1.3    This document sets out requirements according to the scale of development being proposed; from a local development which requires a simple Transport Statement providing an explanation of transport issues through to a major development where detailed technical analyses will be required in a Transport Assessment accompanied by a supporting Travel Plan.  When the proposed development is not in accordance with the Development Plan then the proposal should be appraised in accordance with the Development Planning and Management Transport Appraisal Guidance. http://www.transportscotland.gov.uk/analysis/scottish-transport-analysis-guide/development-planning-management

**Policy Context**

1.4    SPP sets out an approach to integrating transport and land use planning by supporting a pattern of development and redevelopment that:

- supports sustainable economic growth and regeneration;
- takes account of identified population and land use changes in improving accessibility to public services, including health services;
- reduces the need to travel and as a consequence reduce emissions from transport sources;
- promotes road safety and safety on public transport;
- facilitates movement by public transport including provision of interchange facilities between modes;
- encourages and facilitates freight servicing by rail or water; and
- enables people to access local facilities by walking and cycling;

- provision of high quality public transport access, in order to encourage modal shift away from car use to more sustainable forms of transport, and to fully support those without access to a car;

- effective management of motorised travel, within a context of sustainable transport objectives; and

- the infrastructure for modern electronic communication networks which support home-working, real time information on public transport and in-car information systems to reduce car commuting and congestion.

1.5 A framework for delivering better integration of transport and land use planning will be a key policy tool. The objective should be to locate key travel generating uses to support more sustainable travel patterns. The framework should set out:

- proposals for meeting the different transport requirements of different land uses, including designation and management of through routes, development of local services on sustainable networks, use of different modes, and environmental impacts;

- land use implications of traffic and parking management including reference to the regional or local transport strategy in respect of the council's parking standards, public transport priorities and park and ride, congestion charging schemes, and safe and secure provision for walking and cycling including standards for the design and location of cycle parking in support of the land use policies; and

- policy for transport assessments and travel plans to be submitted in support of planning applications.

**Who Should Read This Document?**

1.6 The guidance is intended to help all those with a role in the development management process and to ensure that mechanisms are in place to specify, assess, revise, implement, monitor and review the impacts that development will have on the transport system. The guidance presents an opportunity to deliver sustainable transport consistent with current policy.

1.7 Those with a role will include:

- developers and their agents involved in preparing proposals for new developments or the redevelopment of existing sites including changes of use;

- local authority officers and councillors with responsibilities for development management, covering both land use and transport planning relating to new development;

- the Scottish Government in its responsibilities for land-use planning and the strategic transport network;

- Scottish Government Inquiry Reporters and others involved in planning inquiries;

- public transport (bus and rail) providers; and

- those who may need or wish to understand transport issues within the development planning process including members of the public who may be affected by proposed developments and groups with specific interests in transport.

**Structure of Guidance**

1.8 The document is divided into six chapters and is supported by two appendices. Chapter 2 describes the transport assessment process, its scope and purpose. This process is directed towards the successful delivery of development-related transport measures aimed at achieving sustainable transport outcomes. It incorporates scoping, transport assessment and implementation including travel plans and monitoring. It is focussed on ensuring effective delivery and operation. It also provides guidance on the role of stakeholders.

1.9 Chapter 3 of the document deals with identifying the need for an assessment including the type and scope of assessment.

1.10 Chapter 4 provides an outline of the level of assessment that would be required for a Transport Statement (TS). When a proposed development is expected to generate a moderate level of trips and no major transport impacts are expected a Transport Statement can be undertaken to address the key transport issues.

1.11 Chapter 5 describes the scope and detail required within a Transport Assessment (TA). A TA will be required where a development is likely to have significant transport impacts. The specific scope and contents of a TA will vary for developments, depending on location, scale and type of development.

1.12 Chapter 6 considers Travel Plans and how they can be implemented, including the monitoring process.

1.13 There are two supporting appendices:

- Appendix A considers mode share targets.

- Appendix B deals with measures and mechanisms in an implementation context, including the use of planning and legal agreements.

# 2 ASSESSMENT PRINCIPLES AND PROCESS

**Principles of Assessment**

2.1 Transport Assessment (TA) will assist local planning authorities to appraise the operational implications of a development within the context of the Local Development Plan. The TA report will permit the transport implications of a proposed development to be considered and will identify any measures required to enable a more sustainable and environmentally efficient proposal. The TA will also assist the relevant Roads Authority or Scottish Government to consider any issues relating to transport and traffic operations on the network.

2.2 Transport Assessment is a comprehensive and systematic process which aims to identify and address the transport issues relating to a proposed development. The TA deals with person-trips, not car trips. Transport Assessment applies therefore to new developments and changes of use or intensifications requiring planning permission that alter the transport features of the site. Transport Assessment focuses on the development site within a catchment area determined by the nature of the development, and assesses accessibility of the site to the catchment by different modes of travel.

2.3 When preparing a Transport Assessment the following principles will be relevant.

*Encouraging environmental sustainability*

- reducing the need to travel, especially by car – by promoting more sustainable patterns of development by reducing the physical separation of important land uses, managing travel demand through policy measures, reducing the length of trips

- reducing the environmental impact of development – by improving sustainable transport choices, by providing safe and easy access to jobs, services and leisure facilities by walking, cycling and public transport

- accessibility of location – ensuring that the site is or can be accessible by non car modes

- other measures for influencing travel behaviour – using demand management measures to reduce car use (particularly single occupancy), for example, promoting car clubs/car sharing schemes or by parking management

*Managing the existing transport network*

- management of existing network – the existing transport network can be managed by adopting low-cost improvements, such as, public transport priority or ITS applications, to improve operations on the network

- access to the transport network – access from developments to the existing network should be managed to make better use of the available capacity

2.4 Depending on agreed area-wide or development site targets, the objective will be to maximise sustainable travel by walking, cycling and public transport, and only then to consider the impact of the residual vehicular traffic. This outcome will be achieved through measures to improve the infrastructure and services to encourage sustainable travel throughout the catchment area, and through careful attention to the design and layout of the development to ensure that those on foot, cycling or using public transport have convenient and safe access to the development without any conflict with vehicular access or vehicles manoeuvring in car parking areas.

**Transport Assessment Process**

2.5 A TA is intended to evolve as a development passes through concept, planning, delivery and monitoring stages. The process embraces scoping, transport assessment, travel plan and monitoring. It should evolve with each stage and provide a reference framework for ensuring that a development performs, in transport terms, in accordance with its design, its planning permission (and associated approvals) and is monitored following delivery.

2.6 The exact detail recorded at each stage will depend on the scale of the proposed development and the specific circumstances of the case. The transport assessment stage may, for example, range from a simple and straightforward process for a small site conforming to the development plan to one that requires extensive modelling using complex data. Completion of the Transport Assessment Form in advance of any scoping discussions will provide some early indications to developers and their agents.

2.7 No two developments are likely to be exactly the same; what is appropriate for one development will not necessarily be satisfactory for another. This in turn creates potential for variation in the detail of the procedure and the final output.

2.8 Even with these variations however, it is clear that within the Transport Assessment process that scoping, assessment, travel planning and monitoring are required if the appropriate objectives are to be set, implemented and then validated through a robust monitoring methodology. Whatever the level or significance of the transport assessment, it should be tied more closely to the information provided on the planning application form and the application's validation and registration process, therefore placing the responsibility with the applicant.

2.9 In conclusion the Transport Assessment process can be summarised as follows:

- The traditional Transport Assessment is now associated with the Travel Plan and Monitoring stages to provide a comprehensive process from planning (concept) through implementation to measurement of output. The TA central reference document should remain with the development and evolve with it in response to changing planning and transport circumstances.

- Accessibility analysis and location considerations will lead the process of assessment. Person trips will form the platform for all numerical and computational work with numbers associated with car and non-car modes being appropriately addressed in accordance with current policy.

- In many cases, vehicle impacts will still be important and, in terms of the principles involved in the analytical process, will generally follow the well-established IHT procedures. There will be some specific changes as noted below.

- The assessment years will be year of opening or completion for developments with short construction periods (say up to 2 years), and year of opening (or first full year) plus year of completion for developments which are phased over 3 or more years.

- No future year transport growth will be applied beyond year of opening or first year of assessment. The assumption is that any growth prior to opening year should apply since nothing is being done as a consequence of the development to influence this, but that beyond that time the emphasis should be on the applicant/developer addressing the impacts of their additional transport movements and ensuring that measures are in place to deal with those specific impacts.

- Although the above will generally apply, there will be a limited number of occasions where some developments and their associated infrastructure will be of such significance that a longer term design date may be demanded. This requirement should be clarified by developers with the roads authority at the outset.

- It is essential that a clear definition of the basis of assessment is set out at the scoping stage. Where roads and planning authorities opt for a no net detriment approach, their definition of no net detriment should be made clear from the outset.

- Developers will be mandated to demonstrate transport delivery consistent with planning approvals and any associated conditions and/or agreements.

**Role of Stakeholders**

<u>**Local Authorities**</u>

2.10 Scottish local authorities are both the transport authority and the planning authority, except in the national parks where the respective National Park Authority is the statutory planning authority with responsibility for granting

planning permission for new buildings or changes to buildings and land uses within their area.

2.11 Local authorities have a key role in the Transport Assessment process in their functions relating to land-use planning, roads and transport. They should:

- set out in their development plans their preferred sites for future development, based on accessibility appraisal or transport modelling, prioritising those sites which enable good accessibility by walking, cycling and public transport, and identifying residual traffic impacts and proposals for mitigation;

- prepare a Local Transport Strategy and/or work towards the preparation of a Regional Transport Strategy;

- encourage pre-application discussions with developers to cover Transport Assessment, sources of information, good practice advice, and clear guidance on what developers may be expected to provide;

- use the Transport Assessment document to assess the suitability of the planning application in liaison with bodies such as the Scottish Government, and public transport operators; and

- use the Transport Assessment document to monitor implementation and ensure that, in transport terms, the development is consistent with the Transport Assessment and Travel Plan.

2.12 Local authorities will be involved in assessing the transport and travel characteristics of all development and redevelopment proposals. They will also be involved in developing transportation measures to support major development proposals, such as traffic management and on-street parking, or providing new infrastructure.

## Scottish Government

2.13 Transport Scotland, an agency of the Scottish Government, is responsible for the operation of Scotland's trunk road and rail networks, and also for establishing and running the national concessionary travel scheme in Scotland. Land-use policies and subsequent development impacts inevitably affect these networks resulting in constraints and pressures. Developers should liaise with Transport Scotland in cases where a proposed development is likely to result in a material increase in the volume of traffic or a material change in the character of traffic entering or leaving a trunk road or is likely to impact the rail network or services.

**Developers**

2.14 Each prospective planning application will require to be considered to establish whether the Transport Assessment process applies. Developers and their agents are responsible for creating and maintaining the Transport Assessment document for a development proposal subject to the influence of local authorities and other parties. The documentation will develop through the process; for example, in the application the Travel Plan and monitoring sections will be "proposals" but to a level suitable for use within a planning condition or agreement.

2.15 Developers should consult the planning authority prior to submitting a planning application to ensure that the type and scale of the proposal is suitable for the site under consideration. They should also liaise with transport authorities, including Transport Scotland (in the case of trunk roads), and public transport operators to demonstrate how the development will function in transport terms and to identify any possible adverse transport impacts. Developers will need to discuss provision for improved pedestrian, cycling and public transport services to the site at an early stage.

2.16 Detailed design of the proposed development should take account of the policy requirements set out in SPP. In preparing and executing the Transport Assessment, developers or their agents will be required to present detailed information about all modes of transport.

2.17 Developers who ensure that new development is located, designed and implemented to promote access by sustainable modes of travel (walking, cycling and public transport) will benefit in a number of ways. Such development maintains high levels of accessibility to customers, workers and visitors, whatever the transport circumstances. In addition, development which is well integrated with other facilities and services is likely to prove more popular as a place to work and visit.

2.18 Where reduced dependence on car access can be achieved, this will enable savings on site and construction costs for parking, as well as freeing up potentially valuable land for development use. It is therefore not surprising that many developers see the economic benefits to be gained from ensuring that new development is made highly accessible by several modes of transport and not only the private car.

**Public Transport Operators**

2.19 Developers are advised to discuss public transport provision to the site, first with the local authority or regional transport partnership where appropriate, and then with public transport operators such as local bus companies, train operating companies and the Scottish Government as rail authority. Local authorities are well placed to assist in discussions with these organisations.

2.20 Public transport operators will need to consider what alterations may be needed to existing services or what infrastructure provision must be made for new services to maximise access opportunities to the development. They may also be able to advice and comment on the layout and design of development.

2.21 In some cases where new services and associated infrastructure are being promoted to improve public transport provision, the involvement of the operator(s) will be essential if appropriate and binding agreements are to be developed in support of any planning application.

2.22 In most cases it will be preferable to pursue development proposals where infrastructure and services are already well-established. Development proposals which are dependent on new provisions subject to the development proceeding can make it difficult to build confidence with operators whose primary role is to provide and operate services.

2.23 Trying to build partnerships to implement future services where the outcome in relation to a planning approval is uncertain or where a planning consent may not be implemented can be viewed by some as wasteful of resources. Operators should be encouraged to discuss associated risks in pre-application discussions as it may be that options for the proposed layout of the site are the keys to its accessibility and to service viability.

# 3    IDENTIFYING NEED FOR ASSESSMENT

**Scoping the Assessment**

3.1   An early indication of the scale of any potential transport impact arising from a development will influence the level and type of assessment required. Early discussions with the relevant planning or roads authority regarding the type and scope of assessment should be undertaken.  A simple Transport Assessment Form (shown in Figure 3.1) will provide sufficient information to indicate the extent of further steps required.  In most cases the completion of the Transport Assessment Form will provide a clear indication of whether or not further analysis is required**.**

3.2   In the case of local developments or changes of use where transport impacts are likely to be insignificant, a detailed assessment will not be necessary.  At the next level, a simple Transport Statement can help inform decision makers.  Guidance on the transport issues and information required in a Transport Statement are outlined in Chapter 4.  In other cases where the likely transport impacts require further, more detailed consideration, a full Transport Assessment will be required.

3.3   If the applicant is in any doubt, it is recommended that clarification be sought with the planning or roads authority at an early stage in order to minimise any possible delays later in the planning process.

3.4   Scoping is key to the future development of the Transport Assessment.  It is the first opportunity to consider the various transport issues and to create a benchmark for everything that follows.  This will enable developers to clarify whether the transport elements of their proposals are likely to be acceptable or whether additional analysis or measures will be required.

3.5   Throughout the process of securing planning permission, the main point of contact for the developer will be with the planning authority.  However other bodies (such as the Scottish Government and public transport operators) may also need to be involved.  Where a development is likely to result in a material change in the volume or character of traffic entering or leaving a trunk road or impact the rail network, the planning authority must consult Transport Scotland.  Initial contact with the planning authority can also identify the need for discussions with other stakeholders.  Early discussions with these parties could save time later in the planning process by improving the possibility that all issues have been covered in the process from the outset.

3.6   Early discussions can assist the developer in ensuring through the scoping and transport assessment stages of the process that the proposal complies with the Development Plan in promoting sustainable transport. Subjects for discussion should include:

- the location, type and scale of the development;
- whether the development is in line with national guidance and Development Plan policy;
- whether alternative locations should be considered (or if the developer only has the one site, what other type or scale of development may be more appropriate);
- the content and level of detail of any transport statement or assessment document;
- mode share targets;
- monitoring travel behaviour to the site; and
- implementation of the provisions of any necessary Section 75 planning agreement.

## Figure 3.1  Transport Assessment Form

| Contact Details | | 12 |
| --- | --- | --- |
| | **Applicant** | **Consultant** |
| **Contact name:** | | |
| **Company:** | | |
| **Address:** | | |
| **Telephone:** | | |
| **E-mail:** | | |

| Development Details | |
| --- | --- |
| **Brief description** | |
| **Existing/ historical site use** | |
| **Location:**<br>Street/Road<br><br>Town/City/Plan Area<br><br>(Map to be included) | |
| **Size (e.g. GFA, no. of dwellings, etc.)**<br><br>Indicate if any thresholds in Table 3.1 are exceeded. | |
| **Opening year(s)** | |

3.7 The key issue initially is whether the proposed site is in a suitable location and is consistent with policy described in Scottish Planning Policy and in the Development Plan. Development Plans should identify those sites with good accessibility by non-car modes for early development as compared to those which can only be accessed by car. The choice of a suitable location for development means that any adverse impacts are more likely to be minimised.

3.8 Discussions should also be used to identify measures needed to promote a wider choice of access to the site particularly by non-car modes, including:

- improvements or modifications to pedestrian access (including facilities for people with reduced mobility);
- improvements or modifications to cycle access;
- improvements or modifications to public transport services;
- the need for a Travel Plan; and
- funding and the use of planning conditions and planning and other legal agreements to secure these measures.

3.9 Wherever possible, planning authorities should avoid continually requesting additional information from a developer when this could have been agreed early in the process. Scoping will also provide the opportunity for developers to enquire about the availability of local data that may assist in working through the Transport Assessment and Travel Plan as well as providing a basis for future monitoring.

**Criteria for Assessment**

3.10 A Transport Assessment will be required where the development or redevelopment is likely to have significant transport implications, no matter the size. The coverage and detail of the Transport Assessment should reflect the scale and the likely extent of transport impacts of the proposed scheme. The planning authority and developer and, in the case of developments that affect trunk roads, Transport Scotland and their term consultants should discuss the content and level of detail of the Transport Assessment required as part of the planning application.

3.11 More detail may be required for those developments that meet or exceed any of the following criteria:

- residential development of 100 units or more;
- 100 or more vehicle movements per day;
- 10 freight movements per day; or
- when the planning authority has significant concerns about the possible transport impact of the proposed development.

3.12 The possible transport impact of proposed developments is likely to be greatest where any of the following criteria are triggered:

- Location: sites that are not consistent with national guidance or accessibility criteria or policy contained in the Development Plan. These sites are likely to be those only easily accessible by car, generally located out of centre or on the edges of urban areas.
- Size: the indicative sizes criteria in Table 3.1 below are met or exceeded.

**Table 3.1  Indicative Size Criteria for a Transport Assessment and Travel Plan**

| Land Use | Parameter | Transport Assessment |
|---|---|---|
| Food retail | GFA | $> 1,000m^2$ |
| Non-food retail | GFA | $> 1,000m^2$ |
| Cinemas and conference facilities | GFA | $> 1,000m^2$ |
| Leisure facilities | GFA | $> 1,000m^2$ |
| Business | GFA | $> 2,500m^2$ |
| Industry | GFA | $> 5,000m^2$ |
| Distribution and warehousing | GFA | $> 10,000m^2$ |
| Hospitals | GFA | $> 2,500m^2$ |
| Higher and further education | GFA | $> 2,500m^2$ |
| Stadia | Seats | $> 1,500$ |
| Housing | Dwellings | $> 100$ |

3.13 Further details may be required where the local authority consider the proposals raise significant transport implications, such as where the development is likely to:
- generate traffic at peak times in a congested area or the nearest trunk road junction;
- generate traffic, particularly lorries, late at night in a residential area; or
- raise significant concerns over road safety.

3.14 Planning authorities may wish to pursue other criteria or require a more detailed approach for some applications or in particular areas. Such cases may arise, for example, for development proposals in sensitive tourist areas.

3.15 With reference to local and major planning applications, Transport Scotland generally define these in accordance with the thresholds indicated in Transport Assessment Guidance. These are, however, indicative and may vary dependent upon the proposed land use and its location. The thresholds at which the differing land use proposals are considered to be "major" is defined on the basis of potential travel demand. The Planning etc. (Scotland) Act 2006, Part 3, Section 35A, introduced a requirement for pre-application consultation dependent upon the category of development. The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009 assign classes of development to the categories of national, major and local developments as detailed within Part 3 Section 5 paragraph 26A of the Planning Act. For clarification the thresholds as defined and utilised by Transport Scotland for major development within Transport Assessment Guidance, will be employed with regard to potential scale of transport impact on the trunk road network and the level of assessment required. (Refer to Table 3.1)

3.16 Section 53A of Part 2 of the Planning etc. (Scotland) Act 2006 and the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008 defines the requirements for pre-application consultation for development categorised as "major" within the Act. It is recommended, however, that, irrespective of the categorisation of development, early consultation should be undertaken with TS for the reasons stated above.

3.17 The criteria outlined in Table 3.1 are intended only as a general guide. However, in setting their local criteria, planning authorities should remember that absolute or inflexible thresholds might encourage developers to try to submit planning applications for schemes that fall just below the threshold in order to avoid preparing a detailed Transport Assessment. If the development proposal does not exceed any of the above thresholds, it is still important to understand what transport changes, if any, are likely to occur and the submission of a Transport Statement may be required. The completion of the Transport Assessment Form will assist in determining whether any further statements or reports are necessary, whether a simple Transport Statement is appropriate or whether complex analysis and reporting is required.

3.18 Another potential concern is that developers may submit planning applications on an incremental basis for parts of a site in order to avoid the requirement to prepare a detailed Transport Assessment for the whole site. This is most likely to arise in the case of housing development. Where this pattern of development will have a cumulative impact on the trunk road, Transport Scotland will require a comprehensive Transport Assessment document which covers the development as a whole.

3.19 Furthermore, local authorities must recognise that the importance or relevance of impacts is not related solely to size. Although as a general rule the larger the proposed development the more information will be required, there will be exceptions whereby relatively small developments have potentially serious impacts. For mixed-use development, it will probably be best to discuss the requirements for a Transport Assessment for each separate proposal rather than devising general criteria, as each element is likely to be different.

3.20 The criteria outlined above may also refer to developments where there may be changes of use or alterations or intensification of an existing use. However, where there is likely to be no change in the amount of vehicle or people movements, a Transport Statement may suffice.

3.21 For policy compliant proposals, i.e. those in accordance with an up to date Development Plan, the level of detail required for the Transport Assessment may be reduced.

**Other Considerations for Scoping Discussions**

3.22 In addition to defining the scope of the Transport Assessment document, discussions between a developer and a local authority should highlight, at the earliest possible stage, any additional requirements or changes that may be needed to the layout and design of the proposed development. These might include infrastructure changes to make access on foot or cycle easier, required improvements to public transport services, whether a Travel Plan needs to be submitted, and the likely content of any planning obligation that may be entered into in accordance with Section 75 of the Planning etc. (Scotland) Act 2006. On-going liaison between developers and the local authority will enable agreement on the nature and scale of the development so that changes at a later date are less likely to be needed.

3.23 While a key aim of the process is to promote and monitor access by sustainable modes and to reduce car dependency, there will in many cases still be road infrastructure impacts to be addressed as part of the planning application. It is important to ensure that all possible ways to promote sustainable modes and reduce car-use have been fully explored and used. Other traffic management measures should also be assessed before considering any increase in road capacity.

**<u>Deciding on the Scope of an Assessment</u>**

3.24 Transport Assessment for a development proposal should present all the transport implications of the proposal. The transport impacts of any development proposal are not always easy to predict. It is necessary for developers to be given the opportunity to explain how the impacts may be different from what might otherwise be interpreted from a simple and brief description of a proposal and its location.

3.25 The submission of a Scoping Report will allow the roads authority to make a decision on the detailed contents and level of analysis required for a full Transport Assessment. A list of the information that should be provided in a Scoping Report is shown in Table 3.2 below. For the majority of items on the list the methodology to be adopted should be provided during the scoping process with detailed analysis included in the TA.

**Table 3.2  Contents of Transport Assessment Scoping Report**

| Development | Traffic | People |
|---|---|---|
| **Details of proposed development** | **Surveys undertaken/ required and methods** | **Proposed percentage modal split** |
| **Development location** | **Details of network/ development peaks** | **Proposed person trip rates/ generation** |
| **Current planning status of proposed development** | **Predicted growth** | **Impacts on other public sector organisations/ third parties** |
| **Existing/historical site uses** | **Proposed assessment periods** | **Sustainable Transport Provisions (existing/proposed)** |
| **Committed development/ infrastructure** | **Assessment years** | **Public Transport Impacts** |
| **Details of phased development (if applicable)** | **Proposed vehicle trip rates/ generation** | **Details of Travel Plan to be provided** |
| | **Proposed service vehicle trip rates/ generation** | **Other relevant information** |
| | **Proposed trip distribution** | |
| | **Road Network Impacts** | |
| | **Parking Provision** | |

# 4 PREPARING A TRANSPORT STATEMENT

## Introduction

4.1 A Transport Statement (TS) should identify the main transport issues relating to a proposed development. This will normally include details of the existing conditions and for the proposed development. The TS will identify the existing transport infrastructure, travel characteristics associated with the site and the proposed measures to improve the infrastructure and services to encourage sustainable travel to the site. Detailed accessibility analysis and assessment of the traffic impacts will not be required.

## Existing Conditions

4.2 The TS should provide information on the following aspects:

- existing site information – description of the current physical infrastructure and characteristics of the site and its surroundings;

- baseline transport conditions – existing transport infrastructure and services, and background transport data.

4.3 The following information should be provided:

### Existing Site Information

- a site location plan showing the proposed development site in relation to the surrounding area and transport system;

- the permitted and existing use of the site;

- the existing land uses in the vicinity of the site;

- existing site access arrangements including access constraints, where applicable.

### Baseline Transport Data

- a qualitative description of the travel characteristics of the existing site, including pedestrian and cyclist movements and facilities, where applicable;

- existing public transport provision, including frequency of services, operators, location of bus stops/train stations, park and ride facilities;

- details of any proposed transport improvements or projects;

- a description and functional classification of the highway network in the vicinity of the site;

- an analysis of the injury accident records on the road network in the vicinity of the site access for the most recent three-year period or five-year period if the proposed site has been identified as within a high accident area.

**Proposed Development**

4.4 The following information should be provided within the Transport Statement:

- a plan showing the proposed site layout;

- description of proposed land use;

- the scale of the development, number of residential units/ gross floor area, etc;

- access arrangements for pedestrians, cyclist and vehicles, and location of public transport facilities;

- the person trip generation for the proposed development;

- potential location of trip destinations (or origins) for the proposed development;

- how location, layout and design will influence the choice of mode;

- a proposed parking strategy and internal vehicle circulation (including number of spaces, parking layout, ratio of operational to non-operational spaces, method of car park operation, overspill parking considerations, disabled parking, motorcycle parking, cycle parking, taxi drop-off points);

- the transport impacts of freight or service operations

4.5 The above requirements are not exhaustive and there may be a need for supplementary information that takes account of local conditions as well as other material considerations. However, not all proposed developments that are considered to require a TS would necessarily need all the above matters to be considered. Therefore it is recommended that the scope of the TS is agreed during scoping discussions between the developer (or their agents) and the appropriate authorities.

# 5    PREPARING A TRANSPORT ASSESSMENT

**Introduction**

5.1    A Transport Assessment will be required where the development or redevelopment is likely to have significant transport implications, no matter the size.  The criteria which are met or exceeded to require a Transport Assessment were outlined in Chapter 3 and indicative thresholds are shown in Table 3.1.

5.2    The Transport Assessment report should aim to provide supporting evidence to accompany the planning application to demonstrate that the development is sited in a location where current and likely future travel behaviour will produce a desired and predicted transport output.  The TA should provide information in a suitable form to enable the local authority and, if necessary, Transport Scotland to assess and determine the planning application, seek any changes to the proposal and devise necessary planning conditions or negotiate planning or other legal agreements.

5.3    The detailed content of a Transport Assessment will vary depending on the location, scale and nature of the proposed development.  The circumstances of each planning application will also influence the level of detail required in the Transport Assessment. The Transport Assessment should be presented in clear language so that lay people can understand the implications.

5.4    The summary of transport issues and the measures being taken to deal with them should be set out clearly in the TA.  It is important to make at least an initial assessment of transport impacts as early in the process as is possible (which is the purpose of the Transport Assessment Form in Figure 3.1) so that any necessary changes to the proposal can be brought into the design of the scheme.

5.5    A Transport Assessment for a major development or redevelopment proposal (or one with significant transport impacts) should have three main elements:

- An assessment of travel characteristics.
- A description of the measures which are being adopted to influence travel to the site.
- A description of the transport impacts of the development in a dynamic network and how these will be addressed.

5.6    Figure 5.1 below outlines the key elements of the Transport Assessment.

**Figure 5.1  Key Elements of a Transport Assessment**
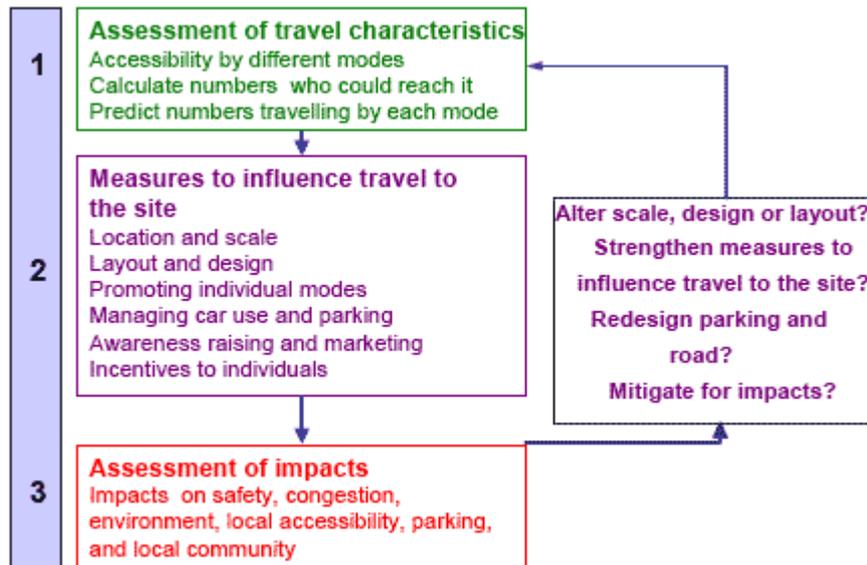


5.7    For larger developments, with significant transport impacts, the process is an iterative one, with refinement of the layout design, improving public transport services and so on, leading to regular discussions between the developer and local authority, and possibly other stakeholders, such as the Scottish Government.

**Existing Conditions**

**The Site Visit**

5.8    The role of the Transport Assessment is to provide decision makers with a good understanding of how the transport aspects of the development will function. The first stage to be undertaken, either in association with or before the scoping discussions, is a site visit.

5.9    One or more site visits may be needed to examine aspects such as:

- accessibility within the site boundaries. For larger developments it will be necessary to consider the travel time across the *functional area* of the development: from the boundary of the site with public access routes to the 'entrance' of the building(s).  The site visit may suggest other layouts for the building/s and locations of doors and entrances to the site which could save time and provide better quality access by non-car modes;
- accessibility on foot to the site, including for those with mobility impairments, from the surrounding locality, bus stops and railway stations;
- pedestrian crossings and safety, including whether alternative layouts on the surrounding roads might reduce conflicts between pedestrians and motorised traffic or cycles;

- access by bicycle, identifying opportunities for improving cycle access including cycle lanes, junction and crossing improvements;
- access from bus stops (railway stations), calculating walking times from bus stops (or stations) and considering whether new bus stops are required or existing ones need to be relocated; and
- access for vehicular traffic (buses, if appropriate, cars and lorries), identifying potential conflicts with non-vehicular modes, as well as possible local congestion problems.

## Existing Site Conditions

5.10 The TA should include details about the existing site in order that the baseline conditions can be clearly established. The information to be provided should include the following:

- a site location plan which shows the site in relation to the existing area and transport network

- the existing use of the site

- a description of the existing land uses in the vicinity of the site, including development plan allocations and any committed development

- existing site access location and constraints, if applicable

## Baseline Transport Data

5.11 The following information should be provided with regard to the existing transport system in the vicinity of the site:

- the number of person trips currently generated by the site and their modal distribution

- existing pedestrian and cycle facilities

- pedestrian and cycle movements

- existing public transport facilities (including location of bus stops, tram stops, train stations, park and ride facilities) and services (including numbers, routes and frequencies) in the study area

- public transport patronage, if available

- parking facilities available at site or in the vicinity

- a description and functional classification of the road network

- current traffic flows on links and at junctions within the study area

- identify current peak periods on the adjacent road network

- identification of any critical links and junctions on the road network

- any planned transport improvements which will affect the study area

5.12 The requirements identified above are not exhaustive and further supplementary information may be requested to take account of local conditions and other material considerations.  In addition a TA may not call for all the information identified above therefore it is important to agree the requirements during scoping discussions.

**Proposed Development**

5.13 Detailed information should be provided regarding the proposed development, including the following:

- site layout plan showing proposed uses

- the scale of the development including details for each land-use, including areas, number of units, etc.

- access arrangements including locations and infrastructure and services for all modes of travel (walking, cycling, public transport and private cars)

- proposed parking strategy including number of spaces, layout, operation and management, disabled, cycle and motorcycle parking, overspill parking arrangements if applicable, proximity to any controlled parking zones

- servicing arrangements including routes and facilities for service vehicles

- the impact of site construction traffic

- development phasing (if applicable) giving years for initial opening, full occupation and any intermediate years if applicable

5.14 While some developments may only be useable for one purpose, others, such as industrial units or offices, could be used with radically different intensities with differing transport impacts.

5.15 Such proposals must be handled carefully to ensure that the benefits of the Transport Assessment process are not lost.  Relevant points to note are:

- Transport Assessment may incorporate some elements which require implementation by the final occupier to be successful, such as financial inducements to encourage behavioural change.  Other elements may be self-enforcing, for example restrictions on parking provision.

- For planning applications, planning authorities should ensure that the description of the development is sufficient to enable the main transport impacts to be identified and assessed.  The Transport Assessment document should indicate the conditions to be imposed on any 'planning in principle' consent to ensure that any subsequent applications maintain the conditions of the original application.

- One approach will be to consider the worst likely case.  If the resulting trip generation is acceptable then any other outcome can be regarded as acceptable.

- Planning permission normally rests with the land and not the occupier. Planning or other legal agreements will be enforceable against the person who entered into the agreement and in the case of registered Section 75 planning obligations any person who derives title from that person.

5.16 It may be appropriate to confine the Transport Assessment only to infrastructure matters that can be provided by the developer and require a Travel Plan to encourage behavioural change from the occupier. The developer would be required to take on responsibility for the Travel Plan prior to passing it to the occupier.

5.17 As part of the overall process, the occupier would also be responsible for carrying out post-implementation monitoring to ensure that travel patterns are developing as intended or to help identify courses of action required through modifications to the Travel Plan.

5.18 The above information is not exhaustive and other information may be required depending on the nature of the proposed development or other site issues.


**Travel Characteristics**

**Accessibility by Mode**

5.19 New developments can have both positive and negative impacts on accessibility (which may be intended or unintended) including access to transport systems, the local area and community focus and cohesion:

- **access to transport systems:** changes which should be identified and appraised as part of the Transport Assessment include the location of access points and links by foot and cycle to the wider public transport and road networks; the creation of new public transport nodes or links provided to serve the development that will benefit others; access for freight to the road and rail networks;
- **access to the local area**: such changes should have been identified in the measurement of accessibility in the first part of the Transport Assessment. In most cases this should support the development (providing accessibility and social inclusion benefits to local people), but such analysis may highlight measures which can further enhance access to the local area; and
- **community severance**: it is possible that a development might simultaneously improve access to the site, whilst creating a barrier to access within the local community. The assessment should identify any effects which the proposed development could have on the cohesiveness of communities. These impacts include:

  o whether the development itself or changes to transport infrastructure act as a barrier to movement and previously used routes;
  o whether the level of traffic accessing the site or using nearby roads make links between parts of the community more difficult.

## Measurement of Site Accessibility

5.20 There are various measures of accessibility and methods of calculation. Determining the accessibility of a site will require calculating the travel time by different modes of access: walking, cycling, public transport and car. Travel time assessments determine the catchment area of a development by different modes: areas within which one can reach a development within set times or time-bands (e.g. 30 mins). Catchment areas for a location can be shown in isochrones on maps. The choice of time-band may vary in response to the use and scale of the development. People may be prepared to travel further for some activities, for example, to a sports stadium than to a shop.

5.21 Journey times of up to 20-30 mins are appropriate for walking and 30-40 mins for cycling. A two-stage process is recommended: estimating time to the development site by analysis of maps; then checking the actual times of people travelling these routes, which will help take account of factors such as the time required to cross roads or walk/cycle up hills.

5.22 Public transport journey times can be calculated by a combination of analysis of timetables and maps. This should be complemented by observation of walking times to actual (or potential) bus stops. A 30 minute door to door travel time (including the walk, wait, journey time, and walk to the destination) is an appropriate choice of time-band by public transport for most types of development although it may also be helpful to consider a 45 minute door to door travel time. For developments of national or regional importance, 1 hour may be appropriate.

5.23 Car access can be calculated in various ways, including analysis of maps and route planning software. It should include estimates of the in-vehicle travel time together with walking to the vehicle, searching for a parking space, and walking from the vehicle to the site entrance plus likelihood of known congestion on route. Time estimates for other motorised vehicles - motorcycles, mopeds, light vans, HGVs - can be assumed to be the same.

5.24 For housing developments a different approach is needed since it is an origin rather than a destination for journeys. The travel time assessment should measure the time taken to reach services (e.g. shops, employment centres) from the housing development, but the basic methods used will be the same. Travel times across the development site for larger housing developments may be significant, and separate analyses may be needed for different parts of a very large development

## Trip Generation and Modal Split

5.25 The estimation of how many people will travel to the site (or in the case of housing, from the site) and by what mode requires consideration of the:

- location of the site;
- how many people are living within the travel time isochrones by each mode;
- whether there are competing developments that will significantly affect the catchment area;
- the likely propensity of people within each catchment to use the proposed facility;
- larger catchment areas (often for larger developments) imply a higher modal share for car-use but also offer more potential for public transport use;
- whether people need to carry bulky items to or from it, such as for DIY stores;
- whether people will be likely to visit the site as part of a linked-trip to other locations, for example for pass-by shopping;
- how design and layout within the site helps or hinders access by different modes and adds to or reduces travel times;
- measures taken to influence modal split and how they are likely to influence the choice of mode; and
- the implementation of travel plan measures and initiatives.

## Trip Databases

5.26 Estimating travel generation and mode share requires appropriate data. However the suitability of data for Transport Assessments is of variable quality, with much depending on the location where the development is proposed, and the resources available to the developer undertaking the assessment. Since analysis can only be, at best, as good as the data on which it is based, there is an ongoing need to collect and use good quality data. Appendix A describes a number of data sources that are available.

5.27 As more multi-modal trip data is added to the available databases this will provide improved estimations of trips by all modes. Trip generation databases currently included a limited quantity of sites where an effective Travel Plan has been implemented. Therefore adjustments to trip generation estimates will be necessary to take account of any travel plan measures that will be put in place to achieve the desired mode share targets. Further information on the implementation and monitoring of travel plans is considered in Chapter 6.

## Mode Share Targets

5.28 Transport Assessment documents are appropriate for identifying how Mode Share Targets (MSTs) set by local authorities for individual developments will be met.

5.29 No-net-detriment can be a useful target to aim for in setting MSTs or defining infrastructure improvements. No-net-detriment means no net increase in travel time or risk of accident as a result of the development. No-net-detriment may also be related to environmental criteria such as emission reduction.

5.30 The Transport Assessment document should identify how the expected mode share compares to the authority's own MSTs. For a major travel generating development the MSTs should be set on the basis of what is realistically achievable. If the impact of a development proposal on the capacity of a road network requires a modal shift greater than is realistic to achieve "no-net-detriment", the target would not be met; the road would go over capacity and lead to increased congestion and travel time. This may point to such a development being refused planning permission. Further information on MSTs can be found in Appendix B.

## Measures to Influence Travel

## Location

5.31 The choice of location will be the most important factor in determining the potential for promoting sustainable development and the policy objectives of SPP. Sites identified in the Development Plan for future development or redevelopment for those activities which generate a significant number of trips should be the most easily accessible for non-car modes.

5.32 It is recognised that at the TA stage the location will have already been determined but the developer should ensure that the location of development components within the site should favour the modal hierarchy. The significant location factors that influence accessibility are:

- the nature of the place where the development is to occur
- how it relates to its surroundings, especially proximity to walking, cycling and public transport routes.

## Land-Use Mix

5.33 Mixed-use development can also promote sustainable transport, particularly walking and cycling trips, by encouraging local trips, multi-purpose trips and reducing the overall distances travelled by car. For example:

- larger housing developments can be designed to include shops or services within walking and cycling distance, or be located on key public transport routes
- larger workplaces can include on-site shops and services, such as cafes or sandwich shops, to reduce the need for employees to travel at lunchtime and shared parking provision
- hospitals and colleges can provide housing for students or key workers within easy walking/cycling distance.

5.34 Mixed-use developments can pose special problems for preparing Transport Assessments. Mixed-use development may not lead to less car use because people may not use the local services provided. They do provide opportunities for less car-dependent lifestyles. Calculating catchments, trips and modal split to mixed-use developments will require judgements as to the likelihood of the attraction of the facilities provided on site and the level of trip sharing that may take place.

5.35 The significant land-use factors that influence accessibility are:

- the nature of the land-use mix provided in terms of services
- the level of parking provision.

## Layout and Design

5.36 The design of all developments should give priority to access by foot, cycle and by public transport before considering the needs of access by private car. For developments requiring servicing, access arrangements for deliveries must also be considered. Good design and layout of a development can significantly improve the ease of access by non-car modes. The detailed design will differ with each type of development, the particular site and its setting

5.37 Detailed design of the development requires:

- the entrance(s) to be as close as possible to pedestrian routes and crossings, compatible with safe design, to allow easy access from both sides of the road. Entrances should also be sited near to bus stops where there are existing bus services, or to bus or railway stations when appropriate. Account must also be taken of access by taxi and, where appropriate, design must be consider measures such as drop-off zones, covered waiting areas and communication points. Pedestrian/cycle access is to be given priority

- walking routes to be direct to and within the development, providing safe and secure routes which must be suitable for use by people with mobility impairments

- links to cycle networks, with secure cycle parking adjacent to main entrance

- access by car, including from the car park, not to be given priority, over other modes.

5.38 The significant design factors that influence accessibility are:

- the special network and movement patterns
- the orientation and location of buildings within the site
- the access arrangements within the site
- the ease of pedestrian access to the site
- the ease of cycling to the site
- the location of site with respect to public transport services
- the location and provision of parking

## Promoting Access on Foot

5.39 Walking is the main mode of transport for many people, especially in urban areas. It is most sustainable mode and requires relatively little investment in new infrastructure to make it attractive. The importance of walking is often understated because the journeys are often short and it is difficult to measure.

5.40 Good access to developments on foot is very important. Walking to a well-sited development can be significant and is also important for longer trips by public transport, which will normally begin and end with a walking trip. The key measures to encourage walking involve planning and designing pedestrian routes to and within the site.

5.41 It is essential that developments provide for the accessibility needs of people travelling on foot, with mobility impairment, carrying heavy loads, escorting young children, etc. It is important to identify the existing and anticipated desire lines, crossing locations, volume and type of pedestrian activity, to influence the design of pedestrian access to the site.

5.42 The key design issues to consider for pedestrian access are:

- a comprehensive, safe, direct well-signed and well-lit network
- able to safely and comfortably accommodate considerable fluctuations in flow levels
- provide easy access on foot from the site to other major developments
- provide personal security
- adequate pavement width (minimum 2.0m)
- pedestrian crossings should be an integral part of the design
- good surface with suitable drainage

- avoid additional walking distances, excessive gradients or require pedestrians to walk through car parks or to follow indirect footpaths

- suitable for blind, visually impaired

- able to accommodate wheelchairs, prams or pushchairs

## Promoting Access for Cycling

5.43 Access to developments by cycle will be dependent on a number of factors, the main ones being topography, culture of cycling, type of development and cycle network provision.  The potential for cycling is probably greater for journeys to work and to school, but is also considerable for other activities including sports and leisure, and for local journeys.  Detailed advice on the design of cycle facilities is provided in Cycle-Friendly Infrastructure (IHT 1996) and Cycling by Design 2010 (Transport Scotland, 2010) http://www.transportscotland.gov.uk/strategy-and-research/publications-and-consultations/cycling-by-design

5.44 The appropriate design for cycling will depend on the anticipated number of cyclists, the speed or volume of motor vehicles, the functions of the route and the physical opportunities present.  It should also take account of the number of lorries, sight distances, on-street parking, the number and type of junctions and accesses to properties.  It is important to consider which routes cyclists will use and whether they can share carriageways safely with other people or vehicles.

5.45  In order to encourage cycling the following are needed:

- safe cycling routes to the site (both well designed, safe and secure on-road routes as well as off-road routes where appropriate or feasible, cycle crossings)
- secure cycle parking (e.g. lockers or Sheffield stands)
- other facilities on the site (e.g. showers/lockers for employees)
- employer or government supported financial incentives (e.g. cycle purchase loans)

## Promoting Access by Public Transport

5.46 For many developments public transport, usually buses, will be the main potential alternative to the private car, particularly where the development catchment is relatively large and involve distances which are longer than those within reasonable walking and cycling distances.

5.47 Good location is the key to promoting public transport use, but its provision (and use) can also be encouraged through better information and awareness, good site layout, bus priority measures, etc.

5.48 New developments, particularly larger ones, may provide the opportunity to modify existing public transport services or add new ones.  The aim should

be to provide good quality services, which people will want to use and they need to be available when residents move in new developments, otherwise the habit of using private cars will become ingrained and the change to public transport will be more difficult to achieve.

5.49 Important features for successful public transport access include:

- A network that serve's people's travel needs effectively
- Bus stops positioned in convenient and safe locations and be as close as possible to trip generators and attractors
- Safe and accessible stations and stops, with easy access for people with a mobility impairment
- Services which operate at suitable times, appropriate frequencies and are well integrated
- Convenient and useful information for potential users, particularly real time information
- Good quality vehicles and infrastructure.

## Managing Car Use and Parking

5.50 The Transport Assessment process can also be used to influence travel choice through the management of car access and parking levels. Measures should be introduced to minimise the need for parking while at the same time providing for good design and location of parking and access arrangements.

5.51 The following management measures should be considered to minimise car use:

- Apply maximum or reduced parking standards
- Consider charging for and controlled parking
- Allocate appropriate number of spaces for car clubs/shared spaces

## Travel Plan and other Demand Management Measures

5.52 A Travel Plan (TP) is a document that sets out a package of positive and complementary measures for the overall delivery of more sustainable travel patterns for a specific development. Their ability and success in influencing travel patterns is dependent upon the commitment of the developer or occupier of a development and the enforcement of travel plan monitoring by the local authority. Travel plans should be implemented to encourage a shift in transport mode for those travelling to and from a development. Further guidance on travel plans measures that can be employed and a method for assessing travel plan impacts can be found in Chapter 6 and Annex A Guidance and Information Sources

5.53 Demand management measures can be used to influence people's travel behaviour in favour of more sustainable options. These may include travel

planning for work places, schools, residencies or for individuals. A number of measures can be adopted within travel plans, including public transport information, marketing initiatives, car sharing schemes and car clubs and measures to reduce the need to travel, such as teleworking and video conferencing.

**Assessment of Impacts**

**Traffic Impacts**

5.54 Transport Assessment must cover traffic and road issues, parking and any particular impacts caused by abnormal loads.

5.55 While a key aim is to promote access by sustainable modes and to reduce car dependency, there will in many cases still be road and traffic impacts to address and deal with as part of the planning application. However, it is particularly important to ensure that all the ways to promote sustainable modes and reduce car-use have been fully explored and utilised. Other traffic management measures should also be considered before looking to increase road capacity.

5.56 If an initial assessment of the proposal indicates that the predicted traffic levels are still unacceptably high, it should indicate a need to re-consider whether further measures to reduce the level of traffic generation are necessary. If after further consideration, the proposal illustrates that considerable extra road capacity will still be required to accommodate predicted traffic increases, the local authority may need to consider reducing the scale of the development or refusing planning permission.

5.57 When increases in road capacity are considered necessary and acceptable, the design should give adequate priority to walking, cycling and public transport. Such measures should also be consistent with the Local Transport Strategy.

**Traffic Analysis**

5.58 Transport Assessments must identify both the volume and distribution of vehicle trips related to the development and set this within the context of existing traffic movements in the locality. The following should be noted:

- **Extent** of the Transport Assessment should be sufficient to identify significant traffic effects. These impacts may be some distance from the development.

- **The significance** of a traffic impact depends not only on the percentage increase of traffic but the available capacity. A 10% increase on a lightly trafficked road may not be significant, whereas a 1% increase on a congested motorway will be.

- **Design dates** for appraisal should generally be for shortly after opening, within a year, especially for retail and employment uses, or on completion

of the development in the cases where the development is large and phased over a long period of time (e.g. large residential developments). The susceptibility of infrastructure and services to growth should be clear from examination of the proximity to design thresholds. Some developments and their infrastructure requirements will be of such significance that a longer term design date may be demanded. Developers should seek clarification on this issue from the roads authority at an early stage in the process.

- **Phasing of development** should also be taken into account. In the case of housing, this may require testing at a number of future dates to align transport provision with increasing demands. This could also link with a timetable for developer contributions.

- **Future effects** of other measures to increase travel by non-car modes should be taken into account. These may form part of a planning agreement or Travel Plan due to be implemented over time.

- **Catchment and locational features** should be clearly related to trip generation assumptions. Whereas the size of the catchment area will determine potential traffic generation, the location will determine the level of diverted and pass-by traffic.

- **Retail impacts** can be complex. Account should be taken of the potential for growth in some retail markets (e.g. non-food) but not in others (e.g. food). Retail developments can influence trip-making as markets mature, but this depends on the scale and catchment of the store.

5.59 In most cases, complex calculations as above will not be required since the impacts of most new developments are usually very localised. This will not necessarily be the case for residential and the larger commercial and mixed-use developments. Their traffic impacts must therefore be assessed over a larger area.

5.60 Whilst road traffic impact analysis should focus on peak periods, in line with current junction-testing techniques, the effects of peak spreading and the impact during inter-peak periods should not be ignored. The Transport Assessment should indicate days and times when the combination of development and non-development traffic will peak. Daily travel information and traffic time profiles are useful in the following areas:

- identifying busy hours for testing;
- assessing bus and rail service viability; and
- assessing car parking accumulations over time.

5.61 The models and procedures for testing the effect of traffic levels are not expected to change significantly, since they are based on the way traffic is observed to flow. However, an exception is the use of micro-simulation software, which involves incorporating junction assessment techniques into a wider representation of network operations. Microsimulation models are often used for the analysis of the roads impacts of development. Some have

the ability to model bus priority and air quality and can have a useful role in public consultation.

5.62 More traditional models:

- focus on road traffic impacts, so it is important not to let them deflect attention from provision for other modes;

- need to be validated against current traffic behaviour (such as link and turning flows, queues and delays, etc.) before they are used to predict trends; but

- are particularly useful where a major change to traffic movements is contemplated (which is fairly rare).

5.63 It is important to recognise that where models are to be applied to detailed development-related traffic issues the models must be "fit for purpose". An area-wide model validated across that area to DMRB standards may not be appropriate for specific corridor testing unless that corridor validates to the required standard.

## Parking Impacts

5.64 On-site parking provision should conform to demand management principles and be compatible with the policy guidance on parking set out in SPP and levels stated by the local authority, particularly in the Local Transport Strategy and local and town centre parking strategies.

5.65 Transport Assessment should demonstrate how the need for parking has been minimised in new development and redevelopment. It is no longer appropriate to focus on providing sufficient parking to satisfy all demand. Over-provision of parking is still common in development proposals, largely based around the routine use of the 85th percentile in car trip rate assumptions. A more appropriate trip rate choice will therefore lead to more realistic parking provision. Such an approach will often be of benefit to developers, who may then be able to increase the density of the development.

5.66 The analysis of parking should focus on the requirement for parking as an output of the design of the development, once other measures have been fully taken into account. It should highlight whether there is potential to level the peaks of parking demand, for instance through shared use of spaces between parts of the development which have different peaks in demand. On-site parking controls and charges may also need to be introduced.

5.67 Off-site parking provision and controls need to be included in the Transport Assessment stage and reflected in the other areas of the report. Restrictions on on-site parking may lead to overflow parking in the surrounding area. Development proposals may need to contribute towards the introduction of

on-street parking controls, for instance for a residents' parking scheme, as part of the overall package of measures associated with an application.

**<u>Safety and Security</u>**

5.68 The two main areas of impacts that should be assessed are:

- the risk of traffic related accidents for those using and passing by the site; and

- feelings of insecurity for those using and passing by the site.

5.69 Changes in the risk of accidents result from changes to the volume and mix of traffic, the layout of footways, cycle-ways and roadways, and accesses to roadways. These can be appraised before the introduction of the development by means of a safety audit. For developments on trunk roads this is a legal requirement.

5.70 The most direct indicator of safety is the number of recorded accidents. For larger developments it may be possible to predict likely impacts on the number of accidents by considering data relating to accidents on different types of road and junction types.

5.71 For smaller developments this is usually not possible, nor does it cover all aspects of safety relating to accidents. In these situations it is necessary to look for design factors which are likely to lead to conflict between different users.

5.72 A range of design and social factors determine perceptions of risk and personal security depending on the characteristics of areas that pedestrians use. Design factors include:

- characteristics of site perimeters (such as whether solid walls are used, and the design features of entrances and exits);

- surveillance systems (such as CCTV, and staff with the role of surveillance);

- informal surveillance (relating to visibility lines from busy areas);

- landscaping (relating to visibility, and 'cover' for intruders);

- lighting and visibility (such as placement of pillars, recesses, and quality of lighting);

- the provision of emergency call facilities;

- how busy the area feels: a greater presence of people leads to greater feelings of security; and

- good sight lines and a lack of 'dead ends'.

## Environmental Impacts

5.73 The environmental impacts of a development proposal are generally outside the remit of the TA process, as they should be picked up through an Environmental Impact Assessment ( EIA). For some types of development an EIA is always required; for others it is required if the planning authority considers that the development is likely to have significant effects on the environment. Where both an EIA and a TA report are required, usually for a very large development, the TA would provide much of the transport-related information needed for the EIA.

5.74 In some cases, the local authority may think it is appropriate that the TA report covers one or more specific environmental issues:

- **Noise levels**: if the development is likely to generate significant levels of additional traffic, an estimation of the impact upon local noise levels may be necessary.

- **Local air quality**: for developments generating significant levels of additional transport, the local authority may consider that an estimation of the impact upon local air quality should be incorporated within the Transport Assessment.

- **Landscape, townscape and heritage impacts** caused by transport would normally be part of the planning application as a whole. However, the local authority might consider it necessary for the Transport Assessment to provide a particular focus on certain of these issues, to avoid the need for separate studies.

## Integration

5.75 Transport policy emphasises the need to integrate the different modes of transport, and development proposals provide opportunities for achieving this objective. Transport Assessment documents should clearly identify how the proposal will influence interchange between modes in the area. Where large flows of people are forecast there may well be impacts on the efficiency of interchanges, and for developments such as arenas and stadia these may affect interchanges at some distance from the proposed site. Many of the improvements to foot, cycle and public transport described above will help address any identified problems.

5.76 The Transport Assessment should also identify how the proposed development would affect activities within the local area. For instance, mixed-use development may provide for linked trips without the need for additional car journeys. Some developments may mean that certain functions are within walking distance where previously a journey out of the area would have been needed. The opposite can also apply, particularly in relation to single-use car orientated development, such as business parks located on a by-pass.

**Cumulative Impact**

5.77 With several proposals in close proximity, a more detailed Transport Assessment of the cumulative impact of the proposals may be more appropriate than one for each proposal in isolation.  If a planning authority wishes to promote several developments near each other, they should aim to assess the cumulative transport issues arising from the entire scheme, ideally at the time the site or area is being designated in the Development Plan.

5.78 Conversely, where proposals may emerge independently from one another, rather than as a single proposal, the situation is more complex.  This can give rise to a domino effect when one successful application leads to further proposals, as may occur with housing.  Planning authorities may be able to foresee when this is likely to occur (or react when it starts to happen), by aiming to assess the sites together, possibly as part of an area-wide development brief or masterplan.

# 6    IMPLEMENTING TRAVEL PLANS

**Purpose**

6.1  A travel plan is a site specific package of practical measures which minimise the negative impacts of travel and transport and aims to co-ordinate transport with wider policy issues (such as environment, accessibility and social inclusion) into a co-ordinated strategy.  Travel plans have been demonstrated to influence travel behaviour in favour of more sustainable options.  They can be applied at a wide range of establishments, such as schools, businesses, homes, hospitals and airports, and also targeted at individuals.

6.2  It is recommended that the appropriate use of travel plans should be determined by considering the potential contribution a development can make to sustainable travel.  All applications meeting the threshold for a Transport Assessment (TA) may require a travel plan although it should be realised that developments below the threshold may nevertheless contribute to sustainable travel.  A travel plan framework should be agreed at the planning application stage and outline measures and targets included in the TA.

6.3  It is recommended that travel plans associated with a planning consent should be specified through a planning obligation, negotiated with the developer, in order that they may be adequately implemented and enforced. The TA should include details of a proposed TP as part of the application, and include proposals for monitoring the travel plan and adjusting it where necessary in the light of outcomes.  The existence of a travel plan does not, however, remove the requirement to consider planning applications against the Development Plan and other material considerations.

6.4  Local authorities should help facilitate the development of effective travel plans by ensuring that measures to support them are incorporated in local planning policies, including the Local Development Plan and Local Transport Strategy.

**Principles**

6.5  The Travel Plan for the development should first appear either in the Transport Assessment or as a supporting document, and be developed as required through to the operational phase of the development.  It is essential in translating the theoretical work of the Transport Assessment into operational reality. As such, it will need to develop over time to take account of changing circumstances and ensure that it continues to remain focussed on providing up to date information on transport choices.

6.6  Where Travel Plans are recognised as being highly influential to the travel patterns that develop in a given location, strong emphasis should be placed, particularly in the early years of the development to ensuring that the practice reflects the theory.  There is little point in looking too far ahead in theory if the delivery is misdirected in years 1 and 2.

6.7 Travel Plans can provide considerable benefits to companies and organisations: reduced costs and increased efficiency will benefit the company while reducing local road congestion can benefit the whole community. A Travel Plan is a means of promoting sustainable development and of securing the requirements of the Transport Assessment. A Travel Plan is only required if the development is a major travel generating use. Unless a Travel Plan is submitted alongside the application delays in decision-making could result.

6.8 A Travel Plan will incorporate a package of the various measures developed during the Transport Assessment stage of the process. These will be tailored to the particular circumstances of the development proposal. Travel Plans provide an effective way of co-ordinating the whole range of transport-related measures associated with a particular development or site. Such a package of co-ordinated measures will be more effective in changing travel patterns than individual initiatives. In addition, the information on travel patterns gained through monitoring as part of a Travel Plan can also provide very useful data for designing the details of additional measures to ensure effective enforcement. Whilst Travel Plans are separate from the infrastructure provision etc, in practice the plans are often linked to the physical layout of the site and of course the intended land uses, in support of wider transport and planning policy.

6.9 It is recommended that a Travel Plan associated with a planning consent should be specified through a planning obligation in order to be implemented and enforced and to demonstrate ways the developer expects to meet Mode Share Targets and mitigate transport impacts rather than be submitted as part of the planning application. In the case of a development where the developer does not have an end user identified, it may be appropriate that a developer still produces a Travel Plan (which would be amended by the occupier) and would agree the basic provisions.

**Targets**

6.10 The use of measures is to meet mode share targets which have been derived from the TA or the Local Transport Strategy. A travel plan without targets is of limited value.

6.11 The plan should encourage change in a manageable way for those it is targeting. It should be practical and realistic in its aims. Most people are already multimodal in their travel behaviour therefore this will often mean small incremental changes for which the travel plan should have mechanisms in place to ensure the change is sustained in the long term.

6.12 It is not always the case that the most resource intensive travel plans have the most effect on mode share. Research has demonstrated that travel plans:

- Containing only marketing and promotion are unlikely to achieve any modal shift;

- With car-sharing and cycle measures may achieve 3-6% reduction in drive alone commuting;

- Works buses may achieve around an 8 – 13% reduction in drive alone commuting;

- The combination of all the above measures plus disincentives to car use may achieve a larger (15 – 20%+) reduction in drive alone commuting.

6.13  An example of exceptional commitment would include:

- An annual budget for measures per employee of £200;

- Senior management being prepared to lead by example, giving up reserved car parking spaces and changing mode;

- Support from the developer for a network of buses to serve the proposal, coupled with fare reductions of at least 30%.

6.14 Local authorities are encouraged to develop a weighting for different trip reduction measures relevant to their local circumstances that they and developers can utilise when designing a proposal.  A generalised example is given in Table 6.1 below, however in practice figures will be dependent on the specific context of the proposal.

**Table 6.1  Trip Reduction Weighting Table**

| Measure | Score |
|---|---|
| Major new public transport infrastructure | 3 |
| Minor new infrastructure i.e. bus stops, cycle racks | 1 |
| 1-2 new or enhanced public transport services | 2 |
| More than 2 new or enhanced public transport services | 2 |
| Reductions in prices of public transport services by 30% or more | 3 |
| Restrictions on effective parking availability | 5 |
| Annual budget for measures per employee or (retail/leisure) 50m GFA<br><br>• Not stated<br><br>• <£10<br><br>• £20-£50<br><br>• £50-£100<br><br>• >£100 | 0<br><br>1<br><br>2<br><br>3<br><br>4 |
| Promotional activities i.e. green transport week | 1 |
| Consultation with staff | 2 |
| Public transport information | 1 |
| Car sharing scheme:<br><br>• paper based (notice boards)<br><br>• computer access and self registration | <br><br>1<br><br>2 |

6.15 The score indicates a likely level of car trip reduction that can be achieved with those measures at sites in the local area.  They should be based on empirical local evidence on the effectiveness of measures.  The scores and resultant levels in single occupant trip reduction are then calculated as follows:

- 8 or less: 3 – 5%
- 8 – 16: 5 – 10%
- 16+, which must include parking restrictions: 10 - 15 %

**Monitoring**

6.16 Most Transport Assessment documents will be developed with an accompanying Travel Plan that embraces a monitoring requirement. It will be essential to monitor the performance of the development's transport effects to ensure that it is behaving in the manner predicted. This may involve measuring the modal share to assess if targets are being achieved and assessing parking demand and usage.

6.17 Monitoring requirements will be the responsibility of the developer (or subsequent occupier(s)) and shall be reported to the Planning Authority. Monitoring could involve the building occupier(s) submitting an annual report to the local authority presenting the outcome of monitoring exercises. Small companies or organisations might be affiliated to a wider organisation responsible for monitoring targets on behalf of all member organisations.

6.18 Monitoring is a much under-used feature of modern transport planning yet in the context of the Transport Assessment process it provides an opportunity to learn extensively about whether or not our planning and delivery techniques are appropriate and sustainable.

6.19 The purpose of monitoring within the Transport Assessment is to ensure that the transport related impacts at delivery are consistent with that for which approval has been sought and obtained. The objective is not to deal retrospectively with this for any single developer but to learn from the process to ensure that the same "mistakes" are not repeated time after time.

6.20 The monitoring process should seek to examine not only the effects of behavioural or soft measures, but also the extent to which any infrastructural alterations are performing in operational terms. The collection of this data will provide an additional opportunity to enhance the available knowledge base.

6.21 The delivery of future monitoring needs to be considered and addressed as part of the overall planning process. Whilst planning and legal agreements may provide an appropriate mechanism, consideration should be given to financial bonds in order to ring fence funds allocated for this specific and important use.

6.22 The obligation would be placed on the developer to collect this information as part of their planning permission. It could be, for example, a condition that at intervals of 12 months and 24 months after the development commencing operation that certain data sets were provided.

6.23 A monitoring framework for the TP should be agreed and included in or with the Transport Assessment document. A monitoring strategy will be required as part of the planning approval and specified as part of any planning obligation that may be entered into in accordance with Section 75 of the Planning etc. (Scotland) Act 2006.

6.24 The strategy should identify the type of monitoring proposed, for example, modal share, counts of trips on foot/bicycle/bus etc. over a period of time and timescales for undertaking the monitoring, for example, monthly, quarterly or annually, depending upon the circumstances.  Provision should be made for possible future changes to be implemented in view of the outcomes of the monitoring process.  This may be in the form of revisions to the Travel Plan or changes to bus services and local infrastructure, for example.

6.25 The monitoring strategy will be reviewed by Transport Scotland where issues related to strategic transport networks are involved.

6.26 It is recommended that the UK Standard Assessment Method (SAM) (www.trics.org) developed by TRICS be applied for the appraisal of travel plan impacts.

6.27 Further advice and guidance on travel plans and sustainable travel can be found at the Scottish Government's website: www.chooseanotherway.com

**Appendix A**

**Mode Share Targets**

**Introduction**

A.1  Depending on the intrinsic accessibility of a location or wider area, measured using accessibility analysis, and based on the sustainable transport objectives of the authority, an assessment can be made of desirable mode shares for transport movements to and from that location or area.  In order to meet the objectives of that assessment, mode share targets can be set for a given time period.  Targets which promote modal shift are valuable in encouraging developers and operators to look innovatively at possibilities for increasing accessibility.  The Transport Assessment process should then establish ways to accommodate or mitigate the impacts of less sustainable transport modes in order to meet the mode share targets.

A.2  Mode share targets are applicable to new development, change of use proposals and extensions to existing developments. They can be set for:

- The authority area as a whole, a sub-area and for categories of development as specified by the authority.

- Any large new re/development area where there is a design statement planning brief or master plan.

- Any development for which a travel plan is required.

A.3  'No-net-detriment' is a useful aim in setting mode share targets.  No-net-detriment means for example, no net increase in travel time or risk of accident as a result of the development.  More restrictive targets are however desirable, for example an increase in public transport mode share over a given period to improve travel connections, reduce emissions and enhance accessibility.

**Use of Mode Share Targets**

A.4  Mode share targets (MSTs) are currently most commonly used in travel plans, particularly for employment land uses.  Wider use of them is though encouraged, in particular for them to be utilised for other land uses and in the development management process.  They should therefore be acknowledged within local plans, transport strategies and development management procedures.

A.5   MSTs need to be defined at the appropriate regional/local level with individual development proposal targets set within this context.  At a broad level MSTs form one aspect of a transport strategy.  An overall MST will be dependent on changes in travel to existing development as well as new development.  These strategic MSTs need to be directly translatable to individual site MSTs and therefore be realistic and achievable.

A.6  The achievement of MSTs is influenced by differing local characteristics.  This means there will be differences between and within local authority's

MSTs. MSTs should take into account local levels of transport accessibility, types of development and car parking controls. They should also consider the provision of amenities, i.e. crèches, banks, level of local retailing and fitness centres, the availability of convenient and affordable public transport and existing incentives and disincentives to influence travel choice.

A.7    Individual development proposals will derive MSTs from the local authority's local transport strategy. New development is likely to be only a small proportion of total travel but this travel may be easier to influence. As MSTs may have a significant effect on the shape and form of the development they should form a vital part of the original development concept. The targets should be set in ranges rather than absolutes.

A.8    Discussions regarding MST requirements are encouraged between developers and appropriate local authority planners at an early stage. This is particularly important where the development is large or likely to generate significant travel as it will avoid unnecessary work and potential delays.

A.9    The methodology for predicting MSTs for a particular development should consider the wider targets as noted above as well as the following:

**Site location and accessibility by different modes**

A.10   In this context accessibility is site specific and is calculated and expressed as an accessibility index. Absolute accessibility measures are of little value in assisting with the evaluation of MSTs. Relative accessibility is a more important measure that will influence the mode share at the development.

**Different trip making and mode share characteristics of the proposed development**

A.11   Here mode choice characteristics are being used to shape development content and mode share to meet a target. This happens as negotiations on the development progress and can be assessed relative to other similar developments. In practical terms the policy will be to reduce car use rather than meet individual non-car MSTs.

**Transport improvements to change underlying accessibility**

A.12   Where a development proposal does not initially meet its MST there may be value in considering improvements to transport services to change underlying accessibility in such a way as to assist in meeting the required target. Where improvements get close to achieving the MST it may be that additional measures involving travel incentives and disincentives could prove to be effective.

A.13   Where they are implemented MSTs should be comprehensible, robust but simple to use and be capable of wide application to a range of situations.

They should be realistic and practical in that they take account of what can be achieved in a given context.

A.14 Where the monitoring and review of MSTs is to be done by the planning authority, a charge for this could be included in a planning agreement. Monitoring should be at regular intervals. If MSTs are included as part of the planning consent in the form of a condition, the condition must meet the necessary criteria of being reasonable etc. so that it is enforceable.

A.15 In practice Transport Working Parties have been set up and Travel Co-ordinators have been appointed to set, achieve and review MSTs. They can oversee the targets in which ever form they take, for example:

- Regional: e.g. employers in a region can work towards a target for average vehicle ridership.

- Rule of Thumb: Targets that have been adopted from a key piece of literature or advice, e.g 30% reduction in single occupant car trips over 3 years.

- Site Based: Targets based on requirements, characteristics and constraints of a site e.g limited parking available.

- Transport Based: Targets based on local transport circumstances, related to the desire to keep trip generation below levels that will detrimentally affect the local road network.

**Appendix B**

**Mechanisms for Implementation**

**Implementation aspects**

B.1   The key to implementation is to make sure that those actions and measures which are described as being part of the proposed development are properly specified when planning permission is granted. The measures should be identified in the Transport Assessment document.  On-site infrastructure proposals should be clearly shown on the plans and drawings accompanying the planning application.  The requirements, including infrastructure changes expected of developers, should be secured through planning conditions or a planning or other legal agreement.  A Travel Plan can help secure maximum change in travel behaviour in accessing the site by specifying appropriate targets.

**Local Authority Policies**

B.2   Planning authorities must set out sufficient detail in up to date Development Plans and Local Transport Strategies (LTSs) to indicate what they require in development proposals and the general approach to the transport assessment process.  This will provide a transparent basis for planning decisions including the use of planning conditions or Section 75 agreements. It will also enable easier negotiations with developers on the use of planning or other legal agreements, and will give developers more certainty in these discussions.

**Transport Assessment**

B.3   The Transport Assessment provides the framework to ensure that development travel patterns reflect policies in SPP and development plans and the intention of the planning approvals and legal agreements.  They provide a mechanism for measuring the appropriate outcomes.  Transport Assessment consists of four stages, the key documents for which will be held collectively in order that the process can be followed from concept, through scoping and analysis, to delivery and monitoring.

**Planning Conditions and Planning or Other Legal Agreements**

B.4   As part of the planning process it may be preferable to use planning conditions to secure certain measures, particularly where these can be clearly defined and for implementing measures in relation to small schemes. Although Section 75 agreements can be difficult to enforce for Travel Plans, they are available within the legislation alongside planning conditions and are therefore to be used.

B.5   In many cases planning or other legal agreements may be necessary since developers will be expected to provide financial contributions towards a package of measures associated with their development.  Improvements to public transport provision are an area of potential financial support.  Outcome measures resulting from the interventions introduced, such as Modal Share

Targets, can be included in planning obligations. Input measures that form part of the design, for example infrastructure improvements or output measures of travel behaviour, such as the numbers accessing the site on foot, may also be useful in some cases.

**Monitoring**

B.6 Arrangements for monitoring must be agreed at the outset and included in the Transport Assessment document and planning agreement. This may involve estimates of modal share, counts of trips on foot/bicycle/bus etc. over a period of time. Measurement may take place monthly, quarterly or annually, depending upon the local circumstances. Provision should be made for possible future changes to be implemented in view of the outcomes of the monitoring process. This may be in the form of revisions to the Travel Plan or changes to bus services and local infrastructure, for example.

B.7 The developer, occupier, local authority, or a third party can undertake monitoring. Monitoring could involve the building occupier submitting an annual or bi-annual report to the ``local authority presenting the outcome of perhaps monthly or quarterly monitoring exercises. Small companies or organisations might be affiliated to a wider organisation responsible for monitoring targets on behalf of all member organisations. The occupier of the development should pay for monitoring.

B.8 An occupier monitored Travel Plan must be audited, by the local authority or Transport Scotland where issues related to the national transport network are involved.

B.9 If the relevant target relates to parking, the monitoring would comprise periodic surveys of parking levels as well as possibly monitoring complaints from residents in relation to parking problems in the surrounding area. If the target relates to single occupancy vehicles the monitoring could comprise periodic surveys at the site entrance.

**Enforcing Obligations**

B.10 The Transport Assessment is an ongoing part of the land-use planning process which includes monitoring as an integral part. This is important, since the issue of enforcing obligations agreed by the developer (particularly of predictions of travel implications or parking usage) is a difficult issue. Without monitoring, the benefits to be derived from the implementation phase could be undermined.

B.11 If planning or other legal agreements have been secured, the arrangements for the enforcement of obligations need to be set out in the agreement. A Section 75 agreement can be used to set Mode Share Targets.

B.12 In the event that targets are not met this might involve requiring the developer/occupier to provide extra resources to specific measures such as improved public transport, or the provision of funds towards implementing on-street parking controls in the surrounding area. The agreement might set out that, in the event of a failed target, revised Travel Plan incorporating extra

measures, such as charging for parking, will be submitted to the local authority for approval.

B.13 Where a development is in more than one phase, the planning authority might give permission for the first phase only, and indicate that failure to meet the relevant targets in the first phase could result in further phases being refused, or less floor-space or parking being considered acceptable in applications for subsequent phases.

B.14 If targets have not been achieved the authority might make clear the action required in the event of the target not being met, such as further improvement (or increased priority being given) to pedestrian or cycle access to the development.

B.15 For some developments the planning authority may limit the scale of operations at the site. This might mean that a part of the development may have to be smaller than desired, e.g. a floor-space limit might be fixed. In some cases the planning authority may require that parts of the development remain unoccupied for all or part of the time (i.e. some of the seats in a stadium remain unused) or that some or all of the activities on the site might have to cease at certain times.

B.16 Some Travel Plans can be self-reinforcing. For example if parking is physically limited, and alternative parking is not available in the vicinity, there is less need to enforce an obligation relating to traffic using the site. However, the planning authority might want to ensure that on-street parking controls on the surrounding roads are effectively policed.

Further copies of this document are available, on request, in audio and large print formats and in community languages (Urdu; Bengali; Gaelic; Hindi; Punjabi; Cantonese; Arabic; Polish).

Any enquiries regarding this document / publication should be sent to us at
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This document is also available on the Transport Scotland website: www.transportscotland.gov.uk

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