

Transport for London

Guidance for residential travel planning in London



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Guidance for residential travel plans in London

Summary

What this guidance is for

The residential travel plan (RTP) is the key management tool for implementing the transport solutions highlighted by the transport assessment (TA) for a new development. It should demonstrate a holistic approach by incorporating both the 'hard' engineering measures and the 'soft' marketing and management measures necessary to address the transport impacts arising from a new residential development.

Why the guidance is needed

By offering a mechanism in which the transport needs of new residents can be thought-through and addressed from the outset, residential travel plans can help to reduce the need to travel and the need to use more energy-intensive forms of transport, while also improving overall access to goods and services and reducing severance of communities.

Who the guidance is for

The guidance should be used by developers and their agents in creating a residential travel plan for a new development that will be considered by the local planning authority and the Mayor of London. The guidance should also be used by planning officers at local and regional levels to assess the quality and effectiveness of residential travel plans submitted with a planning application.

When should a residential travel plan be submitted

Residential travel plans must be submitted with any new development that contains more than 80 residential units. However, the guidance is also appropriate for the creation of a travel plan for smaller residential developments, and for mixed-use developments that contain a residential element under 80 units but the overall scale of the development is considered to have a significant impact on transport.

The Department for Transport (DfT) published 'Making Residential Travel Plans Work: Good Practice Guidelines for New Development' in 2005, with an executive summary launch and update released in September 2007. The need for guidance specifically for London was recognised and, using the general advice established in the DfT's work, Transport for London (TfL) has produced this document to address the needs and opportunities of residential travel planning in the Capital.

This good practice guide draws on the positive activity that is already taking place in London in terms of travel planning for new homes. It sets out advice on the following issues:

- The strategic policy context for residential travel planning
- How to secure travel plans through the planning process and ensure their delivery
- The design of the travel plan and the likely package of measures included
- Establishing targets and approaches to monitoring and management

Further information and contacts to help with the development of residential travel plans are also provided.

1. Residential travel plans in London

Section 1 Understanding the context for residential travel planning in London

Section 2 Securing residential travel plans

Section 3 Developing residential travel plans – design and measures

Section 4 Implementing residential travel plans – monitoring and management

Section 5 Critical success factors and further information

1.1 Introduction

1.1.1 In 2005, the DfT published ‘Making Residential Travel Plans Work: Guidelines for New Development’. This good practice guide looked at the emerging area of residential travel planning – the preparation of travel plans aimed at influencing travel choice at the origin of people’s journeys: their homes.

1.1.2 This guidance on residential travel plans (RTPs) in London has been produced to further develop this work. It looks at the specific planning and development context in the Capital and highlights good practice across London boroughs.

1.1.3 London has experienced, and will continue to experience, significant development pressure for new housing. This guide explains how residential travel plans can make a positive contribution in ensuring that such development is sustainable and contributes to the Mayor’s vision for London.

Structure of the guide

1.2.1 The guide includes five sections:

- Section 1 examines the rationale for RTPs in London and the policy context in which such plans are developed
- Section 2 looks at the processes for securing plans through the planning process and ensuring their implementation
- Section 3 discusses how to develop successful RTPs, highlighting the importance of issues such as location, density, site design, securing the right package of measures and marketing
- Section 4 highlights the importance of building in targets, monitoring and management arrangements into travel plans from the outset
- Section 5 sets out the critical success factors for RTPs and provides sources of further information

1.3 Why are residential travel plans important in London?

- 1.3.1 London will experience strong demand for new housing over the next 15-20 years, with the population projected to grow by nearly one million people. The London Plan makes it clear that this growth can only be accommodated sustainably through the achievement of higher density developments located in areas of good public transport accessibility and sufficient capacity. The aim is to create a high quality, accessible and compact city.
- 1.3.2 Residential travel plans play a major role in helping deliver this vision. While travel plans for workplaces and schools are now widely recognised as effective tools in cutting traffic, until recently little attention has been given in travel plans to tackling the origins of journeys from peoples' homes.

Understanding residential travel plans

- 1.3.3 A residential travel plan is a package of measures designed to reduce car use originating from housing by supporting alternative forms of transport and reducing the need to travel in the first place.
- 1.3.4 The preparation of RTPs ensures that issues surrounding residents' travel needs are considered as part of decisions made on the location, design and layout of developments at the outset. Requirements on developers to support public transport or other transport improvements can be more carefully targeted to address specific issues arising from the development. The plans also provide a mechanism enabling partnership working between developers, local authorities, local communities and new residents.
- 1.3.5 As a result, RTPs are an important tool in helping to deliver sustainable communities. This is likely to result in a wide range of benefits in London, including:
 - 1. Helping to reduce the need to travel and traffic generation from new development. This will help contribute to the objective of tackling congestion and reducing traffic in London (London Plan Policy 3C.16)
 - 2. Improved accessibility by ensuring that walking, cycling, goods delivery and public transport issues are built into the design and approval of developments from the outset. (Supporting Objective 5 of The London Plan – improving the city's accessibility)
 - 3. Reducing social exclusion by ensuring that a wide range of transport options are easily available for new residents, including those with disabilities, and that local facilities are on hand (thereby supporting Objective 4 of the London Plan)
 - 4. Helping to reduce greenhouse gas emissions by ensuring that developments reduce the need for car use and are accessible. This will help address the increased emphasis on tackling climate change in London (see Box 1)

Box 1:

Alterations to the London Plan highlight:

‘...growth must be accommodated in ways that respect and enhance the environment by being exemplary in mitigating and adapting to climate change...’¹

1.3.6 Developers also benefit from preparing RTPs. Whether RTPs are seen as a means of freeing-up parking capacity at new developments for other uses, or as a marketing tool, they can help developers to gain the market advantage.

1.4 Residential development in London and travel plans

1.4.1 Opportunities for residential development vary enormously across London: from central London locations with infill development to major development on regeneration sites, such as those in the Thames Gateway.

1.4.2 Similarly, the transport network and travel behaviour differ widely between boroughs. While across London as a whole 40 per cent of households currently do not own a car², ownership rates and use fluctuates depending on location. What is clear is that in Outer London boroughs the use of the car is important, accounting for more than half of trips. In Inner London, car use is roughly evenly balanced with the use of other modes, while most travel within, from and to central London is by public transport.³

1.4.3 As a result of these different opportunities, there is currently a spectrum of travel planning for residential development in London (see Table 1 next page).

1.4.4 Some boroughs operate car-free policies (such as Hammersmith, Camden, Southwark and others). In these cases, car-free development is normally supported by local development plan policies secured through Section 106 agreements and implemented with the aid of Controlled Parking Zones (CPZs) and the support of car clubs. In many cases, full residential travel plans are not required of developers taking forward car-free developments.

1.4.5 Even in areas of good public transport accessibility, RTPs will add value by shaping the overall design of the development, ensuring that accessibility is maximised at every stage and that investment for additional transport services is provided where necessary. The RTP also supports car-free lifestyles with the provision of additional services and incentives, as well as contributing to improving sustainable transport modes/choices.

¹ Alterations to the London Plan’, xiii introduction and preamble, September 2006.

² London Travel Report’ 2006 TfL.

³ The Mayor’s Transport Strategy’, Greater London Authority GLA.

Table 1 Development and residential travel planning – current practice in London

Spectrum	Small developments, infill and conversions	Medium-sized developments	Large and very large developments
Examples	Car-free housing in Camden	Plough Lane, Wimbledon	The Greenwich Peninsula
Travel plan	Lack of full RTPs, though measures like car clubs generally developed.	Development-specific RTPs prepared.	Travel Strategies have been prepared that address residential travel alongside other movement.
Issues	In car-free developments RTPs can still play a useful role in ensuring that the overall design of the site maximises accessibility and that improvements in transport are planned as part of the development.	RTPs will need to be carefully monitored and managed to influence travel choice into the future.	The specific measures necessary to influence travel choice at the level of the individual householder need to be included as part of the overall strategic strategy and/or detailed in RTPs.

- 1.4.6 The mid-range of the development spectrum includes well-known individual schemes such as BedZed in Sutton, and other medium-sized developments such as Plough Lane in Wimbledon and the Grand Union Village in west London. In these cases, detailed travel plans were prepared for the development.
- 1.4.7 At the far end of the spectrum lie the major developments currently taking place in London, including: the re-development of Kings' Cross, the Greenwich Peninsula, Barking Riverside and the Wembley Arena area. In these cases travel strategies have been prepared within which elements of residential travel are addressed alongside other land uses.
- 1.4.8 Further work has been undertaken to identify a robust London-wide threshold for the implementation of a full residential travel plan. Chapter 2 of this guidance provides more detail on the nature of this threshold, measured in number of dwellings per development.
- 1.4.9 This advice is relevant across the full range of development taking place in London.

1.5 How do RTPs fit within the policy context?

- 1.5.1 Travel plans are a key element of national transport, planning and housing policies, as well as at the London regional level, and are already included in some local borough policies. As boroughs prepare their new local development framework (LDF) documents and finalise

their local transport policies, they should ensure that travel plans – including RTPs – are explicitly featured.

- 1.5.2 RTPs are an effective tool to help to achieve improvements in a wide range of policy areas. These include: all aspects of sustainability, accessibility, mobility, social inclusion, climate change, local air quality, safety and security, personal health, the quality of public space and streetscapes, and sustainable transport provision.

National policy: planning and transport

- 1.5.3 Planning Policy Guidance Note 13 – Transport (PPG13) states that:

‘The Government wants to help raise awareness of the impacts of travel decisions and promote the widespread use of travel plans amongst businesses, schools, hospitals and other organisations. Local authorities are expected to consider setting local targets for the adoption of travel plans by local businesses and other organisations and to set an example by adopting their own plans... Their relevance to planning lies in the delivery of sustainable transport objectives, including:

1. reductions in car usage (particularly single occupancy journeys) and increased use of public transport, walking and cycling;
2. reduced traffic speeds and improved road safety and personal security particularly for pedestrians and cyclists; and
3. more environmentally friendly delivery and freight movements, including home delivery services.’

(Paragraphs 87 and 88)

- 1.5.4 In addition, PPG13 (paragraph 89) states that:

‘The Government considers that travel plans should be submitted alongside planning applications which are likely to have significant transport implications’. Since publication of the guidance, the need to address all land uses in travel planning, including residential development has become increasingly clear.

- 1.5.5 Planning Policy Statement 1 – ‘Delivering Sustainable Development’ (PPS1) – directly supports the use of travel plans from both an environmental and social viewpoint, and establishes the importance of transport in sustainable development.

- 1.5.6 Planning Policy Statement (PPS3) – ‘Housing’ highlights the need to consider the financial capabilities of the residential communities when they are being planned so that the residents do not need to own a car in order to access services and work. It also emphasises the requirement for high density development to be near public transport modes in order to facilitate non-car access to services. Therefore, provision for walking, cycling and public transport in residential areas is very important. Travel plans provide the mechanism to ensure PPS3’s implementation and management.

London-wide policy

1.5.7 Both 'The London Plan'⁴ and 'The Mayor's Transport Strategy'⁵ develop the national policy approach in putting emphasis on achieving a sustainable city.

1.5.8 London Plan policy 3.C1 states that The Mayor will work with TfL, the government, boroughs and other partners to ensure the integration of transport and development by:

- encouraging patterns and forms of development that reduce the need to travel, especially by car
- seeking to improve public transport, walking and cycling capacity and accessibility where it is needed, for areas of greatest demand and areas designated for development and regeneration, including the Thames Gateway, Central Activities Zone, Opportunity Areas, Areas for Intensification and town centres and other parts of suburban London in which improved access is needed
- in general, supporting high trip generating development only at locations with both high levels of public transport accessibility and capacity, sufficient to meet the transport requirements of the development. Parking provision should reflect levels of public transport accessibility (see Annex 4 on Parking Standards)
- encouraging integration of the major transport infrastructure plans with improvements to the public realm, particularly in key areas around major rail and Underground stations and interchanges, using land assembly powers where necessary.

1.5.9 Policy 3C.17 of The London Plan sets targets for limiting traffic growth, including a projected reduction in traffic of 15 per cent in central London over 10 years from 2001. For Inner London and Outer London town centres the requirement is for zero growth and in the rest of outer London there should be a reduction in the rate of traffic growth from 7.5 per cent to 5 per cent.

1.5.10 Policy 3C.2 of the London Plan states that:

'Developments with significant transport implications should include a Transport Assessment and Travel Plan as part of planning applications. Developers and planning authorities should refer to TfL's guidance on Transport Assessments. All developments that exceed thresholds defined in TfL guidance on Workplace Travel Plans and Residential Travel Plans should have a Travel Plan.'

⁴The London Plan', Mayor of London, February 2008.

⁵The Mayor's Transport Strategy', 2004.

2. Securing residential travel plans in London

Section 1 Understanding the context for residential travel planning in London

Section 2 Securing residential travel plans

Section 3 Developing residential travel plans – design and measures

Section 4 Implementing residential travel plans – monitoring and management

Section 5 Critical success factors and further information

Section 1 explained the national and regional strategic context for developing RTPs in London. The following section discusses the key steps involved in successfully securing RTPs through the planning process. The section includes advice on:

- Ensuring local planning and transport policy support for travel planning
- Identifying the links between the transport assessment process and travel plans, and thresholds or criteria for their requirement
- Working in partnership
- Evaluating travel plans
- Securing plans through the planning process and their enforcement

2.1 Policy support for travel plans

2.1.1 There is a robust policy context for the preparation of travel plans as set out in Section 1.5.

2.1.2 This advice relates to all developments, including residential. A number of boroughs currently have policies for travel plans in existing Unitary Development Plans, or are in the process of developing policies in their Local Development Frameworks (see Box 2 below).

Box 2:

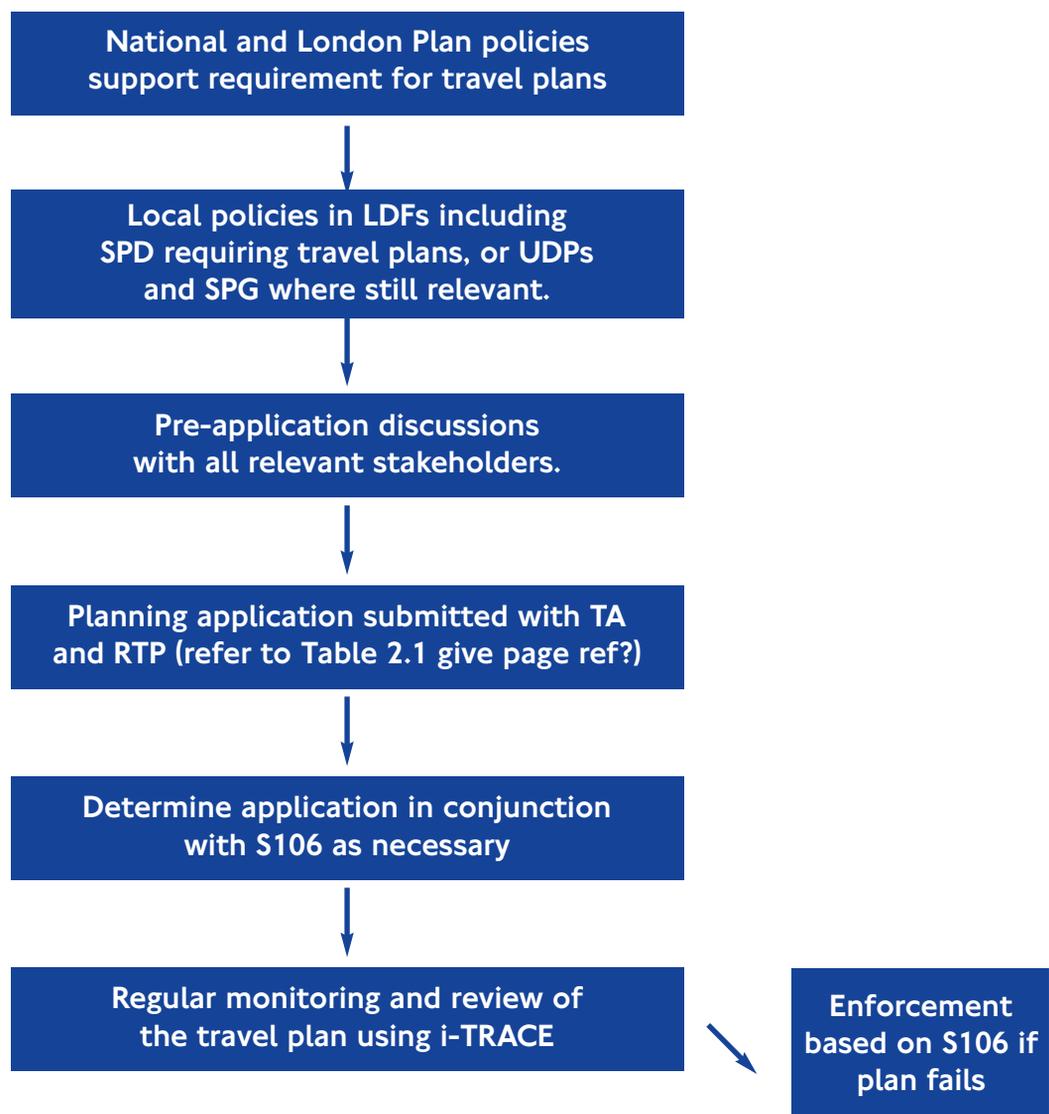
Greenwich Borough Council Policy M2: Travel Plans⁶

‘Development proposals that will have a significant transport implication will be required to be accompanied by a Travel Plan before any granting of planning permission. The implementation of Travel Plans will be secured through a condition or planning obligation on the planning permission in line with Policy SC2.’

⁶‘Greenwich UDP’, second revision, 2004. Page 200.

- 2.1.3 Local policies stating the need for travel plans – and making clear that this applies also to residential development – are valuable in ensuring that the planning process for travel plans runs smoothly. These can be supported through the development of Supplementary Planning Documents (SPDs) or Supplementary Planning Guidance (SPGs) where still relevant.
- 2.1.4 Such policies provide a clear framework within which discussions between local authorities and developers can take place, and a degree of certainty about what is expected from both parties – as well as from other key agencies and the community. This is reflected in the following diagram on policies and process for RTPs.
- 2.1.5 The importance of a transparent process between local authority and developer cannot be underestimated when considering the development and submission of RTPs through the planning process.

Figure 2 Policies and process for RTPs



2.2 Thresholds and criteria for transport assessment and travel plans

- 2.2.1 The need for a transport assessment is set out in 'Planning Policy Guidance 13: Transport' (DfT, ODPM, 2001). The guidance makes clear that transport assessments should be prepared and submitted alongside planning applications for developments and that, where appropriate, a travel plan should be included.⁷ The need for a transport assessment and travel plan should be identified early on as part of the pre-application discussions.
- 2.2.2 TfL, which has responsibility for commenting on large developments referred for Mayoral decision, has produced its own best practice guidance on transport assessments. This should be referred to in the case of major development proposals.⁸
- 2.2.3 The transport assessment should evaluate all the transport aspects of the development proposal. This should include:
- The current accessibility of the site by all modes
 - The potential demand for movement and the likely modal split of journeys to and from the site across a range of journey types
 - Reviewing the options for improving access to and from the site in order to maximise use of sustainable modes of transport in relation to activities and services
 - Providing details on how to minimise parking levels
- 2.2.4 The travel plan is the key management tool for implementing the transport solutions highlighted by the transport assessment. It should demonstrate a holistic approach by incorporating both the 'hard' engineering measures and the 'soft' marketing and management measures necessary to address the transport impacts arising from the new development. Once planning permission has been granted, the travel plan will be the ongoing management tool for implementing and monitoring the necessary transport measures to the site over the long term.
- 2.2.5 Some London boroughs, such as Ealing (see Box 3), have prepared Supplementary Planning Guidance establishing the requirements and criteria for both transport assessments and travel plans. Such measures can help to clarify what is expected of developers and streamline the planning process.

⁷ PPG13: Transport', 2001, paragraph 23.

⁸ TfL Best Practice Transport Assessment Guidance', 2006.

Box 3:

Supplementary guidance in Ealing on transport assessment (TA) and travel plans (TP)

Ealing Borough Council has prepared supplementary planning guidance (SPG20) on Transport Assessments. This states that:

‘In general, a TA will normally be required when any development site exceeds one or more of the following trip generation criteria:

- a) More than 500 person trips per day
- b) More than 500 vehicle movements per day
- c) More than 100 person trips during the peak hour (07:00 – 10:00 and/or 16:00 – 19:00)
- d) More than 50 vehicle movements in any single hour
- e) More than 20 heavy goods vehicles (over 7.5 tonnes) per day
- f) Any goods vehicle movement between midnight and 06:00
- g) Twenty or more car parking spaces are proposed, or where there is less car-parking provision than the restraint based Unitary Development Plan parking standard’.

In SPG 21 on Green Travel Plans, the Council establishes that developers should:

‘...submit a TP for planning applications which are greater than 1,000 m² (gross floor area) in area, or provide more than 25 dwellings. The TP and the associated Transport Assessment (TA) must demonstrate that the development will not cause problems of congestion, danger or inappropriate parking in the area.’

2.2.6 Research commissioned by TfL⁹ has assessed appropriate thresholds for the requirement of a full residential travel plan. The study used the London-centric TRAVL database to calculate an estimate of significant trip/traffic generation for residential sites. Based on the recommendations of the study, a threshold of 80 dwelling-units was proposed.

2.2.7 This guidance therefore recommends that full residential travel plans are prepared for residential developments over 80 units. A summary of the justification for this threshold is attached in the Appendix.

⁹The development of a threshold for residential travel plans’, Colin Buchanan, December 2006.

- 2.2.8 However, special consideration should be given to those sites which do not meet this threshold, but that are likely to generate significant levels of traffic.
- 2.2.9 There may be occasions when borough officers request a travel plan for developments below this threshold, should they, for example, consider that the proposed development (whether due to its size, or that of individual units, nature, the proposed occupier, mix of proposed uses or for some other reason) presents a significant traffic impact which requires mitigation or accessibility issues to be addressed.
- 2.2.10 This is likely to be particularly relevant in mixed-use sites where each individual land use proposed may not actually reach the threshold for requiring a plan, but where cumulatively the impacts arising across a site will be significant. Boroughs may wish to require residential travel plans in such circumstances, or if there are a number of smaller developments in an area which are likely to have the same cumulative effect as a single, large development.
- 2.2.11 TfL has produced a document entitled 'Guidance for Workplace Travel Planning for Development'¹⁰ which recommends clear thresholds for the requirement of travel plans for a wide variety of developments.
- 2.2.12 It will be important to monitor that developments are not persistently being submitted that are just below the threshold to avoid the need for a travel plan. To prevent this it is helpful to establish supporting policy criteria for requiring travel plans that can be used to cover a wider range of instances.
- 2.2.13 In residential developments which are not of a sufficient size to require a full travel plan, developers are still required to encourage sustainable travel and to provide appropriate travel information and processes. They can draw on the measures outlined in Section 3 of this guidance to identify appropriate solutions.
- 2.2.14 Wherever a full travel plan is required it is important to remember that it should provide for and manage sustainable access to the site (both people and goods), and to reduce unnecessary car journeys. Good travel plans can ensure that residential developments work well in accessibility terms. **Travel plans cannot, however, make a site which is unsustainable in planning and transport terms acceptable.**

¹⁰ Guidance for Workplace Travel Planning for Development', TfL, [Update] October 2007.

2.3 Working in partnership

- 2.3.1 It is recommended that RTPs are secured using the development control process and good RTPs will be the result of productive partnership working by a range of individuals and organisations.
- 2.3.2 In securing RTPs, it is important therefore that joint working starts at pre-application stage. This allows sufficient time for RTPs to be developed, and for the plans themselves to be part of the fabric of the development (eg through the design of cycle parking within the development, provision of car club parking bays and home zones). Partnerships can then continue to benefit throughout the lifetime of the plan and relevant development.
- 2.3.3 A range of different organisations/individuals will need to participate in securing the RTP. Pre-application discussions will include:
- The developer
 - The consultant acting on behalf of the developer (who may also act as the Travel Plan Coordinator)
 - Borough transport planners and engineers, and the sub-regional Travel Plan Coordinator
 - The borough case officer for the potential application and their legal adviser (where appropriate)
 - TfL/Greater London Authority (GLA) (where appropriate)
 - The Highways Agency (where appropriate)
- 2.3.4 In addition, in the case of major applications, effective communication with the local community and council members is an important part of pre-application activity. The timescale for planning decisions is constrained and such liaison can help explain the potential impacts of proposed development. It should also demonstrate how a travel plan can help in improving accessibility and reducing parking and congestion problems.

2.4 Evaluating residential travel plans

- 2.4.1 Ongoing discussions between borough officers, sub-regional Travel Plan Coordinators, developers, TfL (where relevant) and others during the preparation of a travel plan will ensure that the final plan for a site is appropriate in its content and deliverables. With such plans playing an increasingly important role in shaping the overall design and construction of developments, it is important nevertheless to evaluate their quality at the outset – before planning consent is granted.
- 2.4.2 The following checklist provides key issues and questions to consider when reviewing draft RTPs.

Checklist 1: Evaluating RTPS – key issues and questions

X or ✓

Issues	Questions	
Strategic policy context	Does the travel plan recognise the wider land use and transport policies of the borough?	
Reflecting the transport assessment	Does the plan address the specific transport needs of the site including disabled parking provision and improve its accessibility by sustainable modes?	
Setting milestones	Does the plan include strong objectives and stretching but realistic targets?	
Delivering a package of measures	Does the plan include appropriate 'hard' and 'soft' transport measures?	
Partnership working	Does the plan identify the role of key partners in delivery (eg the developer, TfL, the borough, etc)?	
Ongoing success of the plan	Is there a clearly defined structure for managing the plan and does this evolve over time to enable the developer to pass on responsibility to residents if relevant, or another party?	
Monitoring and review	Does it establish an effective approach to monitoring and reviewing the plan including provision for new measures to be introduced?	
Funding	Does the plan establish funding for its management, monitoring and delivery?	
Enforcement	Does the plan include safeguards to ensure that it will be delivered, for example by identifying what action will be taken when, and by whom?	

2.5 Securing RTPs through the planning process

- 2.5.1 This section considers how borough officers and developers can ensure that the travel plan continues to remain a comprehensive strategy that retains its relevance through the planning application process.
- 2.5.2 The way that a residential travel plan is secured can vary depending on the location, type of development, scale of development and planning or transport context. These issues should have been addressed at pre-application stage, wherever possible, when the approach to be followed should be agreed.
- 2.5.3 If there have been no pre-application discussions, or the travel plan is not being submitted with the application, the planning authority will need to consider whether it is appropriate, or not, to validate the application at this stage. The planning authority can seek the travel plan prior to determination or determine the application without it. Should no travel plan be submitted before determination, the developer runs the risk of the application being refused. Therefore, a travel plan should be submitted at the validation stage of the application process.

Summary of experience to date

- 2.5.4 Experience with travel plans has shown that:
- To be most effective and achieve the best results, the requirement for a travel plan should be determined alongside the application as a key consideration and not as an afterthought. It must form part of the package of planning permission requirements
 - It is essential to ensure that the site cannot be occupied without the RTP being approved
 - The use of a section 106 agreement where appropriate is more effective as a way of securing RTPs given the range of elements needing to be locked in and the normal financial requirements. Conditions may be suitable for some physical measures, but the travel plan needs to be viewed and secured as an integrated whole to aid monitoring and enforcement
 - The travel plan must be site-specific in the measures and approach it adopts
 - On mixed-use sites it is crucial there is a framework or umbrella travel plan within which the RTP and other travel plans fit, such as those relating to leisure, retail or employment development
 - The section 106 agreement should cover the measures to be taken, the costs of monitoring and review, the triggers for payments or actions, the responsibilities, as well as the short and long-term management of the travel plan and its effective implementation. Management of the plan should also address the

ultimate hand-over to the appropriate forum, whether this be a steering group, residential association or local authority

2.5.5 This section details the process of preparing and implementing the travel plan through the planning application process.

2.5.6 Table 2.1 identifies the tasks involved for the applicant in the travel planning process before and after the determination of the planning application

Table 2 Travel plan development process

	Travel Plan Status	Stage of Development	Activity
Planning	A. Scoping	Establish need for travel plan and define relationship to transport assessment if appropriate. Agree scope of both documents with borough officers (and TfL or HA if a referred planning application – see Appendix 4 for further information).	
	B. Pre-application	Submit draft travel plan (with baseline data if appropriate) to borough officers (and TfL if required) for comment.	
	C. Submission	Submit second draft of travel plan and transport assessment for consideration alongside planning application to borough (and TfL if a referred application). The terms of any legal agreement including conditions and planning obligation must be resolved with borough officers. Appendix 3 provides further advice.	
Determination of Planning Permission			
Implementation	D. Post-permission and pre-opening	Update and expand travel plan in accordance with conditions and/or planning obligation. Implement appropriate measures prior to occupation.	
	E. Post-opening	Roll-out implementation of travel plan(s).	
		Review and monitor success of travel plan in accordance with travel plan strategy and conditions/planning obligation. Liaise with borough officers (and TfL/HA if appropriate).	
		Ongoing review and improvement of travel plan.	

Ensuring delivery

- 2.5.7 RTPs differ from some other types of travel plan, in that their preparation generally takes place in advance of site occupation and without full knowledge of the travel needs and characteristics of the future residents. They offer a unique opportunity to deliver better travel choices by planning for improved accessibility through the layout and design of new developments. The use of the multi-modal TRAVL database can provide important baseline survey information on the likely transport impacts of a development. An RTP should evolve over time and, once implemented, respond to monitoring information. They should be 'living' documents. Arrangements should be agreed at the outset for how the plan and its targets can develop and change over time.
- 2.5.8 As far as possible, the section 106 agreement should be drafted in such a way as to make the travel plan self-enforcing through the use of actions to be taken in default or to remedy potential consequences (see Box 4).

Box 4:

Self-enforcing planning agreement

Ealing Borough Council required that the section 106 agreement for the Grand Union Village (GUV) should include a payment of £130,000 for the implementation of a Controlled Parking Zone (CPZ) if it became apparent as a result of monitoring that off-site on-street parking by GUV residents was taking place. This would be payable for up to 10 years and be matched by a payment of £170,000 to subsidise existing residents parking permits if a CPZ was introduced.

- 2.5.9 Other mechanisms that should be included within section 106 agreements to help ensure delivery include:
- A requirement to extend the monitoring period and to provide a revised package of measures until such time as targets are met
 - Payments to the local authority to cover the cost of implementing the previously agreed measures where these have not been put in place
 - Payments to the local authority to cover the cost of taking action to deliver the agreed targets where these have not been achieved
 - Constraints on the use of the site or subsequent phases of development until such time as the agreed target outcome is achieved
- 2.5.10 In reality, well-designed RTPs which are the product of good partnership working between boroughs and developers will be successfully implemented. In such cases, neither party want to trigger the use of sanctions with any setbacks in implementation resolved by negotiation.

3. Developing residential travel plans – design and measures

Section 1 Understanding the context for residential travel planning in London

Section 2 Securing residential travel plans

Section 3 Developing residential travel plans – design and measures

Section 4 Implementing residential travel plans – targets, monitoring and management

Section 5 Critical success factors and further information

A residential travel plan places accessibility at the heart of the development process. This must ensure that it is integral at all stages, from the development's location, layout and design, to its marketing and ongoing management.

This chapter looks at the following key issues:

- The objectives and principles for RTPs
- The Travel Plan Pyramid
- The key issues to be addressed and the components that will form part of the travel plan in all stages of plan development

3.1 Objectives and principles

3.1.1 Guidance on RTPs produced by the Department for Transport¹¹ established the following objectives for travel plans in residential developments. It explained that RTPs should:

- Address residents' needs for access to a full range of facilities and services – for work, education, health, leisure, recreation and shopping
- Reduce traffic generated by the development to a significantly lower level of car trips than would be predicted for the site without the travel plan. The travel plan should not provide grounds for unacceptable development in the wrong location
- Promote healthy lifestyles and sustainable, vibrant local communities
- Address specific problems identified in the site's transport assessment, eg a road safety problem that prevents children or older people from gaining access to facilities
- Encourage good urban design principles that open up the permeability of the development for walking and cycling linked to the Design and Access statements

¹¹ Making Residential Travel Plans Work: Good Practice Guidelines for New Development', DfT, 2005.

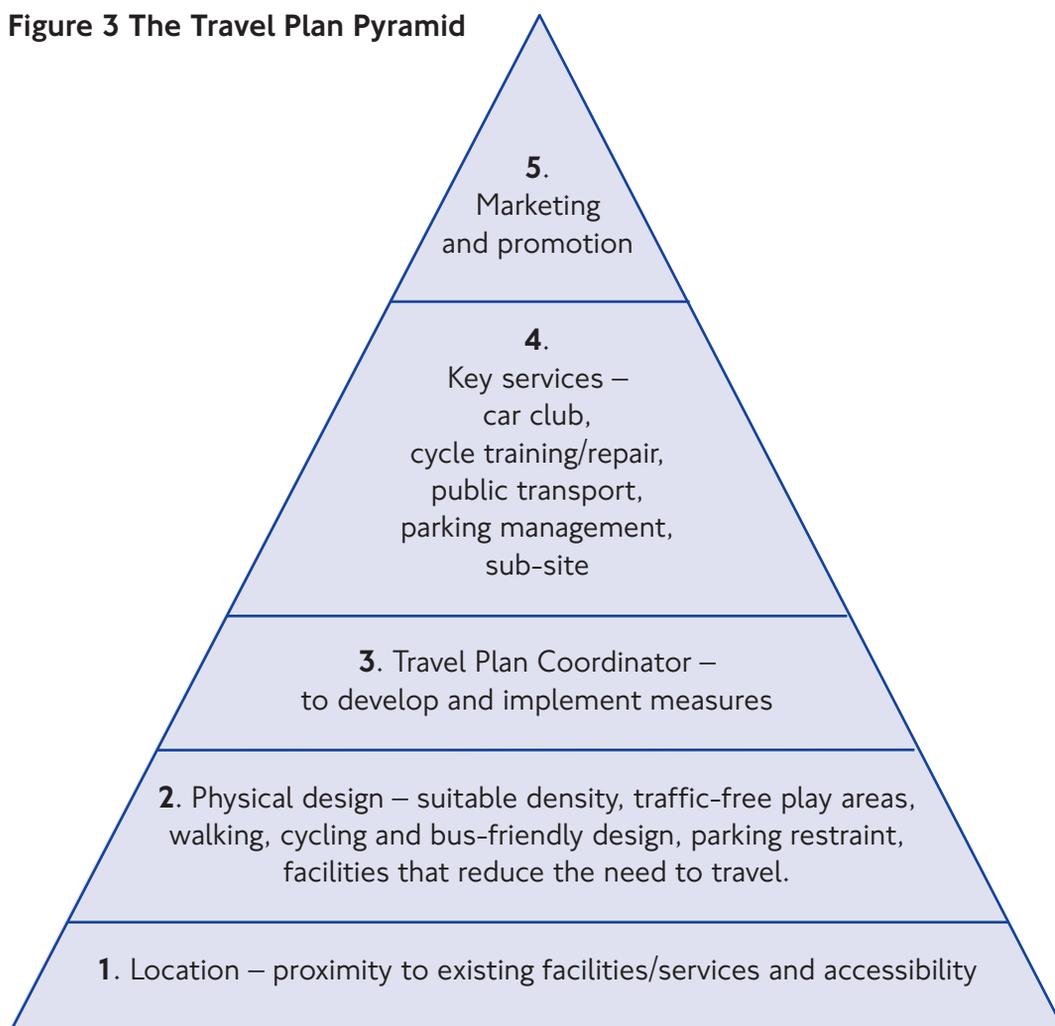
3.1.2 Residential travel plans follow key principles which should guide the choice of measures. These guiding principles are set out in Checklist 2.

Checklist 2: Principles

Residential travel plans – key principles

- ✓ The plan should be site specific – the detailed choice of measures is guided by opportunities and constraints of the site, for example, existing public transport and facilities.
- ✓ It should combine ‘hard’ measures – site design, infrastructure and new services – with ‘soft’ measures – marketing, promotion and awareness-raising among residents.
- ✓ It should provide a holistic package with measures integrated into the design, marketing and occupation of the site rather than ‘retrofitted’ when the development is complete. The measures should aim to achieve more sustainable travel patterns from the outset, rather than cutting car use once the residents are in occupation.
- ✓ It should include measures to support walking, cycling, deliveries and public transport use.
- ✓ It should include parking restraint – likely to be critical to the success of the plan in reducing car use. A travel plan should never be treated as justification for more generous parking, as the parking level is itself an important measure in the plan.

Figure 3 The Travel Plan Pyramid



3.2.1 A residential travel plan can be thought of as a pyramid of measures – the plan is built from the bottom up, with decisions and actions at each level creating the conditions that provide the foundation for success at the next level up. Some of these actions will also be outcomes from the transport assessment. As stated in Section 2.2. a full residential travel plan will be required for development sites above a threshold of 80 dwellings. However, this does not mean that below that threshold developments will be exempt from implementing sustainable transport measures.

3.3 Level 1 – Location

3.3.1 The choice of location is critical in determining travel patterns generated by new development. In general, the greater accessibility of central and Inner London and larger town centres in Outer London provides a supportive setting for low-car living. At the same time, plans for large-scale redevelopment of areas like the Thames Gateway should contribute to a change in the way people travel across the whole of London, and not just in the immediate locality. RTPs will have a lasting effect on an individual's travel choice.

3.4 Level 2 – Physical design

- 3.4.1 Many physical aspects of new development will influence residents' travel patterns from the outset. Good site design can foster community vitality by enabling residents to move safely and easily on foot and by bicycle. It can facilitate bus movements through the site and minimise the dominance of private motor vehicles. Planning guidance for London¹² highlights the importance of sustainable Residential Quality – the design-led approach and urban design principles by which dwellings can be built at higher density, while maintaining urban quality and fostering sustainable development (see Box 5).

Box 5:

'Housing: The London Plan Supplementary Planning Guidance', Mayor of London, November 2005

'Research into implementation of Sustainable Residential Quality principles has shown that housing developments should be designed to encourage pedestrian movement to and from surrounding communities. This permeability should reflect desire lines, especially those associated with efficient access to public transport, retail, community and other facilities. The London Plan uses the term Sustainable Residential Quality to describe this complex collection of factors.'

Site density

- 3.4.2 Achieving appropriate housing densities – together with good design and amenity space – is important in creating compact neighbourhoods that can sustain local services and public transport. The London Plan's density, location and parking matrix¹³ also provides guidance, suggesting suitable (net) densities for different types of site, taking into account location, setting and the index of public transport accessibility levels (PTAL).

Walking and cycling friendly design

- 3.4.3 TfL and London boroughs have a target to achieve an increase of at least 10 per cent in journeys made on foot per person in London between 2001 and 2015¹⁴, and a 400 per cent increase in cycling by 2025.¹⁵ It is essential that the design incorporates good quality, safe and comfortable walking and cycling routes, and that the layout is permeable to those on foot or bicycle.

¹² 'Housing: The London Plan Supplementary Planning Guidance', Mayor of London, November 2005.

¹³ Density, location and parking matrix, Table 4B1, 'The London Plan, Spatial Development Strategy for Greater London', Mayor of London, February 2004. [Update]

¹⁴ 'Transport Strategy Implementation Targets', Mayor of London, GLA, July 2004.

¹⁵ 'Transport 2025: Transport vision for a growing world city', TfL, November 2006.

- 3.4.4 Safety must be designed-in, for example by ensuring routes are well-lit and share frontages with buildings offering natural surveillance to pedestrians and cyclists. Walking and cycling routes will follow ‘desire lines’ through the site, and connect conveniently with the off-site walking and cycling networks. They must enable people to walk or cycle to the places they want to reach – such as bus stops and Underground stations, shops, community centres, schools and other facilities (see Box 7).

Box 7:

Accessible by design

Grand Union Village in Ealing has been designed as a pedestrian and cycle-friendly ‘urban village’ that will encourage sustainable travel. The 705-home mixed development, by Taylor Woodrow and Bryant Homes, has a network of footways and cycle ways throughout the site and every unit has access to safe and secure cycle parking. Priority is given to pedestrians and cyclists with a 20mph limit throughout the site enforced by traffic calming measures. The on-site cycle routes link to existing off-site routes.

- 3.4.5 TfL has published guidance¹⁶, on the importance of securing high quality improvements to the walking environment and how new developments provide opportunities to achieve such improvements. In addition, the ‘London Cycle Design Standards’ have been published to establish the principles and standards for designing to reduce barriers to cycling, in order to improve safety and convenience and increase levels of cycling in London.¹⁷
- 3.4.6 Lower vehicle speeds make areas safer, and can be achieved through the introduction of an area-wide 20mph zone. Lower speed limits – of 10mph or less – are used in home zones. A home zone is a street, or group of streets, designed primarily to meet the needs of pedestrians and cyclists, rather than motorists, and to ‘open up’ the street for social activity and play. Street design, landscaping and highway engineering all have a role in controlling vehicles and achieving very low speeds. The aim is to improve the quality of life in residential roads by making them places for people, rather than just thoroughfares for cars, and to encourage people to use streets in different ways. Crucially, drivers should feel that the car is a guest in the street.

¹⁶ ‘Improving Walkability: Good practice guidance on improving pedestrian conditions as part of development opportunities’, TfL, September 2005 (focuses mainly on non-residential but includes some residential good practice).

¹⁷ ‘London Cycle Design Standards’, May 2005.

- 3.4.7 The potential for a home zone needs to be considered at an early stage to ensure compatibility with the overall design of the site. A marked difference between new-build home zones and those established in existing neighbourhoods is that there is not usually scope to involve prospective residents at the design stage. Nevertheless, principles of home zone design can be incorporated in a new development (see Box 8). In developing the features of the home zone careful consideration is required of all potential users.

Box 8:

Incorporating home zone principles in new development

The old Queen's Hospital site in Croydon is now being developed for residential use entirely on home zone principles. The scheme, by Fairview New Homes, provides 340 apartments and 25 houses. It will be paved with blockwork within which trees and public art form part of the streetscape. Play provision is made at three separate locations, two of which lie adjacent to home zone streets. The centre of the site is designed to provide an informal meeting place, and is dominated by a large tree. Parking is provided at approximately 0.7 spaces per unit. The use of home zones was an express requirement of the development brief prepared by the London Borough of Croydon¹⁸.

Cycle parking

- 3.4.8 Sites should include secure cycle parking provided in line with TfL's 'Residential Cycle Parking Guidelines'¹⁹. This should therefore be conveniently placed for visitors, residents and other users. For example, Sheffield stands for visitors should be in front of houses and covered lockable cycle storage designed into residents' homes to fit with building regulations and other design considerations.
- 3.4.9 Additional cycle facilities should also be considered, such as pool bikes and cycle hire facilities. Contacting local cycle suppliers and stores and providing discounts on cycle purchasing, setting up cycle training, buddy schemes and user groups should also be considered.

¹⁸ See www.ihie.org.uk and www.homezones.org.uk

¹⁹ 'Residential Cycle Parking Guidelines', TfL, (September 2007)

Providing for deliveries

- 3.4.10 The increasing use of the internet and home shopping has resulted in the need to better provide for deliveries. To enable this need to be met there are specific issues which should be considered:
- Fifty per cent of UK households are unoccupied during normal working hours
 - Twenty to forty per cent of home deliveries that can't fit through a letter box fail first time and result in either extra delivery trips or the receiver having to make an additional journey to collect the item, often by car
- 3.4.11 Facilities should therefore be designed into developments that allow deliveries to be made to the recipient through the adoption of unattended drop off/pick up systems. There are a wide range of unattended delivery solutions available, ranging from cool boxes for grocery shopping through to parcel lockers for small packages. Examples are available at www.freightbestpractice.org.uk. Centralised mail delivery facilities in communal areas, rather than letter boxes in individual accommodation units, also contribute to greater security and delivery efficiency.
- 3.4.12 Provision also needs to be made for the delivery vehicle to stop and unload in a legal and safe place. Dedicated loading provision, ideally off-street, should be provided so there is no conflict with parked cars, and the delivery can be undertaken safely and efficiently.

Social space and amenity

- 3.4.13 Encouraging sustainable travel in new developments is not just about journeys made to and from the site, but the fine detail of people's movements and interactions in their own neighbourhoods. Community vitality is affected by opportunities for meeting others spontaneously and the extent to which social space is protected from traffic.
- 3.4.14 Site design wherever possible should make generous provision of dedicated space for social exchange and recreation. This should be imaginatively designed. For example, through the creation of areas that provide a focal point for the community with: seating and public art; children's play areas; usable green spaces; sports grounds; allotments; and woodland and nature conservation areas. The development's public areas should not feel like landscaped car parking. It is also important that older people can find attractive sitting space close to their houses that offers more than a view of the car park.
- 3.4.15 In addition, the amenities incorporated into the design of the buildings can help to reduce the need to travel. Flexibility in the layout of rooms can facilitate working from home without obstructing other uses. For example, a wall that is at least 1.8m long with an electricity

point and space to put a desk facilitates home working. Other considerations for home working are the provision of broadband access and workshop space.

Bus infrastructure

3.4.16 Where buses will be coming onto the site, the design should include the provision of appropriate infrastructure, such as bus stands, stops and shelters. These should take account of TfL's current accessibility guidelines which are designed to ensure step-free access to buses²⁰. The position of bus stops in relation to bus routes should be determined by TfL London Buses, as should the use of bus gates and bus priority measures. It is also essential that for roads to be used by buses the physical layout on site is approved by TfL.

Car parking allowances

3.4.17 Parking policy in The London Plan seeks to ensure that on-site car parking at new developments is the minimum necessary and avoids over-provision which could undermine the use of sustainable transport. The exception to this approach is in ensuring that developments are readily accessible to disabled people through the provision of suitable designated parking spaces and/or drop-off points²¹.

3.4.18 The London Plan sets maximum car parking standards for residential development and requires that public transport accessibility levels are used to determine the appropriate level of provision. Importantly, parking restraint is expected to increase as the availability of alternative means of transport increases.

3.4.19 Parking standards are likely to be critical to the success of RTPs in achieving low-car use, and parking provision should reflect the travel plan's aspirations. The scope for car-free development should also be considered (see below). The range of measures introduced through the travel plan are designed to improve the site's accessibility by more sustainable means and to support lower levels of private car ownership and use (eg people in households with two or more cars travel on average 40 per cent further each year rather than people in households with one car²²).

3.4.20 Restricting parking provision will help to ensure the take-up of key services provided by the travel plan and improve the ability of these services to become self-sustaining. Another benefit of a lower parking allowance is that it can free-up space for other development on the site, or for other purposes that directly benefit the community, such as communal gardens and play areas.

²⁰ 'Accessible Bus Stop Design Guidance', TfL (2006).

²¹ 'The Mayor's Supplementary Planning Guidance, Accessible London: Achieving an Inclusive Environment', April 2004, provides detailed advice on access for disabled people.

²² 'National Travel Survey for 2002/03', DfT.

- 3.4.21 The intention is not to restrain access to a car since this can be provided through a car club (see Section 3.6.2) but decrease the need for ownership of a car and overall car use. The optimum parking ratio (the number of parking spaces provided per dwelling) for a development supporting a car club is reported to be between zero and 0.8²³. The car club will also require designated parking bays, conveniently located for residents.
- 3.4.22 A scarcity of parking at other destinations, such as employment sites and in the town centre, can also be expected to influence the success of the plan in reducing car trips.

Parking design

- 3.4.25 The design of car parking should be unobtrusive, and should not dominate the visual impression of the site. Parking spaces should ideally not be placed directly in front of houses, but nevertheless should have a degree of passive supervision if possible. More visible parking should be well landscaped and should not block cycling or walking access to the property. Flexibility can be built in through the use of paving that can be taken up at a later date, allowing free space to be returned to garden. It is important to refer to the DfT minimum standards in the design of disabled parking bays²⁴.
- 3.4.24 The management of parking is also important in reducing car use and this is discussed further below.

Car-free development

- 3.4.25 The London Plan states that an element of car-free housing should be included on developments where accessibility and the type of housing allow this to be possible.
- 3.4.26 Car-free developments (with no on-site parking except for disabled people) have been successfully pioneered in several London boroughs (see Box 9). These schemes are generally accompanied by implementation of CPZs and provision of car club vehicles, together with bike parking/hire as an alternative to car ownership.
- 3.4.27 A residential travel plan is especially relevant in the context of car-free housing, where the measures provided can help to ensure that residents have good access to facilities and services. It also ensures that accessibility issues are considered as part of the design of the development.
- 3.4.30 It is important that parking in the surrounding area is restricted by on-street parking controls ahead of occupation (eg CPZs). Car-free housing should be secured through a section 106 agreement which includes a provision that residents are not entitled to a residents' parking permit (see Box 10).

²³ 'CarPlus Car Club Tool Kit for Local Authorities', 2004

²⁴ 'Inclusive Mobility: A Guide to Best Practice', DfT 2002.

Box 9:**Car-free and low car development – examples from three London boroughs:**

Car-free housing has been pioneered in the **London Borough of Camden**, where the local authority has signed planning agreements covering more than 2,000 car-free and car-capped dwellings since 1997. Developments take place where there are on-street parking controls in place, and residents are not entitled to on-street residential parking permits. Planning obligations ensure that the same restrictions will be carried over to future occupants. The policy is now widely accepted within Camden.

In the **London Borough of Southwark** a maximum of 0.4 parking spaces per unit is permitted for residential development in the central zone. All developments in Southwark's Controlled Parking Zones are required to be car-free.

Similarly, the **London Borough of Merton** has policies that encourage proposals for car-free residential development in town centres and areas where there is an operational controlled parking zone. Under these circumstances CPZ orders will be used to prohibit the issue of residents' parking permits to occupants.

Improvements to off-site access

3.4.29 Off-site improvements may also be required to facilitate access to local facilities. These can include:

- Road safety improvements to highways infrastructure serving the site
- Improvements to key off-site walking and cycling routes, eg a river walkway or a link to cycle networks
- New off-site bus infrastructure, such as bus priority measures, stops and stands
- 'On-street' or other convenient visitor cycle parking

3.4.30 The site's transport assessment should identify key facilities and routes serving the site, and highlight any shortcomings in access that need to be addressed.

Box 10:

A typical section 106 obligation in Camden relating to car-free housing

‘The owner hereby covenants with the Council to ensure that prior to occupying any residential unit forming part of the Development each new resident of the Development is informed by the Owner of the Council policy that they shall not be entitled (unless they are or become entitled to be a holder of a Disabled Persons Badge issued pursuant to Section 21 of the Chronically Sick and Disabled Persons Act 1970) to be granted a Residents Parking Permit to park a vehicle in a Residents Parking Bay or to buy a contract to park in any car park owned, controlled or licensed by the Council.

The Owner for itself and its successors in title to the Property hereby acknowledges that the provision in Clause 1 above will remain permanently.’

The Agreement shall be registered as a Local Land Charge.

The obligation for car-free or capped is the same. The only difference is that in car-capped there is parking on site.

The Traffic Management Order has to be altered and the permit-issuing section should be informed that permits should not be issued for the properties so designated.

Traffic Management Orders

All Parking Traffic Management Orders have been changed to reflect car-free and car-capped housing for the generality. So:

Definition is that **car-free** and **car-capped** ‘means as defined in the section 106 agreement of the Town and Country Planning Act 1990 relating to residential development.’

Orders say, for example:

‘No resident parking permit shall be issued to a resident (except for a holder of a disabled persons badge, issued pursuant to Section 21 of the Chronically Sick and Disabled Persons Act 1970) of housing which has a valid planning consent requiring it to be Car Free (Capped).’

Source: Camden BC

Facilities that reduce the need to travel

3.4.31 While the location of the development should ensure that it is within easy reach of town centres, shops and other services, there is often a case for providing key facilities within the development itself. This can further reduce the need to travel and cut car trips. Research has shown, for example, that a local newsagent will absorb two thirds of all newsagents' trips²⁵. Larger developments have the potential to generate a mix of uses and activities that contribute to the area's self-sufficiency while also creating a stronger sense of place.

3.4.32 In preparing the transport assessment and the travel plan, specific consideration should be given to how residents will access facilities for:

- Employment, including access to major centres of employment and facilities available for working at home, eg live/work space, broadband, and tele-centres
- Education/childcare, e.g. nursery, primary and secondary schools
- Shopping/personal business, e.g. food shops, convenience stores, post offices, banks, availability of home delivery services or mobile shops and provision for home delivery in communal areas
- Healthcare, eg GP, dental surgeries and chemists
- Leisure and recreation eg playgrounds, parks, open spaces where children can play and learn to cycle in a motor traffic-free environment, sports grounds, leisure centres, libraries, arts centres, allotments, pubs and cafes
- Community needs, eg community meeting places, drop-in centres and places of worship for faith communities

3.4.33 Incorporating key facilities, such as shops and surgeries, to assist in addressing gaps in provision in the area surrounding the development (see Box 11). Design features of the site can also make it easier to procure services for the site at a later stage; for example, through provision of space for a part-time health surgery. The developer may also be able to improve the accessibility of the site by funding measures that create better walking and cycling routes to nearby facilities.

Box 11:

Facilities on the doorstep

At **Grand Union Village in Ealing**, a range of local facilities has been incorporated into the development. The Village already has a community centre, run by a newly-established Community Development Trust. When completed there will also be a crèche, health centre, local shops and a restaurant. Meanwhile schools, supermarkets, pubs and a leisure centre are a short walk away.

²⁵'Compact but sustainable', J Winter, S Farthing & T Coombes, Planning Week, 8 June 1995, Pages 15–17.

3.5 Level 3 – The Travel Plan Coordinator

- 3.5.1 Once it is established that the location of the development and its built environment support sustainable travel, the remaining focus of the travel plan should be on the provision of key services and its communication with residents.
- 3.5.2 Ensuring services are in place, and managing the strategy for the site, will require resource from a Travel Plan Coordinator. This does not necessarily imply a permanent full-time post and the workload of the coordinator is likely to be variable. More time will be required in the early stages when services are being procured for the site ahead of occupation and when residents are first moving in. However, further work will be needed to revitalise and refresh the plan at future stages and to accommodate the needs of later incoming residents following the initial establishment of the development.
- 3.5.3 The Travel Plan Coordinator role can be provided by a consultant with appropriate expertise in smarter choices, working on behalf of the developer. It is important that the travel coordinator is based within easy access of the development, so that they can act as a champion for the travel plan and play a hands-on role, providing a friendly point of contact for residents and on-site marketing staff where relevant.
- 3.5.4 The resource for coordination needs to be included in the plan itself, and secured in the section 106, together with robust arrangements for the delivery and review, covering:
- Day-to-day management and appropriate management structures
 - Detailed time frames for delivery and handover arrangements for the travel plan or its components (when the developer's responsibility ceases)
 - Targets and monitoring arrangements
 - Ongoing support from the local authority and provision for enforcement in the event of non-delivery
- 3.5.5 These issues are also discussed in Section 4 in relation to the management of the RTP.

3.6 Level 4 – Key services

Public transport services

- 3.6.1 TfL and the boroughs have established the public transport accessibility levels (PTAL) method, which provides a consistent framework for assessing public transport accessibility across London. These are available through the relevant TfL or borough contact. Ensuring that a new residential area will enjoy good accessibility is a key function of the travel plan. Developers may be required to fund the introduction of new services or enhancements to existing ones (see Box 12).

Box 12:

Providing key connections

For Quintain Estates' development of **New Wembley**, a sum of £1.75m has been required through a section 106 agreement for bus improvements. The development is a large mixed-use site with housing for 8,000 residents, around the new national stadium. A bus infrastructure strategy is to be submitted to Brent BC and TfL, with works up to a cost of £50,000. Further developer contributions are required for Wembley Central and Wembley Park stations. A new bus corridor will be created along the boulevard that runs through the site, and two existing services diverted through the development.

- 3.6.2 Such requirements can lead to an increase in service frequency or a diversion to enable buses to enter the site or run very close to it. Developers may also be required to fund station improvements. Where appropriate, consideration should also be given to the scope for providing or enhancing river transport, such as commuter ferries. Bus, rail and river services should be carefully tailored to the requirements of the site, providing access to key destinations such as shopping centres, employment sites and public transport modes.
- 3.6.3 Bus services should be well supported by the on-site and off-site public transport infrastructure, such as bus stands, stops and shelters and bus priority, all of which must be planned in tandem with the services themselves and in consultation with TfL London Buses. The ability of the site layout to accommodate bus movements should be included in pre-application negotiations and assessed by TfL London Buses before designs are finalised. Existing and new residents should be made aware of the proposed route enhancements.
- 3.6.4 Services should also be supported by effective marketing, as part of the wider package of promotional and awareness-raising measures for residents (see below). Research suggests marketing initiatives for public transport are at least as important as service improvements in attracting passengers²⁶.

Car club

- 3.6.5 Car clubs are fast expanding in London. For most RTPs, a car club is likely to be a key service, facilitating low-car living and complementing parking restraint. The London Plan recognises that car clubs are particularly useful in implementing the sustainable residential quality approach to housing density and parking.
- 3.6.6 Through the club, residents gain access to a car in their neighbourhood without having to buy or maintain their own vehicle. Membership typically costs around £100-£200 a year, though this may

²⁶ 'Smarter choices – changing the way we travel', Sally Cairns, Lynn Sloman, Carey Newson, Jillian Anable, Alistair Kirkbride and Phil Goodwin, DfT, July 2004.

initially be met through developer funding. Vehicles, maintained by the car club operator, are available for short-term hire on a pay-as-you-go basis, with charges per hour and per mile, and bookings available at as little as 15 minutes notice. The overall cost of using a car in this way is cheaper than personal car ownership for drivers with lower mileage. Moreover, TfL research shows on average membership reduces car mileage by a third for all users²⁷. In addition, each car club vehicle replaces eight privately-owned vehicles.

- 3.6.7 In the London context it is often a requirement for a developer to establish a car club as part of a section 106 obligations, if necessary, pump-priming the scheme with an initial sum (see Box 13). Conveniently located parking bays must be designated for car club use – with additional spaces identified and secured as the scheme grows. Free initial car club membership and marketing for the scheme should also be part of the travel plan’s promotional package and integrated into the marketing for the site as a feature of its livability. Discussions with potential operators will help in determining the need for other support measures, such as office space for the scheme administration. The success of the car club in becoming self-sustaining is likely to depend on parking pressure – through scarcity or cost.

Box 13:

Kick-starting a car club service

In Merton, a car club will be part of a new development at **Plough Lane, Wimbledon**. A local car hire company will use a business unit on the site, and run the car club as part of its rental business. The developer, David Wilson Homes, agreed through the section 106 to procure the car club and identify suitable accommodation for it within the site.

The developer will also provide funding for every household to have a free year’s membership of the car club and an induction session where they find out how the scheme works. Under the agreement, the developer’s financial liability for establishing the scheme cannot exceed £95,000.

²⁷ ‘Car Clubs Customer Research’, TfL, Feb 2007.

3.6.8 Independent guidance on the successful establishment of car clubs estimates that the minimum size of development to support a stand-alone, viable car club is 250 units. On smaller developments, schemes may be viable if integrated into the wider neighbourhood to serve other homes and businesses. In developments of less than 200 units, the best option may be to use section 106 contributions to expand a car club that is already up and running in the area. A briefing on funding car clubs through section 106 agreements is available from CarPlus²⁸. The website www.londoncarclubs.net provides information and links to clubs across the city.

Other services to support sustainable travel choices

3.6.9 A number of other services may be included in RTPs which are helpful in supporting sustainable travel. For example:

- Support in accessing a car share scheme
- A cycle centre providing cycle repair services (see Box 14)
- Discounted taxi/private hire services as a complement to the car club, as there are some circumstances where taking a taxi makes more sense than short term car hire. (Taxi/private hire trips should still be counted as car trips for monitoring purposes)
- Provision of broadband access in new homes can give residents easy access to local home delivery services and to information on travel provided through community websites (see below) as well as making it easier for residents to work at home

Box 14:

Services to support sustainable travel

Travel plan proposals for the regeneration of the **Greenwich Peninsula** include provision of a **cycle shop and repair centre**, a bicycle club and pool bike arrangements. The shop will act as a focal point for cycling on the Peninsula, supplying cycles and clothing, carrying out repairs, offering cycle hire or loan and cycle training.

Managing residential parking

3.6.10 Where there is high demand for limited parking, a parking management scheme may be necessary to allocate spaces. In some schemes, residents are charged annually for car park spaces and the revenue is ring-fenced to pay for sustainable transport. Another option is for parking spaces to be sold or rented separately from homes so that they are not seen as being part of the intrinsic value or use of the dwelling (see Box 15).

²⁸'Car Club Toolkit', Car Plus, Sept 2007.

3.6.11 It is important that the parking strategy is communicated to future residents ahead of occupation, so that they understand the constraints on parking when deciding to live in the development and effectively 'buy in' to its parking conditions. The parking scheme is best communicated in the context of the wider benefits of living in a relatively low-car development, and the wider amenities offered by the site.

Box 15:

Parking strategy

The **One SE8** development in **Lewisham** is a development of approximately 550 residential units. Underground parking spaces at One SE8 are sold separately from the housing units at a cost of £25,000 each. A car club is also provided on site for residents and is operated by Streetcar.

Controlling on-street parking

3.6.12 For low-car and car-free housing, on-street parking controls will be important to prevent overspill parking on neighbouring roads. Existing residents are often concerned that a new development close by will result in more vehicles competing for scarce parking on their own streets. It is important to clarify what controls will be in place to prevent this from happening, or alternatively to spell out what action will be taken (by whom and how) if it does happen.

3.6.13 It should be emphasised to existing residents that the purpose of restraining parking is to reduce car use, and so cut traffic generated by the new housing area. In some cases, planning agreements have contingency arrangements for on-street parking controls or controlled parking zones (CPZ) to be introduced if the development results in overspill parking (eg see Box 4). Account should be taken of the potential difficulties of implementing a CPZ. London boroughs are required to produce Parking and Enforcement plans²⁹ in which the use of CPZs is among the measures to be considered. Extensive use of CPZs across a borough can help to facilitate car-free development, as well as meeting wider traffic management and sustainability objectives.

Subsidiary travel plans

3.6.14 Some new developments will include their own workplaces, schools and leisure centres. As a result, the travel plan for the whole development may benefit from 'subsidiary travel plans' for these centres, for example, the occupier of a new office building could be required to draw up and implement a workplace travel plan. On a large mixed-use development the residential travel plan can provide an

²⁹Required as part of Borough Local Implementation Plans.

over-arching framework in which subsidiary travel plans are to be introduced and implemented, by other parties, as appropriate.

- 3.6.15 Measures can be included in a residential travel plan to provide support for travel plans at schools, workplaces and leisure sites serving the development, though they are not part of the site, eg highways safety improvements for a safe route from the development to a nearby school or promotion for residents to participate in a walking bus. As part of a section 106 agreement, developer contribution can also be used to pay for the time of a local authority Travel Plan Coordinator to work with a local school or workplace serving the development and assist them in the development of a travel plan (see Key contacts in Section 5).
- 3.6.16 Detailed guidance on school and workplace travel plans is available in two TfL publications³⁰. There are dedicated travel coordinators at a number of London boroughs and at TfL who can provide advice on developing school and workplace travel plans (see Key contacts in Section 5).

3.7 Level 5 – Marketing and promotion

- 3.7.1 The location, design, facilities and services encompassed in the lower levels of the pyramid should create all the conditions to make sustainable travel choices a natural option. But communicating these opportunities to residents is also essential; consequently a communication strategy for the travel plan is critical to its success.
- 3.7.2 The strategy adopted needs to involve engagement with residents at an individual level. ‘Personal travel planning’ techniques – in which individuals receive customised advice tailored to their journey needs – have been shown to encourage more sustainable travel patterns. A new development provides an opportunity to offer personal travel advice when residents have just moved in or even before, when they purchase or rent the property. At this point, new travel habits are being established and information about the services and facilities in the area are essential to achieving sustainable travel choices.

Sales and induction

- 3.7.3 Residents need to be made aware of the travel arrangements and the access options serving the site from the outset, as part of the normal sales and marketing process for the new development. This will require special training for sales staff, so that they understand the purpose and aims of the travel plan and can be involved in its communication and delivery.
- 3.7.4 Good access by public transport, attractive walking and cycling facilities/training, the availability of the car club and measures to reduce the adverse effects of traffic are all positive features to be highlighted to potential residents in promotional materials. Explaining

³⁰ ‘What a school travel plan should contain – A step by step guide’ and ‘Guidance for Workplace Travel Planning in London’, both available from tfl.gov.uk

all the site's transport characteristics from the beginning, for example the layout of bus routes their frequency and duration as well as parking restrictions will help to avoid misunderstandings arising later.

- 3.7.5 Each newly occupied home should receive an induction visit from the Travel Plan Coordinator. During the visit, explanation should be given about the travel opportunities of the site, the travel plan and its incentives, and the provision of detailed travel advice if desired. The provision of a location map illustrating public transport options, together with walking and cycling access to locally available services/destinations are particularly valuable.

Welcome packs

- 3.7.6 Many travel plans use developer funding to provide financial incentives for sustainable travel as part of a resident's welcome pack (see Box 16).

Box 16: Welcome packs

Each household on the new development at Plough Lane, Wimbledon, will receive: an Oystercard giving pre-paid use of public transport to the value of £100; a discount on Thameslink; one free membership of the car club; secure cycle lock-up and a free bicycle – or alternatively, cash for buying cycle equipment. A travel information pack for households will include cycling maps and public transport information, and all residents will be given an induction session about public transport and cycling. A community website will provide travel information for homes on the site and adjacent businesses.

- 3.7.7 Such incentives are likely to play a critical role in influencing travel habits. The welcome pack for each household can include the following measures:
- Free/discounted use of public transport, eg Oyster cards providing free public transport for a year for a specified number of people within each household
 - Free/discounted use of the car club, eg a voucher to provide free membership for up to two adults per household for the first year
 - A free/discounted bicycle or bicycle equipment, eg a voucher to provide this for a number of people within each household
 - An offer of a visit from a personal travel adviser who can help provide information about sustainable travel that is specifically geared to the journey needs of the household
 - An offer of locally based on-road cycle training for adults and children and bike buddy schemes. Local borough officers may be able to advise on existing services in operation

- Walking and cycling maps showing local walking and cycling routes in relation to local facilities such as sports centres, cinemas, pubs, health centres, shopping and routes to nearby green spaces and recreational trails by public transport and bike
- Travel Options guides specific to the development that include public transport information and local maps – explaining what bus, Underground and train services serve the site and what services can be taken to access specific facilities. In cooperation with local leisure providers it may be possible to issue residents with special admission vouchers giving discounts for people accessing these facilities by sustainable transport
- Information about the travel plan and any other services provided to support sustainable travel, such as home shopping delivery (including access to unattended delivery solutions), local taxi/private hire service, tele-centre facility, etc
- Feedback survey to gather early information about perceived transport choices, the impact of the travel plan and ways of improving it
- Interactive maps on dedicated websites

3.7.8 Any measures offered as part of the welcome pack must be tailored to the site and its residents.

3.7.9 There is evidence that simply providing promotional literature is less effective than engaging with people on an individual basis and encouraging them to actively select the information they need. It is therefore preferable to assemble the contents of each welcome pack in consultation with the individual household, possibly as part of the induction session, rather than simply issuing a ready-made pack.

Ongoing promotion

3.7.10 In addition to the induction process, other initiatives will be needed to promote sustainable travel on an ongoing basis (see Box 17), for example:

- A community website, regularly updated to provide comprehensive travel information of the type included in the welcome pack, with details of forthcoming travel events and forums, timetable changes and new promotional offers. The website could also feature a community car-share database (or links to national schemes such as www.liftshare.com) and links to home delivery grocery services
- A community noticeboard for travel information – again regularly updated
- Community travel forums – at which residents are invited to give feedback to the Travel Plan Coordinator and service providers about travel arrangements

- Community travel events – for example cycle promotion days and special launches for new services. These could link into existing travel awareness activities operated by TfL and the boroughs
- A bicycle user group for the site together with free training and a cycle buddy scheme so that experienced cyclists can help less experienced ones get started (see www.BikeBUDi.com for other resources)
- Regular follow-up meetings with individual households to review the success of travel arrangements
- Regular review of the welcome packs and promotional offers to ensure that these are up-to-date and relevant to new, incoming residents

Box 17:

Refreshing travel plan messages

As part of the New Wembley travel plan, different marketing initiatives will be employed at regular intervals, to keep messages fresh.

Suggested elements are: an induction pack for new occupiers and staff that will provide information about the travel plan; a newsletter reporting on progress; regular special events; support for green transport week; a travel plan noticeboard; posters, leaflets, email updates; and press promotion. Public transport information is to be provided in town centres and other public centres through posters and interactive terminals, and on a dedicated Wembley travel website which will include real-time information on public transport services.

3.8 Travel plan checklist

- 3.8.1 A travel plan checklist is set out below. This summarises the wide range of measures that can be included in residential travel plans. It is not suggested that each plan should include all of these measures, but that they should be considered in the context of the specific development and in the light of the objectives and principles outlined above. The choice of what is relevant and necessary for the site should flow from the transport assessment.

Checklist 3: Travel plan measures	X or ✓
Site design	
Permeability for pedestrians and cyclists	
Highways safety measures/traffic calming/pedestrian and cycling-friendly infrastructure	
Site speed limits	
Restrictions on car movements within the site	
Parking restraint (or potential for car-free site)	
Minimising intrusion from parking (where applicable)	
Areas for social exchange, recreation, seating, play, and biodiversity	
Secure cycle parking in a convenient and well-lit location	
Cycle shower and changing facilities in site workplaces (if applicable)	
Bus routing: ensuring the road design allows the bus to reach all parts of the development and that it connects well with the surrounding area.	
Bus infrastructure, such as stands, stops, shelters, bus gates and real-time information (where services will be entering the site)	
Adoption of home zone principles or home zone features (option to be considered)	
Improvements to off-site access	
Road safety improvements to highways infrastructure serving the site	
Creation and enhancement of cycling and walking links serving the site	
Provision of off-site bus infrastructure/priority on routes serving the site	

Facilities that reduce the need to travel	X or ✓
Healthcare	
Education/childcare	
Shopping/home delivery, eg convenience store, cool storage areas for collection of groceries, unattended delivery facilities	
Employment, eg mixed residential/office use or live/work accommodation, broadband, tele-centre	
Leisure facilities	
Community	
Public transport improvements	
New or enhanced bus services	
New or enhanced river services	
New or enhanced rail services	
Facilities to improve interchange (eg cycle parking/lockers at stations)	
Car club	
Service established on site	
Parking bays allocated	
Other services to support sustainable travel	
Taxis and private hire	
Cycling development plan	
Cycle support centre	
Broadband access and provision of office space in houses	
Car share scheme	
Home delivery grocery service (and cool storage drop-off points on site and unattended delivery facilities).	

Parking management scheme	X or ✓
Allocation of on-site parking including adequate blue badge holder bays	
Control of off-site parking (eg yellow lines or CPZ)	
Promotion and awareness-raising package	
Travel plan training for sales/marketing staff	
Induction sessions for new households and follow-up visits	
Travel welcome packs	
Free/discounted use of public transport	
Free/discounted cycles and cycle equipment	
Free/discounted use of car club	
Cycling/walking maps	
Public transport information	
Personal travel advice	
Information about access to other services and facilities	
Cycle training	
Community travel website	
Community travel noticeboard	
Community travel events	
Community travel forum	
Measures to support complementary travel plans (on and off-site)	
Schools	
Workplaces	
Leisure facilities	

4. Implementing residential travel plans – targets, monitoring and management

Section 1 Understanding the context for residential travel planning in London

Section 2 Securing residential travel plans

Section 3 Developing residential travel plans – design and measures

Section 4 Implementing residential travel plans – targets, monitoring and management

Section 5 Critical success factors and further information

Travel plans rely on sound monitoring and management arrangements to ensure their effectiveness in the longer term. These issues must be considered at the outset as the responsibility for most RTPs will ultimately pass from the developer to the residents occupying the new development. How the plan will develop and evolve, and who will be responsible for it at each stage of development must be addressed in the original travel plan and confirmed in any section 106 agreement.

This section considers these questions further in the context of:

- Setting Targets
- Monitoring
- Managing the RTP

4.1 Setting Targets

4.1.1 Targets play an important role in RTPs. The targets chosen should be demanding, but achievable. They should clearly relate to the goals set out in the plan. Monitoring of the plan should track the core targets, providing regular information on the progress that the plan is making in achieving its aims. This information can provide important ‘early warning’ if a plan is failing to have a sufficient impact on travel behaviour and the plan and its measures can then be modified accordingly.

Checklist 4: Targets for RTPs – Dos and Don’ts

Aim for Targets which...

- ✓ Relate to the development and that can be achieved at the specific site – especially with reference to the TA.
- ✓ Are easy to monitor – such as through annual surveys and trip counters.
- ✓ Cover a small range of relevant issues.
- ✓ Can be linked to enforcement measures if necessary.

Avoid targets which...

- ✗ Simply adopt broader targets (eg London-wide or borough targets) which may be impossible to achieve at a single site.
- ✗ Require expensive and complicated monitoring.
- ✗ Cover a wide range of issues, with low relevance to the actual plan.
- ✗ Are not enforceable.

- 4.1.2 The choice of targets for a plan will be influenced by the site in question, its size, the infrastructure proposed on site and travel choices available in the surrounding area. As such, there is not one readily available 'package' of targets to adopt.
- 4.1.3 Nevertheless, the ultimate aim of most RTPs is to reduce journeys by car to and from the site and to improve overall accessibility by walking, cycling and using public transport. In establishing targets, accurate baseline information on car access to and from the site is imperative. Plans should start by relating targets to the information provided by transport databases like TRAVL (Trip Rate Assessment Valid for London). This is a multi-modal travel database for London, primarily used to predict trips generated by development based upon surveys of real sites (further information from www.travl.org.uk). This information should already have formed part of the site's transport assessment.
- 4.1.4 In selecting targets, it is important that they are realistic in terms of the site in question and the measures proposed in the plan. They should reflect the reductions in car use expected as a result of the plan's implementation, as compared with the base case if no action was taken.
- 4.1.5 The TRAVL database should begin to provide more information on the likely levels of reduction in car use that can be expected as a result of different travel plan measures. In addition, authorities will find it necessary to gather baseline data from existing residential sites of a similar type within their own borough. Analogies can also be drawn from the available evidence on the impact of other school and workplace travel plans implemented in London. Data can also be drawn from census data gathered for the borough in question.
- 4.1.6 In the case of well-designed RTPs, target levels of car use should be achieved at, or near, the start of occupation, since the conditions affecting car use are 'designed-in' to the development. This is demonstrated by monitoring at sites, like the Greenwich Millennium Village, which were designed around low car use principles. Although car ownership in the Greenwich Millennium Village is the same as the average for Greenwich, the level of car usage by residents for travel to work (15 per cent) is less than half of the average usage in Greenwich³¹.
- 4.1.7 In contrast, some travel plan initiatives will only become fully effective once they have become established and fully marketed (eg membership of cycle buddy initiative).
- 4.1.8 This means that targets for some individual measures in the plan may not be met until the development is occupied and the scheme fully established.

³¹'Greenwich Millennium Village: Travel Monitoring Study', 2004 Report.

Relevant targets and indicators

4.1.9 Relevant targets and indicators for RTPs are likely to include:

- **Car trips per household:** the main target in the travel plan will normally be a measure of the level of car trips originating from the site, eg car trips per unit per day (see Box 18). In some cases this is also recorded during the morning peak period. TRAVL, PTAL ratings and data for similar developments can inform the base case, and targets need to take account of the impact of the travel plan measures

Box 18: Target setting – car trips

Quintain Estates' **New Wembley** development in **Brent** will provide accommodation for 8,000 new residents. The travel strategy for the site includes a **target** that residents will not exceed more than one return trip by car a day per household.

- **Uptake of alternatives:** examples include targets and indicators for bus/Underground/river taxi use; take-up/renewal of travel passes (Oyster cards); membership and use of car clubs; registration and participation in car share scheme; cycle counts, uptake of bike training and cycle buddy schemes; and number of journeys by foot. Targets/indicators could also relate to the use of facilities, such as home shopping (see Box 19)

Box 19: Target setting – home shopping

The TravelSense strategy for the development of the southern Greenwich Peninsula includes a target aiming to achieve '10% of residents using internet shopping by the time of the first periodic Review' as a result of liaison with local supermarkets with regard to the practical aspects of home delivery services to multi-storey residential accommodation and to Peninsula workplaces³².

- **Car ownership and mode of travel:** car trip-based targets can be paralleled by other targets/indicators relating to car ownership, travel to work by mode and travel to school by mode. Information related to these targets can be secured through annual travel surveys of residents (see Box 20)
- **Travel Plan awareness targets/indicators:** can reflect the impact of sustainable travel information on residents' attitudes. Targets could aim to achieve a significant percentage of residents stating awareness of the plan and its aims. Such qualitative information can help in understanding the degree of willingness to change travel choices

³²'Greenwich Peninsula TravelSense', Meridian Delta Ltd, 2006.

Box 20: Target setting – car reduction

As part of the Car Reduction Strategy at the **Greenwich Millennium Village (GMV)**, annual travel monitoring reports are prepared by the developer. Information is derived from the annual **Household Survey** on the main mode of travel to work, to the shops and to education. These were considered to be the areas where modal choice could be most significantly influenced by GMV design policy decisions³³.

4.1.10 While it is essential to adopt relevant targets for the travel plan, not every indicator that can be usefully monitored has to be expressed as a target. A plan could successfully achieve low car use without all the measures in the plan proving critical.

4.2 Monitoring

4.2.1 Tracking progress in achieving targets to ensure compliance with planning obligations is one of the main purposes of monitoring RTPs. More generally, monitoring should provide regular information about how the plan is working in practice and whether it needs to be adjusted. Where monitoring reveals problems, there should be an opportunity to review the plan and to take remedial action.

Ultimately, if monitoring shows that a plan is failing and no action is taken to address this, enforcement proceedings may be needed.

4.2.2 In view of the role monitoring plays in the management of the RTP, the details of monitoring and reporting requirements should be set out in the original travel plan and agreed as part of the section 106 agreement. This should explain what is being monitored, by whom, how frequently and the reporting lines. Monitoring surveys should be undertaken using the TRAVL standardised survey methodology and the results reported to the borough that granted planning permission. This will be undertaken at cost to the applicant to ensure that the planning obligation is entered into with the correct degree of responsibility. This also ensures comparable, standardised and robust survey results.

4.2.3 Linked to TRAVL, the iTRACE system has been developed in London to help boroughs manage and monitor travel plans and it is essential that data collected through monitoring is compatible with this system. A standard survey methodology has been developed and is described in detail in TfL's 'Best Practice for Workplace Travel Planning for New Development' which has been produced in parallel with this guidance. Further information can also be found at www.travl.org.uk.

³³'Greenwich Millennium Village Travel Monitoring Study: 2005 Report', Rutherfords.

Monitoring and reporting schedules

- 4.2.4 As with target setting, the particular monitoring needs of a development will depend on the site and nature of the proposal in question. Nevertheless a regular monitoring and reporting schedule needs to be established at the outset. In line with the 'Guidance for Workplace Travel Planning for Development' this should take the form of a five-year cycle with the targets being comprehensively reviewed at the five-year point, though boroughs may request a longer period of monitoring (eg 10 years), for major schemes with longer development timescales.
- 4.2.5 Monitoring schedules should propose:
- Trigger points for the initial review, eg at the stage the development reaches 75 per cent occupancy to provide the information base for future monitoring of the plan
 - Full multi-modal travel surveys conducted at the first, third and fifth year after the initial travel plan trigger point has been reached
 - Annual monitoring reports thereafter for the initial five years after full occupation
 - A requirement after five years to outline how future monitoring will be undertaken if all the key travel plan targets have not been met (eg see Box 21)

Box 21: Target setting – home shopping

The section 106 agreement relating to Fairview New Homes Ltd's mixed-use development at the former Rose Bruford College site in Deptford clearly states that:

'No later than the first anniversary and again on the second, third, fourth and fifth anniversary of the Implementation Date, the Developer shall submit to the council the results of the survey and monitoring of the level of car parking at the Development and the results of the audit and monitoring of staff use of sustainable transport for the period of 12 months expiring on the next anniversary..'

After the first five years, the S106 states that: 'on the fifth anniversary proposals for the frequency of subsequent reviews will be submitted to the Council for approval'³⁴.

- 4.2.6 Monitoring reports will be of interest to both the developer and local authority to see how the plan is progressing and whether targets are being met. Funding should be secured by the local authority from the developer as part of the section 106 agreement to help cover the costs involved in monitoring the plan.

³⁴Fairview New Homes Ltd: B1 Office Development former Rose Bruford College sites, Deptford, PFA consulting, 2004.

- 4.2.7 The findings of monitoring surveys should also be conveyed in an accessible format to the residents of the development. The production of a travel plan newsletter or similar format can provide the opportunity to inform residents further about travel choices and progress they are making collectively in realising the plan.
- 4.2.8 In addition to the information captured through the TRAVL surveys, the following checklist provides examples of additional monitoring information that should be considered:

Checklist 5: Monitoring of RTPs	
Minimum monitoring criteria:	✓
TRAVL standardised surveys	✓
Additional potential monitoring criteria:	✓
Uptake and renewal of free travel passes (Oyster cards)	✓
Uptake of free cycle training and use of cycle storage	✓
Uptake and use of car club or car share schemes	✓
Uptake of personalised journey planning	✓
User satisfaction survey by mode	✓
Residents' awareness of travel planning and its aims	✓
Levels of usage of dedicated travel plan website	✓

4.3 Managing the RTP

- 4.3.1 It is important to ensure that appropriate structures and processes for managing the RTP are agreed at the outset. It is necessary to clarify these issues precisely, as in the case of RTPs – in contrast with most other travel plans – the responsibility for the plan will not normally rest indefinitely with the developer, but pass to the occupiers. Ultimately, the arrangements should ensure that the original objectives and targets established in the plan are achieved.
- 4.3.2 There is a growing body of experience in managing RTPs which highlights the importance of the following issues:
- The role of the Travel Plan Coordinator
 - Options for managing the plan
 - Funding for management
 - Ensuring the plan evolves and is sustainable

The Travel Plan Coordinator

4.3.3 A travel plan needs a coordinator to take responsibility for the development and management of the plan and ensure its delivery. In the case of RTPs, the coordinator has a particularly important role in presenting the plan to residents who may not otherwise feel any common cause with its implementation. It is therefore important that the Coordinator is either located on site or makes regular visits to it, and can therefore become a familiar and trusted person.

4.3.4 Typical duties that a RTP coordinator will fulfil include:

- Taking responsibility for the delivery of the travel plan. The coordinator will normally be appointed before people occupy the site to ensure the measures and facilities are up and running before people move in
- Giving a 'human face' to the travel plan – explaining its purpose and the opportunities on offer. This may include offering personalised journey planning advice
- Training the people selling or letting the residential units in respect of the RTP so that it is marketed as an integral part of the site
- Ensuring that structures for the ongoing management of the plan are set up and running effectively
- Helping to establish and promote the individual measures in the plan, such as home deliveries, car share, cycle training, etc
- Liaising with public transport operators and other service providers (eg car club operators)
- Overseeing the monitoring and reporting of the travel plan

4.3.5 The requirement for a Travel Plan Coordinator, their main responsibilities and the duration of appointment should be clarified in the original travel plan and secured as part of the planning consent.

Options for managing the plan

4.3.6 There is a choice of different structures available for the ongoing management of RTPs in London. In some cases, such as most housing association developments, the original developer of the scheme remains responsible for the site indefinitely. In these situations the developer may want to retain direct control of the travel plan and its implementation. It is more common that residential developments will be sold by the original developers to individual householders. This raises questions about the ongoing responsibility for the plan.

4.3.7 A number of different options for management exist, including establishing:

- Steering groups created by partnership working between boroughs, developers, TfL (where relevant) and local representatives. Such groups will play a particularly important role in the development and early delivery of the plan. They can also be facilitated by a wider transport forum involving all stakeholders (see Box 22)

- Community trusts can also be an effective means of bringing the plan ‘home’ and ensuring the active engagement of residents. Trusts should be properly constituted with funding for their activities and administration agreed with the developer at the outset (see Box 23)
- Management companies: are commonplace in many developments and oversee a wide range of functions. They are well placed to take on the oversight of the travel plan and its implementation. Charges necessary to cover such activities can be recouped through appropriate service management charges (see Box 24).

Box 22: Managing a travel plan – Travel forums

The **TravelSense** strategy prepared for the southern Greenwich Peninsula as part of the section 106 agreement by developer Meridian Delta (jointly with Lend Lease and Quintain Estates), sets out clearly the role of a proposed **Travel Forum** to:

- Promote awareness, delivery and use of public transport by all user groups
- Review travel demand generated by the user groups
- Review the performance of the public transport system serving the Peninsula
- Review the TravelSense strategy and develop strategies to achieve the TravelSense targets

The travel forum, involving all relevant stakeholders, will operate alongside the existing Peninsula Transport **Steering Group**, whose members are directly implicated in the funding and implementation of the development (including the London Borough of Greenwich, TfL, Meridian Delta Ltd, AEG and English Partnerships)³⁵.

Box 23: Managing a travel plan – community trusts

The **Grand Union Village** in West London includes the establishment of a **Community Development Trust**. Subject to the approval of the Trustees, it is intended that oversight of the Travel Plan will reside with the Trust. A Transport Working Group will report to the Trustees. The Group’s terms of reference and tasks are all detailed in the GUV Travel Plan whose development and implementation forms a key component of a section 106 agreement

4.3.8 Some RTPs will employ more than one of these management approaches, for example initial management may fall to a steering group which then passes responsibility for the mature plan on to a

³⁵ ‘Greenwich Peninsula TravelSense’, Meridian Delta Ltd, Feb. 2006.

community trust. At the same time, the nature of the community itself may change over time, and this should be reflected by taking account of regular feedback on the management approach.

Whichever the structure selected for the management of the plan it is important that:

- The management group has a clear remit and accountability
- The group is adequately financed to take action (see below)

Box 24: Managing a travel plan – consultancy

At **Plough Lane, Wimbledon**, the travel plan will be managed by the consultant on behalf of the developer, for the first five years of its existence, and this arrangement has been included in the section 106. After this, the intention is that responsibility for the plan will pass to the site management company.

Funding for management

4.3.9 The management of the RTP creates an ongoing requirement for funding for administrative purposes and to support the role of the Travel Plan Coordinator. While a one-off contribution from the developer to cover such purposes can be negotiated at the outset, there are also opportunities to secure funding during the lifetime of the plan.

4.3.10 Examples of on-going sources of funding for RTPs include:

- The use of management service charges
- Establishing a trust fund from a proportion of the income derived from house sales
- Ring-fencing on-site parking charges or rental charges for parking spaces
- Grants and voluntary contributions
- Sponsorship and advertising on transport-related infrastructure and equipment
- Ring-fencing of any penalty charges imposed on the developer for failing to achieve targets
- Redirecting unused funding allocated to supporting services

Ensuring the sustainability of RTPs

4.3.11 Over the lifetime of the plan, the roles and responsibilities of those involved will change and develop. In the early phases, the developer (and the developer's consultant) clearly has the main responsibilities in designing the plan and delivering the proposed measures. Once the development is finished and a new community established, responsibility for keeping the plan alive should pass to the residents of the development acting through a residents' committee, a management company or similar structure.

4.3.12 The typical evolution of a plan is illustrated in the following table.

Checklist 6: Managing RTPs

Phase	Management	Activity	Mechanism used	Funding
Pre-construction	Travel plan prepared by developer (usually by consultant)	<ul style="list-style-type: none"> Agreed appointment of Travel Plan Coordinator as part of the plan 	Planning consent, including a S106 or occasionally a planning condition	Travel plan paid for by developer
Construction	<p>Travel Plan Coordinator in place before residents move in</p> <p>Establishment of steering group including key agencies)</p>	<ul style="list-style-type: none"> Liaising with training sales staff about transport benefits of the site Preparing marketing materials Ensuring TP measures are in place from the outset Publicity and launch of TP 	<p>Travel Plan Coordinator's responsibilities outlined in the travel plan</p> <p>Implementation of identified measures</p>	A Coordinator paid for by the developer
Early moving-in period	<p>Travel Plan Coordinator in place</p> <p>Establishment of residents group, eg community trust or other structure</p>	<ul style="list-style-type: none"> Provision of personalised travel marketing Promotion of individual plan measures Establish the management group for the plan and initiate meetings Monitoring and amendment of plan 	<p>Plan measures detailed in the original TP which is agreed as part of S106</p> <p>Management structure for plan agreed as part of S106</p> <p>Implementation of identified measures</p>	<p>Developer contributions towards individual plan measures</p> <p>Self-funding 'sustainable transport fund established'.</p>
Established community and into the future	<p>Formal management structure to take on responsibility for the plan</p> <p>Travel Plan Coordinator may continue indefinitely or have a finite term (eg five years after initial occupation)</p>	<ul style="list-style-type: none"> Travel Plan Coordinator facilitates transfer of responsibilities for the TP to community trust /other management structure Monitoring of effectiveness by local authority based on regular review 	Transfer of responsibilities outlined in original travel plan	<p>Individual transport measures (eg car club) may reach commercial viability. Ongoing funding for other measures can be provided by:</p> <p>a) Covenanted sums secured at time of planning consent</p> <p>b) Contributions by residents as part of broader service charges</p> <p>c) Cross subsidies</p>

4.3.13 The key to successful management of an RTP is to ensure that the different stages of its evolution are recognised and planned for in advance. In this way, accountability for the plan at each stage can be detailed in the accompanying section 106. If the plan does not deliver its objectives and targets, enforcement action can be taken if necessary.

4.3.14 A summary of the key issues concerned in the management of RTPs is set out in Table 4 below.

Table 4 Management of RTPs

	✓ or ✗
Does the plan allow for management to develop over time, thereby ensuring successful handover of responsibility to residents/community group?	
Is the management structure inclusive – involving local residents, local businesses (if relevant), transport providers, the developer and the borough?	
Is the management structure properly constituted and funded?	
Is it clearly specified what the responsibilities of the management group are, how often it will meet and what the expected outputs should be?	
Is the role and duration of the Travel Plan Coordinator clearly specified?	
What mechanisms will the management use to communicate with residents, eg newsletters, website, noticeboard?	
How will the management responsibilities be carried forward in future – are these tied into the lease/sale documents and site management arrangements?	

5. Critical success factors and further information

Section 1 Understanding the context for residential travel planning in London

Section 2 Securing residential travel plans

Section 3 Developing residential travel plans – design and measures

Section 4 Implementing residential travel plans – targets, monitoring and management

Section 5 Critical success factors and further information

This final section looks at:

- The main success factors in developing RTPs
- Further sources of information and key contacts for developing RTPs

5.1 Success factors in RTPs

5.1.1 Experience in developing RTPs will grow significantly in coming years. In advance of this happening it is important to draw on the best of the developments which have come forward to date (many of which are highlighted in this guide), and to remember that successful RTPs share many of the same requirements as other types of travel plan.

5.1.2 In summary, successful RTPs depend on a combination of the following factors:

- **Right place, right plan.** The ultimate impact of an RTP will be strongly determined by the location and design of the development for which it is prepared. RTPs are unlikely to lead to significant changes in travel behaviour on low density sites and those with generous parking allowances. Nor should they be used as a tool to allow unacceptable developments in unsustainable locations
- **The plan is an integral part of the development.** Ideally, RTPs should directly influence the design and layout of the development. This can have benefits in freeing-up space that would formerly have been used for parking and releasing this for other purposes, as well as ensuring that key features such as cycle storage, direct walking routes, car club parking spaces, home delivery facilities and public transport access are ‘designed-in’ to the development from the start
- **Plans need partnerships.** RTPs require the involvement of a range of individuals and organisations. The commitment to successful implementation should start from early discussions at pre-application stage before planning consent is given, and continue for five to 10 years after site occupation

- **Plans for people.** The importance of the RTP – and the potential benefits it offers – should be explained to new residents from the moment properties are marketed (whether for sale or lease). Residents should be engaged in the plan and encouraged to take on increasing responsibility for its delivery. The Travel Plan Coordinator will play a key role in achieving this outcome
- **Plans need funding.** The ongoing provision of travel plan measures, marketing material and the monitoring and management of the plan creates financial requirements which should be identified in the original plan and accounted for in a section 106 agreement
- **Planning the future.** RTPs evolve over time. From early occupation of the development, through to full occupancy and beyond, the plan should respond and adapt to monitoring information. Arrangements should be agreed at the outset on how the plan and its targets can develop, and for the handover of responsibility for the plan from the developer to residents. A residents' committee or a management company may be the best way to take forward the plan in the future

5.2 Taking it further

Key contacts

5.2.1 The following contacts should be helpful at the various stages of developing and implementing RTPs.

Contacts – general

Greater London Authority:	www.london.gov.uk
London Councils	www.alg.gov.uk
Department for Transport:	www.dft.gov.uk
Department for Communities and Local Government	www.dclg.gov.uk
Transport for London:	tfl.gov.uk
Highways Agency	www.highways.gov.uk

Contacts – travel planning

London Travelwise:	www.londontravelwise.org.uk
Association for Commuter Transport (ACT)	www.act-uk.com
Developing travel plans	www.travelplans.org.uk
Energy Saving Trust	www.est.org.uk
Highways Agency	www.highways.gov.uk/SmarterTravel

The network of London sub-regional Travel Plan Coordinators can also provide valuable advice. Contacts include:

South East London Transport Strategy (SELTRANS)	www.seltrans.org.uk
North Central Travel Plan Network	www.camden.gov.uk/nctn
The South and West London Transport Conference (SWELTRAC)	www.sweltrac.org.uk
The Thames Gateway London Partnership	www.thames-gateway.org.uk
North London Transport Forum	www.northlondontransport.org
West London Transport Partnership	www.westlondoncarshare.com

Contacts – key initiatives

Information on TRAVL and iTRACE	www.travl.org.uk
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Cycling

UK Official Cycling Portal	www.bikeforall.net
The London Cycling Campaign	www.lcc.org.uk
Cyclists' Tour Club	www.ctc.org.uk
TfL's Centre of Cycling Excellence	www.tfl.gov.uk/streets/cycling

Walking

Living Streets	www.livingstreets.org.uk
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Transport for London	www.tfl.gov.uk/modalpages/2694.aspx
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Freight

Freight	www.tfl.gov.uk/businessandpartners/freight
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Car clubs and car share

Liftshare	www.liftshare.com
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Car Plus	www.carplus.org.uk
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Car clubs in London	www.londoncarclubs.net
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Individual clubs	www.carclubs.org.uk
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	www.smartmoves.co.uk
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	www.mystreetcar.co.uk
--	--

	www.urbigo.com
--	--

	www.WhizzGo.co.uk
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Car free housing

Home zones	www.homezonenews.org.uk
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International	www.worldcarfree.net
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London	www.carfreehousing.org
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Key publications

Department for Transport

'The Future of Transport: White Paper', DfT, 2004 available at www.dft.gov.uk

'Smarter Choices: changing the way we travel', DfT, 2004 available at www.dft.gov.uk

'Making Campaigning for Smarter Choices Work, Guidelines for Local Authorities', DfT, 2005 available at www.dft.gov.uk

'Making Residential Travel Plans Work: good practice guidelines for new development, DfT, 2005 available at www.dft.gov.uk.

'Using the Planning Process to Secure Travel Plans', DfT, 2002 available at www.dft.gov.uk

'Making Travel Plans Work', DfT, 2002 available at www.dft.gov.uk

'Inclusive Mobility: A Guide to Best Practice', DfT, 2002, available at www.dft.gov.uk

'Freight Best Practice, Home Delivery : Meeting the Needs of Customers'

DfT, 2007, available at www.freightbestpractice.org.uk

Greater London Authority

'The London Plan: spatial development strategy for London', 2004 available at www.london.gov.uk

'The Mayor's Transport Strategy', 2001 available at www.london.gov.uk

Transport for London

'Guidance on Local Implementation Plans', 2004 available at tfl.gov.uk

'Guidance for Workplace Travel Planning for Development', November 2007 [Update]

'Transport Assessment Best Practice Guidance', 2006 available at tfl.gov.uk

'London Cycling Design Standards', 2005 available at tfl.gov.uk

'Improving Walkability: Good practice guidance', 2005, available at tfl.gov.uk

'What a school travel plan should contain: A step by step guide', 2006, available at tfl.gov.uk

'Pool Bikes for Business', 2007, available at tfl.gov.uk

'Workplace Cycle Parking Guide', 2006, available at tfl.gov.uk

'Residential Cycle Parking Guidelines', September 2007 available at tfl.gov.uk

'Cycle Parking Standards', 2004, available at tfl.gov.uk

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Appendix –

Developing a threshold for residential travel plans

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1. Introduction

- 1.1.1. The purpose of this appendix is to explain how the threshold for requiring a full travel plan for residential developments was determined. It should be noted that there may be occasions where borough officers request a travel plan for developments below the identified threshold, for example if they consider that the proposed development (whether due to size, nature, proposed occupier, mix of proposed uses or some other reason) presents a significant traffic impact to be addressed.
- 1.1.2. The following objectives were considered as part of the work:
 - To establish the relationship between the number of dwellings in a development and the car trip generation
 - To determine which factors are statistically significant in determining trip generation from residential developments
 - To set an appropriate threshold to trigger the need for a full RTP
- 1.1.3 The full assessment was completed by the transport consultancy Colin Buchanan in December 2006. This appendix provides a summary of the work, explaining the methodology and presenting

the results and recommendations that were drawn from the assessment in order to make the process as transparent and understandable as possible.

2. Significant traffic impact

2.1 Background

2.1.1 The residential travel plan guidance defines the need for a residential travel plan (RTP) as being when the introduction of a residential development would result in a significant level of additional traffic generation.

2.1.2 To calculate whether a development would require an RTP, the predicted development traffic generation (using the TRAVL database, see Chapter 3) was compared with the average level of traffic on strategic A-roads across the Capital, as explained below.

2.2 Defining significant car traffic impact

2.2.1 AM peak hour two-way traffic flows for strategic A-roads across London were obtained from DfT count data, and appropriate deviation calculations were used to remove roads with abnormally high or low flows.

2.2.2 IHT guidelines on what constitutes a significant traffic flow in percentage terms were referred to as a starting point from which to determine a suitable car-trip generation threshold. These state that a transport assessment should be considered if 'traffic to and from a development exceeds five per cent of the two-way traffic flow on the adjoining highway, where traffic congestion exists or will exist within the assessment period'.

2.2.3 It is also acknowledged that 'where the capacity of the road is near to being exceeded, a smaller potential increase may well be material'. This has been taken into account in determining an appropriate figure for London, given the levels of congestion that exists across much of the Capital's road network.

2.2.4 While it is noted that more up-to-date guidance than this now exists, the IHT guidance is referred to as, unlike more recent publications, it provides quantifiable percentages to denote significant trip generation.

2.2.5 It is also noted that DfT draft guidance on transport assessments gives 30 two-way peak hour trips as a potential threshold. However, it was felt that determining a percentage of average strategic flows provided a more robust and London-centric focus for determining significance.

2.2.6 The report concluded that due to the levels of congestion across much of the Capital's road network, 2 per cent of the two-way AM peak hour flow of cars on an average strategic A-road in London constituted a significant trip impact to be generated by a development.

2.2.7 Applied to the DfT London count data, this amounted to approximately 23 car trips in the AM peak hour (08:00 - 09:00).

3. Estimating car trip generation

3.1. Data sources for estimating car trip generation

- 3.1.1 The TRAVL and TRICS databases were used as a starting point for examining the relationship between developments and their impact in terms of traffic generation.
- 3.1.2 TRAVL is a multi-modal trip generation database specifically for London. It was developed by the London Research Centre in association with the London boroughs, and the GLA inherited it when it was established in 2000.
- 3.1.3 The database contains surveys of more than 300 sites across the Capital dating back to 1991. Interviews and counts are conducted at each site throughout the day to determine the number of trips made to and from the site by all modes of transport. Additional data that influences mode split or describes the site is also collected.
- 3.1.4 The TRICS database was interrogated with the view of supplementing the TRAVL trip generation data. TRICS originated when six county councils in Southern England took the initiative of collating and sharing traffic count data in a computerised database for development control purposes.
- 3.1.5 However, there is a lack of data consistency between TRICS and TRAVL. Trip generation data available in TRICS covers the whole of the UK, while the number of surveyed residential developments in TRICS for London is very small. Unlike TRAVL, data on parking spaces and the London public transport accessibility measure of PTAL is not available in TRICS.
- 3.1.6 The small TRICS sample of London residential surveys necessitated broadening the selection to include metropolitan areas such as the West Midlands, Greater Manchester, South Yorkshire, West Yorkshire and Tyne and Wear.
- 3.1.7 Statistical analysis showed that using TRICS as well as TRAVL skewed the number of car trips due to the higher car trip generation in the metropolitan areas outside of London. This led to the rejection of the TRICS database as a suitable source, so only the London-centric TRAVL was used for the rest of the assessment.

3.2 Determining the relationship between variables

TRAVL Regression analysis

- 3.2.1 The TRAVL database was found to contain 28 residential sites. From these, five were found to have significant gaps in the data and so were omitted, leaving 23 sites.
- 3.2.2 Regression analysis was undertaken using the TRAVL data, with the dependent variable being the daily car trips and the independent

variable the number of dwellings in the residential development, to produce a line of best fit to show the relationship between the two variables.

3.2.3 The R squared value from the Statistical Package for Social Sciences (SPSS) output denotes the 'goodness of fit', with an R square value of one being a perfect fit and an R square value of zero showing no correlation between variables. The results produced an R square value of around 0.55 showing a slight trend: the daily car trip generation increases as the number of dwellings increases.

Multiple Linear Regression analysis

3.2.4 In order to establish an improved model to relate the number of dwellings in a development with generated daily car trips, other significant explanatory variables can be factored in using multiple linear regression.

3.2.5 The following variables were available for the analysis:

- Site location (ie inner, outer or central London)
- Public Transport Accessibility Level (PTAL)
- Number of dwellings
- Number of parking spaces
- Site area (gross floor area [GFA])
- Housing density

3.2.6 However, on closer inspection of the sample site data, it was found that some of the car parking data was misleading. In some sites where there was a high generation of traffic, car parking numbers had been entered as 'zero', therefore it appears that where car parking is unknown, zero has been entered as a default value. Unfortunately, for this reason, car parking was removed from the analysis.

3.2.7 Initial multiple regression was then carried out on the remaining variables.

3.2.8 It was found that number of dwellings has a highly significant influence on the response variable (car trip generation) at the five per cent significance level. The gross floor area of the site also has significant influence. The impact of urban location on daily car trips has a high coefficient so was taken forward for the next stage of testing.

3.2.9 The other explanatory variables (PTAL and housing density) have an insignificant influence so were taken out of the assessment.

3.2.10 A final multiple linear regression was undertaken on the remaining variables:

- Number of dwellings
- Site area (GFA)
- Site location (ie inner, outer or central London)

3.2.11 A revised R Square statistic of 0.655, which represents an improvement on the direct linear relationship detailed in the previous section between dwellings and daily car trips (0.55 previously), indicates a stronger model for predicting car trip generation using number of dwellings.

3.2.12 This model enabled trip generation to be calculated.

4 Establishing the threshold

4.1 Formula for calculating trip generation

4.1.1 Based on the model determined in the previous section, a formula was derived in order to calculate the car trip generation of future developments, using the three variables:

- Number of dwellings
- Site area
- Location

4.1.2 This formula is as follows:

$$\text{Daily car trips} = 27.695 + (1.549 * D) + (0.007 * SA) + (12.146 * LF)$$

where D = the number of dwellings

SA = site area (GFA)

LF = location factor (central London = 1, Inner = 2, Outer = 3)

NB The formula will not produce intuitive results for very small development sites due to the constant value of 27.695

4.1.3 Daily car trips can then be converted to an AM peak hour flow. An assessment of the 23 sites in the TRAVL sample indicated that, on average, 9.3 per cent of daily car trip generation occurred during the AM peak hour. As a result, the formula for calculating AM peak hour trips is given below:

$$\text{AM peak hour car trips} = \text{Daily car trips} * 0.093$$

4.2 Setting the threshold

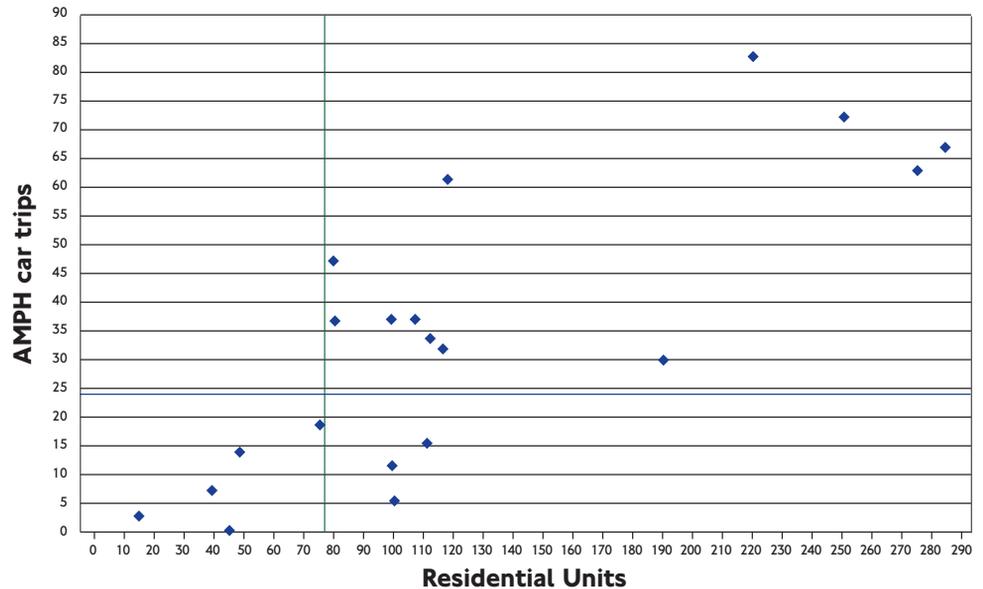
4.2.1 The formulae can be used to calculate an estimate of the traffic generation for any development in the London area. The process of imposing a threshold on this variable then depends on what is considered to be a significant level of traffic generation ie a level at which a travel plan should be required.

4.2.2 As explained in section 2, this study has used a figure of 2 per cent to constitute significant trip generation. This amounts to an AM peak hour car trip generation of 23 cars.

4.2.3 This 2 per cent threshold was then applied to the development sites in the TRAVL database. The threshold of 23 car trips was breached at the c.80 dwelling mark. Therefore 80 dwellings is concluded to be a reasonable size of development for which an RTP is required, based on all previous explanations.

4.2.4 The graph in Figure 4 illustrates the suitability of an 80-dwelling threshold by looking at the residential units versus the surveyed AM peak hour car traffic generation for the 23 development sites analysed from the TRAVL database.

Figure 4 Number of dwellings against AM peak hour car trip generation for the 23 selected TRAVL sites



4.2.5 All sites below the blue horizontal line generated fewer than 23 car trips during the AM peak hour and are therefore discounted. The grey vertical line, indicating the threshold in terms of dwellings, is positioned at 80 in order to ‘capture’ all of the remaining sites.

4.2.6 The other consideration that was researched concerned how many approved developments would fall within the 80 unit threshold. This was an important consideration for two reasons: (a) to determine the potential resource [or workload] consequences for the London boroughs, developers and others involved in implementing residential travel plans, and (b) to determine the proportion of new residential units within London that would be covered by travel plans.

4.2.3 This 2 per cent threshold was then applied to the development sites in the TRAVL database. The threshold of 23 car trips was breached at the c.80 dwelling mark. Therefore 80 dwellings is concluded to be a reasonable size of development for which an RTP is required, based on all previous explanations.

4.2.4 The graph in Figure 2 illustrates the suitability of an 80-dwelling threshold by looking at the residential units versus the surveyed AM peak hour car traffic generation for the 23 development sites analysed from the TRAVL database.

4.2.5 All sites below the red horizontal line generated fewer than 23 car trips during the AM peak hour and are therefore discounted. The green vertical line, indicating the threshold in terms of dwellings, is positioned at 80 in order to ‘capture’ all of the remaining sites.

- 4.2.6 The other consideration that was researched concerned how many approved developments would fall within the 80 unit threshold. This was an important consideration for two reasons: (a) to determine the potential resource [or workload] consequences for the London boroughs, developers and others involved in implementing residential travel plans, and (b) to determine the proportion of new residential units within London that would be covered by travel plans.
- 4.2.7 Analysis of approved planning applications in London during 2005/06 showed that using an 80 unit threshold would effectively capture 67 per cent of the new residential development in London, as shown below:

No. of residential units \geq x	No. of applications per annum	No. of units	Percentage of total units
10	764	45,899	98%
20	365	40,424	87%
30	273	38,117	82%
40	229	36,551	78%
50	193	34,916	75%
60	166	33,394	72%
70	135	31,275	67%
80	133	31,118	67%
90	118	29,843	64%

- 4.2.8 Assuming future residential developments in London are built at a similar scale to those approved over the past two years, the proposed 80 unit threshold would enable two-thirds of new housing to be covered by residential travel plans, without imposing an unduly onerous requirement on the London boroughs, developers and others involved in the planning process.

5 Conclusions and recommendations

5.1 Conclusions

- 5.1.1 Overall, the findings of this work conclude that a suitable threshold to trigger the implementation of a full RTP is the generation of approximately 23 car trips during the AM peak hour (08:00 - 09:00). This figure constitutes 2 per cent of the AM peak hour two-way flow on an average DfT-counted strategic A-road in the London area, calculated using the method described earlier in this report.
- 5.1.2 Analysis indicated that if sites generating fewer than 23 car trips were discounted, a threshold of 80 residential units could be applied to capture remaining sites, without creating an unduly onerous requirement on those involved in the planning process.

5.2 Recommendations

- 5.2.1 The recommendation from this work is that the threshold of 80 dwellings as calculated in this assessment should be the trigger for the requirement of a full RTP.
- 5.2.2 Developments of less than 80 dwellings should not be exempt from implementing any sustainable travel measures, which should be required on a sliding scale linked to an individual assessment of each site. This assessment should be based on the location, size and locality characteristics of each development, using the local knowledge and input from borough officers.



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