PLANNING WITH PUBLIC TRANSPORT

Guidelines for the London Boroughs

1998

Prepared by Llewelyn Davies for
London Transport Planning

Project Team
Tim Pharoah (project lead, Llewelyn Davies),
Martin Crookston (director, Llewelyn Davies), Kate Mansell (Llewelyn Davies).
London Transport (client side) team
David Bayliss, Peter Collins, Peter Livermore, Jon Willis

Planning with Public Transport - Guidelines

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HOW TO USE THIS GUIDE

The purpose of this guide is to provide a source of reference for the Development Control Officer and Developer in planning for public transport.

There are different ways to approach this document:

1. To understand the relevant **planning policy a**nd the **development process,** refer to Section 2.

2. For **particular issues (**e.g. site layout, developer contributions, mixed uses, developer contributions, regeneration), refer to Section 3, and to the topic folder at the back of the document.

3. For **specific development opportunities** such as retail, leisure, employment or residential and the relationship to public transport, refer to Section 4.

4. For a **quick reference** to the principal considerations for the Development Control officer in terms of site planning, or conditions and obligations, refer to the Topic 1 checklist.

1. Introduction

1.1 Purpose of these guidelines

This document aims to provide a source of reference and inspiration in planning for public transport within London's development planning system. It explains the importance of integrating land use planning with public transport provision, and illustrates both graphically and in written form how this can be achieved. National and regional planning policies and their underlying objectives are taken as the starting point, and attention is focused on practical ways of implementing them.

The document is directed towards key players in the planning process: the decision-makers and their advisers in local planning authorities and the private development sector in particular. It is intended also to assist public transport organisations in London in making a positive contribution to the process.

1.2 Partnership in the development process

Development that is well integrated with the public transport networks will benefit a broad range of economic, social and environmental interests, and help London to retain and improve its position as a world capital.

In order to improve such integration, it is important that the various players communicate effectively. The guide is therefore designed to assist people not only individually, but also in their role as negotiators or as members of teams and partnerships in their work. The three main sectors involved are:

- the private sector development industry, including developers of bespoke and speculative schemes, financial, urban regeneration and other institutions who fund many schemes, and their clients in the form of "end users" of schemes;

- the planning system, including the policies and guidance issued by national, regional and local government. The London Borough Unitary Development Plans, and the Development Control system which they serve, are the prime focus of this guide. Planning officers with planning, traffic and transport responsibilities and elected representatives are the key players;

- the public transport sector, including planners and providers of the Underground and bus systems, and of the track and train companies providing services on London's former British Rail lines.

1.3 The key message

London depends on its public transport networks. They provide access for residents and visitors in a way that is efficient in the use of space and sparing in the demands made on the environment. They enable large numbers of people to reach employment, retail, leisure and other services without contributing to traffic congestion and associated environmental hazards.

During the twentieth century attempts have been made to embrace the private car, but the problems created by excessive and growing traffic volumes have become unacceptable. In the twenty-first century, therefore, the role of the car in urban life is likely to be diminished. People's use of the car will become more discerning not only as a matter of necessity, but also hopefully also as a matter of choice.

Road traffic growth cannot continue into the future, and a substantial proportion of personal accessibility requirements must therefore be accommodated by the more environmentally compatible modes of travel, that is walking, cycling, and public transport.

These trends have important implications for the economy. Deteriorating traffic conditions in and around the capital mean that journeys by road are taking longer. This is adversely affecting the competitiveness of business and commerce. As access by car is increasingly constrained, activities organised solely around private road transport may in future find themselves at a competitive disadvantage.

Public transport has always played a vital role in London life, but it is increasingly clear that this role will have to be enhanced to meet the important considerations of environmental quality, social inclusion, and sustainable development. Ensuring that new and changing activities are linked by public transport is going to become a more important element in the development planning process.

The car-reliant schemes that have dominated much of the development agenda over the past few decades are no longer acceptable, and there is an urgent need to identify new and more appropriate forms of development.
Development must be located and laid out in such a way that bus, rail and other services can provide the quality of access that is both desirable for users, and economically viable for the operators.

The policy on how to tackle land use and transport problems has changed, and planning decisions increasingly reflect the new direction. Above all this means that developments must be appropriate in scale and location to fit with the range of accessibility that is to be found in London. London, with its already highly developed bus and rail systems is well placed "to enable the provision of homes, build investment and jobs in a way that is consistent with the principles of Sustainable Development. (Planning Policy Guidance Note 1, 1997 Paragraph 1)

Decision takers may often underestimate the present and growing role of public transport, and the popularity of policies and schemes to improve it. The favourable trends that are emerging also may not yet be widely appreciated.

- Almost everyone uses public transport in London, not just those without cars.

- Public transport is important not only for the journey to work, but for the full range of journey purposes. Nowhere in Britain is this truer than London.

- Public transport use is increasing, with both bus and Underground services being used more than at any time over the past twenty ** years.

- The quality of services on offer is in many areas getting better. Investment in London Transport services is at its highest level for ** years.

- Car ownership in London is growing, but more slowly than elsewhere. Planning land use development to fit with public transport will help to support this favourable trend.

    - Inner London is where there is the greatest opportunity, and need, for public transport. After years of decline, the population of Inner London is increasing again, income levels are growing, and there are major opportunities for new development and re-use of buildings and sites. Public transport will be crucial in maintaining these desirable trends.

1.4 Key facts behind the message

Public transport already accounts for around one fifth of all trips made by Greater London residents. Outer London residents make 50% more trips by public transport than the national average, while those of Inner London make 150% more.[1]

Public transport use in London has been growing in recent years. Underground use is higher now than at any time in the history of the system (**source? Figures?).

In the ten years since the deregulation of the bus industry in the rest of Britain, bus use has increased by 8% in London compared to a decline of 23% nationally.[2]

Car ownership is growing more slowly in London than in the rest of the country, despite higher income levels. This seems to be linked to the respective trends in public transport use. *(reproduce graph from LT Planning "Buses in London: a comparison with the rest of Great Britain", 1998, page 13)*

All types of people in London use public transport, not only those without a car[3]. People living in car-owning households also make 26% of their motorised journeys by public transport, including 14% by bus.[4]

A fifth of trips by economically active people is made by public transport. Those in full time work make more use of rail, while others make more use of buses. Between

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[1] National Travel Survey, 1991-3, special tabulations

[2] London Transport Planning, "Buses in London: A comparison with the rest of Great Britain", 1998, Figure 4.

[3] It is estimated that there are 39% of households in London without access to a car: Office for National Statistics: Regional Trends 32 1997 edition.

[4] London Research Centre, Department of Transport, "London Area Transport Survey", 1991, and London Transport Planning, "The London Transport Travel Market: Digest of Statistics, 1993-4", page 21.

different employment categories, there is much greater variation in the share of trips made by car and on foot than in the share by public transport.[5]

The principal benefit of public transport is its sparing use of space compared to private motorised transport. For example, of traffic crossing the Central London boundary in the peak hour, buses comprise less than 2% of the passenger vehicles, but carry 33% of the people.

London has a hierarchy of centres catering for the population, the region and visitors from elsewhere. These provide the focal points in the public transport network.

1.5 The next sections of this guide

The guidelines cover the general framework, specific issues, and practical examples of planning with public transport. Help in navigating the document is given on the inside of the front cover. The content of the different sections is summarised below.

- ***Public Transport and the Planning process (Section 2)***
  An overview of the new policy framework giving greater emphasis to the role of public transport in planning, and an outline of the main planning objectives. The present role of public transport, and the wide ranging benefits of enhancing that role in the future.

- ***Issues in planning with public transport (Section 3)***
  General considerations such as location and accessibility, site planning, parking provision, town centre vitality and urban regeneration, to more specific issues, for example, density, mixed land uses, developer contributions, traffic management and public transport priority.

- ***Land use specific planning (Section 4)***
  Relating specific development types including retail, residential, leisure, and housing to the issues raised in Section 3 from both a Local Planning Authority and Developers perspective.

- ***Topic folder***
  Various topics are given separate treatment, including a checklist of issues to be dealt with in the determination of a planning proposal.

- Sections 3 and 4 incorporate real and hypothetical **case studies** to illustrate how, in real terms, the developer, local authority and local population benefits from consideration of public transport accessibility.

[5] London Research Centre, Department of Transport, “London Area Transport Survey”, 1991, Table 3.17.

2. THE IMPERATIVE TO PLAN FOR PUBLIC TRANSPORT

This section explains the policy requirement to plan with public transport, the benefits to local authorities and developers of so doing, and the expanding role of public transport in London.

2.1 Introduction

National planning policy guidance now emphasises the role of public transport as an alternative to private road travel. Planning policy reflects a wider imperative to consider the location of development in relation to public transport.

2.2 The concept of sustainable development

Sustainability is about organising the way we live to ensure that it does not prejudice the quality of life in future years. This involves - amongst other things - trying to reverse the undesirable trend lines created by excessive and growing reliance on private motorised transport. Wider meaning can be given to sustainability by including social objectives for broadening opportunities and social inclusion.

In the context of urban development and transport, sustainability requires decent living and working conditions for all in which:

- basic daily needs for the overwhelming majority can be met by trips on foot, bicycle and local public transport, and
- for the majority, longer and less frequently made journeys should be capable of being made by efficient means of transport.

These capabilities should be within the economic and environmental capacities of the area, while paying the full external costs and respecting wider social and environmental objectives.

These aims are consistent with the UK Strategy for Sustainable Development first published in 1994 in response to the 1992 Rio Earth Summit *(Sustainable Development: The UK Strategy (January 1994) HMSO)*. This confirms sustainability as a determinant to future policy in which, amongst other more widespread aims, measures would be taken to reduce the need to travel, influence the rate of traffic growth and reduce the environmental impacts of transport.

Since 1994 there have been a number of decisions taken at the national level which are consistent with the overall agenda for more sustainable transport. These include the setting of air quality and traffic reduction targets, targets for increased cycling and walking, fiscal measures to increase the relative cost of vehicle use and to encourage the use of less polluting vehicle.

London is ahead of many other parts of the country in the preparation of local traffic reduction targets, and in gearing up for more travel by non-car modes. Examples include the construction of major new rail and tram routes, and the establishment of London-wide cycle route, bus priority and Red Route networks.

There is nothing to suggest that such policies and initiatives will eventually be diluted or reversed, and indeed, since the change of Government in May 1997 the commitment to sustainable development has been both re-affirmed and broadened.

The Government has pledged, in the White Paper of June 1998 (*Department of the Environment and the Regions: Developing an integrated transport policy: an invitation to contribute, August 1997*), to develop an integrated transport policy of which a principal objective is to achieve a "better and more strategic integration of transport and land use planning" and also encourage a modal shift away from the car. This is seen as achievable within the framework of the strategic planning system (*The Integrated Transport Strategy White Paper is due in Spring 1998*).

The strategic planning system is itself the subject of major reform in London. Following the referendum in May 1998 a new Greater London Authority will be created which embraces responsibilities for both land use planning and public transport at the strategic level. This should provide a stronger framework for the delivery of an integrated system of spatial planning, especially as it will be locally accountable through the directly elected Mayor for London.

2.3 National Planning Guidance

National Planning Policy Guidance Notes (PPG's) set out Government policy on specific planning issues and identify the relationship between broader planning objectives relevant to development and land use. It is a requirement that PPG's be taken into account in the preparation of Development Plans and also as a material consideration to individual planning applications. The following are considered most relevant.

Planning Policy Guidance Note 1: General Policy and Principles (PPG1), 1997

A fundamental principle of the planning system is "to enable the provision of homes, build investment and jobs in a way that is consistent with the principles of sustainable development" (paragraph 1). Building in a significant role for public transport is consistent with this principle.

Planning Policy Guidance Note 13: Transport (PPG13), 1994

The aim of PPG13 is to guide local authorities in the determination of land use policies and transport programmes. A principal tenet is the recognition of public transport as a genuine alternative to the car (see box).

PPG13 requires local authorities, via their development plan policies, to foster "forms of development which encourage walking, cycling and public transport". In development control, "local planning authorities should consider carefully the impacts on travel demand of all new development before planning permission is granted."

Planning Policy Guidance Note 6: Town Centres and Retail Development, (PPG6) 1996

The key advance of PPG13 policy came with the publication two years later (1996) of PPG6, which required retail and other town centre related developments to be assessed on the basis of a "sequential test", which made town centres the location of first resort (see box).

The correlation between public transport provision and the appropriate location of new development is key to the objectives of Planning Guidance, and the planning system is an appropriate mechanism to "plan" for less travel by adopting an integrated approach to location and land use.

PPG6 and PPG13 do not account specifically for the size of London and the relative comprehensiveness of the existing public transport network. Most urban authorities, however, in London and outside, are adopting local policies to meet PPG13 objectives, such as strengthening the role of existing centres and encouraging the development of travel intensive uses at public transport nodes and corridors. (*Ove Arup for Department of the Environment, Transport and the Regions, "PPG13 Implementation 1994-96", 1997*)

Regional Planning Guidance Note 3 provides specific area advice for London.

Regional Planning Guidance 3: Guidance for London (RPG3), 1996

RPG3 gives London Borough planning authorities advice on the preparation and review of Unitary Development Plans, and sets land use planning issues in the broader context (see box).

"The planning system has an important part to play by encouraging patterns of land use which will reduce the need to travel and which take maximum advantage of existing or proposed public transport connections, consistent with the principles of sustainable development." (RPG3 - London Strategic Guidance, May 1996)

RPG3 gives specific guidance on the acceptable range of parking standards for employment generating development, and this is discussed in Section 3.

PPG13 states (paragraph 4.23) that local planning authorities should:

- promote development within urban areas at locations highly accessible by means other than the private car;
- locate major generators of travel demand in existing centres that are highly accessible by means other than the private car;
- maintain or improve choice for people to walk, cycle or catch public transport;
- limit parking provision;
- establish "accessibility profiles" for public transport in order to determine those sites which could meet the policy goals.
- identify stations and light rail stops as the preferred locations for travel intensive development.

Guidance for London (RPG3) promotes the integration of transport and land use planning so that in considering new developments, local planning authorities should ensure that they are consistent with:

- generating less total travel;
- promoting public transport and other non-car modes;
- creating greater opportunities for activity based on forms of transport other than the car; and
- reducing the journey length of those trips that are made by car.

Local planning authorities should also:

- allocate sites at public transport nodes for uses that can be well served by public transport;
- in larger schemes plan for the provision of high quality transport to and within the site.

PPG 6 (1996) introduced the "sequential test". This gives the following priorities for the location of retail and other non-residential development:

1. town centres;
2. edge of centre sites, defined as being within 300 metres of the edge of the town centre; and
3. other urban sites accessible by a choice of means of travel.

2.4 The benefits of public transport in London: a win-win philosophy

Apart from the social and environmental objectives reflected in policy guidance, there are other benefits to be gained from enhancing the role of public transport:

- there are likely to be increasing limits on car travel, and it will be important to stay competitive within this. Developments accessible only by car may be at a disadvantage in future;
- less car use will allow more intensive use of sites in (with less parking), and hence a better economic return;
- accessibility via public transport allows access to wider markets and labour;
- a greater proportion of the population has access to public transport than has access to a car, and this is especially true of certain social groups including those with below average incomes, and young and elderly people. Ensuring that facilities are accessible by bus and rail is therefore important if social inclusion objectives are to be met.

In considering public transport in the development process, the interests and aims of developer and local authority may initially be perceived as contrary, given the widely held perception of the developer's pre-occupation with car access and generous amounts of parking in order to secure long term financial viability. *(University of Westminster, East Midlands Joint Parking Study, August 1997)*

The interests of both groups can be brought together, however, if the planning framework and the objectives behind it are clear and are consistently applied. The perspective of both developers and local authorities is briefly discussed below.

2.4.1 The Developer's Perspective

It is in the developer's interest to consider access to a scheme in the wider context. Decisions about where to locate are often driven by other factors such as land ownership, the size and cost of premises, skill and cost of the available workforce, and the nature of the market. But none of these factors will guarantee a viable development if it is inaccessible. The key question concerns the kind of access that is appropriate.

In future all development will be in terms of its accessibility, not just by car or truck, but by a choice of mode. To meet the new sustainability objectives, development will need to satisfy one or more of the following criteria:

- the site location is accessible by a range of modes;
- the type and size of development is tailored to the accessibility characteristics of the location;
- the development itself justifies and supports new facilities for access by public transport, walking and cycling.

In order to meet the new policies and objectives, developers will bring forward new kinds of scheme. This involves not only focusing on locations accessible by public transport and other modes, but coming forward with new kinds of "development product" that can be successful in these locations. The car-based schemes unrelated to existing centres or public transport networks will no longer find favour with the local planning authority, nor with planning inspectors or the Secretary of State when schemes go to appeal.

There is plenty of evidence to show the adaptability of the private sector in the face of policy changes or other market factors. There have been rapid changes in the food retail market, for example, in response to the sequential test included in PPG6 (see Section 4). The supermarket sector is relatively independent, but in other sectors the perceptions and attitudes of developers are often influenced by the institutions that provide financial backing, and the end users of development schemes. How can the interests of these bodies be met?

The key requirements are clarity, certainty and consistency in the planning process. If practice varies between different Boroughs, or if policies are weak and only tentatively applied, developers and those with whom they act will have little incentive to make the necessary changes to their development portfolios. Market confidence in the new approach will also be undermined.

Developers are increasingly aware that the types of schemes that have dominated the market during the 1980s and 1990s, such as car-based out-of-centre retail, employment and leisure facilities, cannot guarantee good returns in the future. Occupiers of some car-based developments are already experiencing problems

caused by congested conditions for car access and the lack of alternative means of access. To ensure long term stability of rental values, developers will need to ensure that schemes are accessible by a range of modes, and avoid schemes that are vulnerable to restraints on private road transport.

The long-term profitability of car-based schemes is likely to be undermined by factors already apparent such as:

- increased congestion;
- long term real increases in motoring costs, whether as a result of fiscal policy, or increased fuel or other resource costs;
- other mechanisms designed to reduce reliance on private road transport, or to meet environmental targets, including road traffic reduction measures.

Financial backers, developers and end users will all be seeking to avoid the long-term disadvantages caused by such factors.

A change in market assumptions and development practice is therefore required not only to secure planning permissions which satisfy local sustainable development objectives, but also to create a viable market which is insulated against the adverse consequences of more costly road access.

How the developer benefits from public transport

- potential for an **increase in the density of development**;
- appeal to a **broader range of end users** in terms of transport accessibility;
- **better development returns and competitiveness**: less parking provision means less total space rented or more space given to productive land use;
- **potential for a greater mix of uses and flexibility**;
- more **stable long term return** on investment for urban regeneration projects based on sustainable transport principles. Such developments can also attract funding assistance, and experience greater market stability;
- **visibility** (by passengers) and hence marketing advantage, of schemes located beside public transport routes.

2.4.2 The planning authority's perspective

There are two aspects to the planning perspective, that of Development Control and Development Plan Policy.

The principal concern for the Development Control planner is the appropriateness of a proposed development in accordance with the provisions of the Unitary Development Plan and national and regional Planning Policy Guidance. The development must be appropriate to location, have no detrimental impact on the surrounding environment and be in accordance with policies such as parking and design standards.

In the London Unitary Development Plans there is a clear need for strong land use policies to ensure that public transport provision, location and land use are given much greater consideration as a policy entity. On the one hand, there is a need to provide encouragement for development schemes that are appropriate for public transport access, for example by identifying appropriate sites and accessibility profiles of town centres and other areas. On the other hand, policies need to support tough action to refuse proposals that take insufficient account of public transport. Such policy considerations are explored further in Section 3.

Local authorities frequently express concern that PPG13 policies could affect their competitiveness in attracting investment, or lead to businesses relocating out of their areas when they wish to expand. It is argued that in areas performing poorly in economic terms, it is not practicable to insist on limiting car access. London-wide adoption of sustainable development strategies as set out in RPG3 is therefore crucial, to "level the playing field" of development opportunity. The most important issue in this respect relates to parking standards, discussed in Section 3.

It is important for local authority planners to recognise that the range of development "products" (e.g. size, location, density, and position in the market) for which planning permission is sought is not static. The products brought forward by developers are constantly changing in response to changes in the market, as well as changes in planning policies and regulations. New in-town supermarkets without parking on site, petrol station forecourt shops, and out-of-town "factory outlets" with ample parking, are all examples of development "products" that have emerged in response to changing retail opportunities and planning policies.

The development industry, therefore, is more amenable to changes required to meet the new sustainability agenda than is often assumed. But willingness to respond will depend on planning policies being clear and firmly applied in a consistent manner.

How the local authority benefits from public transport

The advantages to the local planning authority of giving greater consideration to public transport include outcomes which:

- improve the relationship of land use to location with a potentially enhancing effect on traffic movement, congestion and pollution throughout the borough;
- promote local development relevant to the location;
- increase the diversity of development to the benefit of the local population and economy;
- enable higher density development to the benefit of the local economy;
- decrease areas of hard landscaping given to parking, and thus improve the visual and other qualities of the local environment.

2.5 The role of public transport in London

2.5.1 Present

The prominent role of public transport in London today is a consequence of the way in which the city developed over almost two centuries.

London grew up hand in hand with public forms of transport. The railways enabled expansion outwards to accommodate a peak population of about 8 million people in the late 1930s, before the motor car made its appearance in significant numbers. Buses, trams and trolley buses provided local transport to supplement walking and cycling, which together provided for the majority of person trips. In 1933 the number of trips per person each year on London Transport services alone was about 500, not including trips on the suburban and main line railways.

It is only in the past 30 - 40 years that industry, shops, offices and other activities have been developed away from places well served by public transport, in an attempt to adapt to private motorised transport. Over this period, public transport in London has had to compete with ever-growing numbers of cars but, in many respects, it has done so with greater success than in other parts of the country. For example, the proportion of people who travel to work in Central London by public transport has stayed at over 80% for 50 years, while in recent years both Underground and bus use has increased significantly throughout the Capital.

The large role played by public transport is reflected in the fact that Londoners on average own less cars, travel less distance, and drive less than people in other parts of the country. This is particularly true of Inner London, as shown in Tables 2.1, 2.1 and 2.3. From this viewpoint, travel habits are more in tune with national planning and sustainability objectives in London than elsewhere.

Table 2.1 Household car ownership in London and Great Britain, 1991
(% of all households)

	No car	1 car	2 or more cars
Inner London	54	36	10
Outer London	32	45	23
Great Britain	32	45	23

Source: London Research Centre, *London Area Transport Survey*, (1991) Table 2.9, and Department of the Environment, Transport, and the Regions, *Transport Statistics for Great Britain, 1997*.

Table 2.2 Personal travel in London and Great Britain
(Kms per person, per year)

	By car (driver only)	All modes
Inner London	2,272	7,065
Outer London	4,019	9,654
Great Britain	4,782	10,356

Source: *National Travel Survey 1991/93*, special tabulations

The smaller role played by the car in London is clear from the figures, and it is not just a matter of historic accident. The intensity and quality of life in London *depend* on people being less reliant on the car. The density of building, the enormous mixture of activities, and ultimately the high price of land means quite simply that London cannot afford to provide the space for cars that might be a more tempting option in smaller cities. The mobility difference is made up, mostly, by Londoners' greater use of public transport, as shown in Table 2.3.

Table 2.3 Public transport use in London and Great Britain
(per person, per year)

	Distance (Kms)	Trips
Inner London	2,449	231
Outer London	2,217	154
Great Britain	1,360	97

Source: *National Travel Survey 1991/93*, special tabulations

Public transport is not just about getting people to work, though its role in commuting to central London is probably the most prominent and well understood, with the railways in particular configured specifically for this purpose. Half of all rail journeys by Londoners are for work, with most of these being to the City and the West End. But public transport in London also plays a key role for other journeys, and this is where the bus is so important, serving a great diversity of journeys throughout the day (see Table 2.4).

Table 2.4 Trip purposes of public transport trips by Londoners (%)

	Work	Shop	Education	Other	All purposes
Bus	25	31	15	29	100
Rail	51	5	6	38	100

Source: London Research Centre, *London Area Transport Survey, (1991)* Table 6.2.

The advantage in London is that alternatives to the car do exist, and are used to a greater extent and by a greater proportion of the population than elsewhere. In 1991 the car was used for 45% of trips in London (Table 2.5) compared to the British average of 59%. Perhaps more than anywhere else in the country, London's public transport can be used as a network, especially since the advent of the Travelcard. This is reflected in the large volume of passenger interchange traffic that takes place. For example, on average each rail journey involves at least one interchange.

Table 2.5 Travel mode by journey purpose, London residents 1991

	Bus	Rail	Car	Walk	Other	%
Work	11	32	43	7	7	100
Shop	16	5	43	32	4	100
School	14	3	29	52	2	100
All purposes	9	9	45	33	4	100

Sources: *Census 1991* (work journeys); London Research Centre, *London Area Transport Survey, 1991*, tables 3.7, 3.11.

Notes: Mode split for "all purposes" is based on an estimate of walk trips. Car includes all private motorised travel.

In London, land prices and rents can vary significantly in relation to the quality of public transport services. A location on the Underground network is potentially worth more than one that is served only by suburban railway (e.g. much of south east London) or served only by bus routes (e.g. Stoke Newington, Muswell Hill).

Development gains in the form of higher densities and improved rental values can usually be generated by improved public transport accessibility, and thus provide the basis for developer contributions towards such improvements.

2.5.2 The future role of public transport

An enhanced role for public transport is required if London is to remain competitive as a world city. If this is to be achieved, bus, rail and other systems must be developed in harmony with land use development plans and schemes. With car use becoming ever more difficult, either as a result of restraint measures, or congestion and parking difficulties, developments that are well located in relation to public transport will benefit.

(For a fuller discussion of this argument, see London Transport, “Planning London’s Transport to Win as a World City”, 1996. This reviews changing patterns of travel demand, new rail opportunities, the need to reallocate roadspace in favour of buses, and secure improvements to the quality of public transport to remain competitive.)

Future potential

Realising the potential for public transport involves planning for accessibility by all modes. In particular, parking and other traffic restraint measures will be needed to achieve a mode switch away from the car. The availability of public transport has limited impact on mode choice if ample cheap car parking is also available, even in town centres.

Accessible locations - the hierarchy of centres

Measures to manage travel demand, and to limit car use, are likely to be related to the hierarchy of accessible locations in London, with stronger measures taken where public transport accessibility is best.

Although in the absence of a strategic plan for London, no formal hierarchy of centres has been defined, the Borough Unitary Plans mostly include policies which recognise the importance of relating development to different orders of centres within their own areas. Increasingly, too, these policies are being reinforced by assessments of public transport accessibility (see PTALS topic paper in the folder).

This approach enables new developments to be located to make maximum use of public transport, and provides a framework for improving the public transport network, and the range and quality of services offered. This integrated process is particularly important in the areas of urban regeneration, such as the Thames estuary and the Lea valley.

Enhancement of London's rail network

New rail lines are being added to the network, while others are being substantially upgraded. There will be major opportunities for local authorities to plan ahead to ensure that the full development potential of such improvements is realised.

Major new and extended rail lines

Under construction:
- Jubilee Line extension
- DLR extension
- Heathrow Express

Planned Regional Metro:
- Crossrail
- Thameslink 2000
- Chelsea-Hackney

Expanding the market share

In future, an expanded role for public transport is likely to result from increased employment and other activities in central London, and an even greater emphasis on suburban trips for shopping, leisure and personal business. This means developing the network to provide more radial capacity and to make orbital and tangential movements easier by public transport. It will also mean better provision for travel at off-peak times. The extension of shopping hours, the trend towards social activity outside the home, and the emergence of 24 hour activities, all create both the need and the opportunity for more comprehensive bus and rail services.

London already leads the rest of the country in providing for non-work public transport use, but there is considerable scope for further development. Examples are the provision of further midi or mini bus services which can get closer to where people live, better interchange between bus and rail, and the development of new rail interchanges to create a wider choice of destinations available with a single change.

Improvements to interchanges can help public transport to function as an integrated network, rather than simply a series of routes. (See Hounslow case study.) This does depend, however, on services of sufficient frequency being provided, to minimise the time penalty of interchange. The additional waiting time, for example, should not exceed 5 minutes in central London and 10 minutes elsewhere.

The increased role for public transport in London is likely to include:

- serving increased employment in central London and elsewhere;
- catering for a larger share of existing non-work trips;

- providing services to regeneration areas to achieve high mode share from the outset;
- taking a major share of any increase in motorised travel;
- serving the expanding tourist and visitor populations.

While much of this will depend on service quality, fare and ticket structures, and providing good operating conditions for road-based public transport, land use development will also have an important part to play. The biggest changes are likely to be in the major areas of economic regeneration, especially in East London, but any development that is appropriately located and planned can provide additional patronage.

Raising the profile of public transport

London provides plenty of examples of good practice in encouraging public transport use by creating a strong presence, both physically and in people's minds. The stylised London tube map has influenced public transport information throughout the world, and the red bus is similarly famous. The new generation of bus shelters, especially those with real-time bus information, and refurbished stations with shops and other facilities are also important in establishing public transport as an integral part of the city's fabric and way of life.

To be successful in attracting users, public transport has to be highly visible, and well understood. Expanding the role of public transport depends not so much on looking for more "captive" users, such as those without cars, but in making it attractive to those who do have a choice. Prominent station entrances, high quality and well-lit bus stops, and convenient facilities such as telephones and public toilets all help to enhance the presence of public transport on the street and in people's minds. The Wood Green case study (page 60) illustrates how careful planning can contribute.

The profile can also be raised by "off system" measures such as leaflets for local areas or specific events, and working with local employers and managers to promote public transport use amongst their employees, visitors and customers. Local authorities have a key role to play in achieving such measures, especially if they are encouraged at the earliest stage of development negotiations.

Public transport and other modes

The potential role of public transport depends crucially on the extent to which car access is provided for. The more journeys that are made by private motorised modes (car, motor cycle, and commercial vehicle), the fewer journeys that will be made by public transport or non-motorised modes. The basis for this conclusion is that the average number of trips made per person changes very little over time. The most important way of expanding the role of environmentally preferable modes is therefore to reduce people's use of the car.

Public transport competes mainly with other motorised modes, and with walking for journeys over about 800 metres (10 minutes) and up to 1600 metres (20 minutes).

Cycling competes in particular with buses, but it is still a minority mode in London, accounting for around 2% of all trips.

Walking and public transport

The most important interaction is with walking, which is the main means of getting passengers to and from bus stops and stations, and between vehicles at points of interchange. The quality of access on foot to public transport facilities is therefore of key importance, yet responsibility for it lies almost entirely outside the control of London Transport or other operators. The Boroughs therefore need to take full account of access on foot to public transport in drawing up developments plans, development briefs, and in negotiating individual schemes with developers (see Section 3).

2.6 Summary

- Public transport in London plays a big role, and it is getting bigger.

- In many areas, Underground and bus services are being expanded and upgraded, and investment throughout the network is expected to increase. Similar improvements are anticipated on the national rail lines serving London and the South East.

- Giving emphasis to public transport in the development process leads to a win-win situation for both developer and planner.

- The potential for a greater mix of uses, together with appropriate density, promotes vital and viable urban environments and the achievement of wider sustainable objectives.

- Development proposals brought forward by the private sector will adapt to these requirements, provided that they are consistently and firmly applied throughout London.

- London both depends on, and supports, high levels of public transport use compared to other parts of the country. Its relatively dense rail and bus networks, high service frequencies, and interchange opportunities, make the orientation of new development around stops and stations a particularly attractive proposition.

- New and improved public transport facilities will create new locations that can be exploited for sustainable development and vibrant and diverse activities with minimal dependence on the car.

SECTION 3. ISSUES IN PLANNING WITH PUBLIC TRANSPORT

This section highlights the main issues in London which have been raised with London Transport during consultations with Boroughs, and in a special workshop held early in 1998 which was attended by developers, agents, planners and transport planners.

Case studies which illustrate the various issues are included here or cross referenced to Section 4.

Introduction

Accessibility, public transport, and development

It will be clear from the discussion of issues in this section that accessibility is the over-arching theme. It may be useful first to clarify what is meant by accessibility in this context.

Accessibility at its simplest is concerned with how easy it is to move between two places, though beyond this, many interpretations are possible. All movement involves some cost to the individual (time, money, inconvenience etc.), and often involves a cost to others (noise, pollution, delay etc). Accessibility is therefore usually measured in terms of the costs involved in getting between two places or, to put it another way, the various factors that deter people from travelling.

It is useful to draw a distinction between “origin” accessibility, which is mostly to do with the opportunities within reach of people’s homes, and “destination” accessibility, which is concerned with the catchment area of destinations, such as business or shopping locations. The PTALS method measures origin accessibility, in other words measuring how easy it is to get to the public transport system. Other techniques are used to measure how easy it is to get to destinations via the public transport system.

Accessibility embraces all modes of travel. Here we are concerned with the share of accessibility provided by public transport, but realistically this can be planned only in relation to the other modes of travel.

For local authorities in particular, the aim should be to try to organise land use activities in their areas to minimise the social and environmental costs involved in the accessibility requirements which they generate. As explained in Section 2, this will mean planning for as much travel as possible by non-car modes.

For developers, it is important to ensure that users of their schemes, whether employees, customers or visitors, have good access opportunities. This does not have to equate with access by car, and indeed there will be dangers if such an assumption is made. But it is important that development schemes are devised that are appropriate to the location and the access opportunities of that location.

This section of the report explores some of the specific issues involved in getting the balance right.

3.1 Location and accessibility

Of all the planning issues raised in this document, appropriate location is the most important. The great majority of new developments must be planned in relation to existing public transport facilities and services. Only rarely (as in Docklands and the Thames Gateway, for example) will the scale of development enable substantial additions to the public transport networks.

The right business in the right place

Local planning authorities are responsible for ensuring that land use activities are well located in relation to the public transport network. The aim should be to get "the right business in the right place", a phrase coined by the Dutch Government for their location policy. There are two basic principles.

First, residential development (which generates travel) should be within easy reach of bus stops or rail stations that provide links to Central London and other major centres. The PTALS method of assessing public transport accessibility can help in planning appropriate densities of housing, according to the level of public transport service available. (Details of PTALS and their application are given in the topic folder at the end of this document.)

Local facilities related to housing can best be located near the station or stop, so that they can attract “walk-in” trade from public transport users. (See Clapham Sainsbury's case study.)

Second, major development that attracts people such as employment, shopping, and leisure should be located where public transport routes converge.

Planning according to the degree of public transport access

A hierarchy of accessibility, as discussed in Section 2, can be identified in London, and this can help in determining the appropriate location for different types and scales of development. The most accessible locations (where many services converge) are suited to high intensity and specialised activities that depend on drawing people from a wide catchment. At locations lower down the accessibility hierarchy, the scale and type of development should become progressively more local in character.

The central area is pre-eminent as the location most accessible by public transport and is particularly well suited to specialised activities that serve the region and wider catchments.

Some inner areas close to the centre are also capable of supporting very high proportions of trips by public transport, such as Camden Town and Kensington. Major new rail infrastructure can create potential new locations for intensive employment and other development, for example Canary Wharf and Stratford. Similar opportunities can be applied to large leisure and other activities that attract

large numbers of people, for example the Millennium Dome in Greenwich and Wembley (see case study).

There are then a number of important suburban centres highly accessible by rail and bus, such as Croydon and Hammersmith, and others that rely more heavily on bus access. Such centres also can attract labour from a fairly wide catchment area. A report on town centre vitality in London identified 21 major retail centres serving borough-wide catchments. (*Urbed/Halcrow Fox/Donaldsons, "High Accessibility Town Centres in London", LPAC/DoE, 1994*) (Also, see Bromley, Croydon and Hammersmith case studies.)

There are in addition more than a hundred district centres throughout London with good access from local catchments by foot as well as by public transport. These can also be developed to allow a bigger role for the non-car modes, provided that the facilities are designed to serve the local population, and not to attract people from a wide catchment area. (*London Transport Planning, "New ideas for public transport in Outer London", 1996*. Includes case examples of schemes for the use of "intermediate" modes.)

Critical mass

It is important to develop and maintain centres to provide an appropriate "critical mass" of people-attracting developments. In this way access to a range of facilities such as convenience shops, cafes, banks and print services can be achieved with a single main trip (see Section 3.2 below and Hammersmith and Wood Green case studies.)

Regeneration sites

A key issue is what to do with the many "brownfield" sites that are remote from poor public transport. It may be unrealistic to expect that they should not be developed on account of poor accessibility. Some will be well suited to activities that have a low intensity of person trip generation, but a higher intensity of commercial traffic (e.g. warehouses and distribution companies). In this case they will need to have direct connection to the principal road network, and be located so that the main commercial traffic is not routed where it would interfere with bus operation, or local activities. (See Roding Valley case study.) There may be some sites which are simply too inaccessible to develop. There may be others where accessibility by public transport (and non-motorised modes) can be sufficiently improved to enable development to take place, for example in the former Royal Docks area and Barking Reach.

Getting the policy right

The plan-led system (as set out in S54a of the 1990 Planning Act) should enable developers to get the clearest possible guidance as to what kind of development is appropriate for each kind of location. Flexibility in negotiation can be useful to secure development solutions that are appropriate to local circumstances, but this should not extend to flexibility that results in the abandonment of sustainability principles, or the wrong development in the wrong place. This is a key aspect of strategic land use

and transport planning in London which is likely to be strengthened by the new London-wide authority.

It should be emphasised that development proposals by the private sector are formulated to accord with the prevailing climate, which includes not only market conditions, but also the framework of planning policies and regulations. Consequently, robust UDP location policies can influence the character of proposals submitted for planning approval. Inconsistent or weak policies may attract development proposals that are unsuitable for the particular location, and lead to uncertainties and appeals.

3.2 Mixed land uses

Mixed use is promoted in policy guidance as a key ingredient of sustainable development. The PPG13 Guide to Better Practice *(DOE/DOT, "PPG13 A guide to better practice", HMSO, 1995*) gives the following rationale:

- convenient and high quality access between activities;
- keeping areas populated throughout the day;
- providing vitality and security;
- maintaining public access to all parts of town centres.

These attributes lead to more use of public transport compared to the car, and to economic, social and environmental benefits of healthy and attractive centres.

The attributes of mixed use areas which are of particular benefit to public transport are:

- reducing peak/off-peak differentials;
- reducing peak delays to buses;
- maximising activities at a single public transport destination;
- making bus stops and stations safer, especially at night, with streets populated for longer periods of the day.

Defining mixed-use

Mixed use is a relative concept, which depends on the area specified, and the manner of its provision. All Boroughs have a mixture of uses, of course, and the issue becomes relevant only at the more local level. It may relate to the mixing of land uses within a site or within a building, but the quality of the outcome will depend on the interaction between these activities. Mixed-use is not appropriate everywhere, but should be promoted at places where people gather, including rail stations and major bus stops.

Traditional resistance to mixed use schemes

There has been resistance to mixed uses, both within buildings and on development sites, by developers and funding institutions. Developers, investors, and many occupiers often perceive mixed-use developments to be more problematic and risky,

compared with single use developments. They see significant drawbacks in relation to location, sales, complexity, viability, general possibility and management of the schemes. In order to minimise complications, reduce risk and delay, and avoid management problems, there has been a strong preference to develop single high value uses. This extends to the detailed level where developers often prefer buildings to be physically separate. (*Royal Institution of Chartered Surveyors, "Mixed use developments: concept and reality", 1996*)

The achievement of mixed uses (especially within a building) in areas where land prices do not compel high-density development is an issue of estate management or urban management as much as urban design.

The design challenge

The creation of vitality, activity throughout the day, security, vitality of public spaces, requires mixing of activities with street blocks, and is an urban design issue which can be incorporated in development briefs as well as general planning policies for an area. Some boroughs, for example Westminster and Camden, have identified areas for mixed activities in their Unitary Plans. More pro-active attempts are also being made through "urban village" initiatives (Urban Villages Group, "Urban villages", 1992).

The key to the value of mixed use is the interaction of activities on foot. This requires activities to be linked in a clear and convenient way, and without breaks in the footway or footpath, buildings located at the back of the footway, and front doors at frequent intervals, and not separated by large areas of roadway, car parking, or loading areas. It requires, in effect, a change from roadside development to street block development. This is discussed in the PPG13 Guide to Better Practice, page 9.

Prof. Jan Gehl has developed criteria for measuring the pedestrian compatibility of an area based on criteria such as:

- Building orientation to the street
- Frequency of front doors
- Frequency of change of activity
- Active or blind frontage
- Building interest and quality
- Other features of interest or views

Gehl, J, "Life between buildings", Danish Architectural Press, 1996 (originally published 1987).

It requires, in effect, a change from roadside development to street block development. This is discussed in the PPG13 Guide to Better Practice, page 9.

The need to avoid large single-use sites

Mixed-use areas will have a high proportion of movement on foot, and this complements the role and attractiveness of public transport. Single-use areas by

contrast may produce peak-time public transport use, but few passengers at other times. Also, single-use car-oriented developments rarely provide attractive access or waiting facilities at public transport stops.

For large single uses, the bus stop may be sited well away from the front door, perhaps at the other side of a car park and access roads. This is not only inconvenient for bus users, but gives the wrong signal to everyone that car users are more highly valued than those travelling by other means. See Beckton Showcase and Warner Village case studies.

Large “shed” developments have often been built near one another, but which have poor pedestrian links between them. There is often little consideration of how the different uses relate to one another, let alone the surrounding area, and rarely results in useful and attractive public space. In practice, such developments operate as individual developments, encouraging more travel, particularly by car. Examples may be found alongside the A10 and A23 Trunk roads in Croydon and Enfield.

Some of these developments are already suffering from excessive dependence on car access, and congested access routes are known to deter potential users, for example on the A23 and A40 and A406 Trunk roads in London. Developments of this kind are inconsistent with the new policy agenda and should be avoided.

Further reading:
DOE/DOT, “PPG13 A guide to better practice”, HMSO, 1995.
Royal Institution of Chartered Surveyors, “Mixed use developments: concept and reality”, 1996.
Urban Villages Group, “Urban villages”, 1992.
Gehl, J, for City of Melbourne, “Places for people”, 1994
Gehl, J, for City of Perth, “Public spaces and public life”, 1993
Gehl, J, “Life between buildings”, Danish Architectural Press, 1996 (originally published 1987).

3.3 Density

High building densities are required to meet the requirements of more households while minimising land take, while at the same time contributing to diverse and attractive communities.

Concerns about environmental quality have led in the past to maximum densities being prescribed. A study of residential quality in London, however, found no correlation between density and quality (*Llewelyn-Davies et al for LPAC, “The Quality of London’s Residential Environment”, July 1994*). Apart from constraints where there are conservation areas or listed buildings, it will often be possible to raise densities where redevelopment occurs while ensuring high environmental quality.

It would be inappropriate to aim for uniform building density, and consequently their needs to be a rationale for its distribution. This is provided, in part, by measures of public transport accessibility, as applied using the PTAL system (see topic paper in

folder). Higher densities are appropriate in locations well served by public transport. This can be achieved using plot ratios related to the level of accessibility. In Hammersmith and Fulham the plot ratios allowed vary from 0.5:1 in less accessible areas to 2.0:1 in high accessibility areas. Higher plot ratios should be considered in areas with particularly good public transport accessibility.

To formalise this approach, "Transport Development Zones" around nodes on the public transport network could be defined as part of the strategic planning framework for London, as recommended by the Royal Institution of Chartered Surveyors (*Royal Institution of Chartered Surveyors, "New Transport Development Zones" a discussion paper, December 1997*). In advance of this, the Boroughs could consider such designations in their UDP reviews.

More high density locations are possible where major improvements to public transport occur, especially where new rail routes are added (e.g. Stratford) or where new interchange stations are provided where existing rail lines cross but do not connect (e.g. as planned as part of the Chiswick Works redevelopment in Hounslow).

For residential development, the highest densities should be allowed and encouraged on sites closest to public transport, thus maximising its potential use. Unlike trip-attracting uses, residential development does not need to be sited at nodes in the public transport network, but can be served by individual lines or routes. Recent research (*Llewelyn-Davies et al for LPAC, "Sustainable Residential Quality", 1997*) has shown how much higher residential capacities can be achieved within the walking catchment (or "ped shed") of town centres, especially if car parking provision is reduced to reflect the higher degree of accessibility by non-car modes.

Pimlico Station, City of Westminster

Following the decision to include a station at Pimlico on the Victoria Line (1969), Westminster City Council negotiated a change in land use allocations in the area to maximise the accessibility benefits of the station. The aim was to get higher density activity close to the station.

The development plan had provided for employment (office) uses by the riverside, and housing around what was to become the station site. A land swap was arranged with the landowners (Grosvenor Estates), to locate offices close to the Underground station, with riverside sites made available instead for housing.

Because of developments approved prior to these changes, both areas now have a mix of housing and employment, but the land swap was a useful planning response to the new station.

3.4 Town and suburban centre vitality

The planning principles are well established in guidance, and most boroughs have policies to strengthen their centres. (*DOE/URBED, "Vital And Viable Town Centres:*

Meeting The Challenge", 1994) The issue is how to re-focus investment in centres, and away from dispersed or free-standing developments. Attempts to increase the competitiveness of traditional centres by increasing car access, even if they could be afforded, are likely to prove counterproductive.

Probably the most important factor in maintaining or securing strong centres is to use planning powers to prevent the location of employment, shopping, leisure and other non-residential activities away from centres. Competition from out of centre activities consists not only of attracting people away, but also diverting investment and, in the long run, restructuring people's lifestyles around the car, and thus reducing the appeal of centres served best by other modes.

The significant suburban centres in London are the hubs of local bus networks, and most have frequent rail services to Central London and other centres, enabling people to reach them from a wide area without using a car. The location of non-residential development away from these centres will inevitably preclude this opportunity, and is generally inappropriate. See Beckton Showcase, Roding Valley offices and Warner Village case studies.

Parking is often assumed to be vital to the economic success of town centres. Research for the London Planning Advisory Committee (*Sanderson, J and Johnson, T, "The Relationship Between Parking And Town Centre Prosperity", paper 2 in "1997 Parking advice: background papers", London Planning Advisory Committee, 1998)* and from other sources, has shown, however, that other factors are generally more important, including the quality of the pedestrian environment and the diversity of shops and other facilities available.

3.5 Economic regeneration

Regeneration projects should produce development that is compatible with public transport and encourages its use. Sometimes the circumstances provide good public transport opportunities, as well as development value to pay for it. Problems arise, however, where circumstances are more difficult, and the temptation is to abandon the principles of sustainable development in order to attract development and jobs at all costs.

Many brownfield sites are located in former Docklands or other industrial areas, which traditionally were poorly served by public transport. The use of such sites needs to be carefully planned for occupation by uses with fewer requirements for personal travel. They may be more appropriate for uses that generate commercial traffic, but relatively low volumes of commuting or visitor traffic. Again, public transport access measures can help to identify such locations in unitary development plans. (See the offices at Roding Valley case study.)

In large areas of regeneration potential, new development should be planned with public transport from the outset, especially where the scale of development justifies the provision of entirely new services or infrastructure. See Barking Reach and Surrey Quays case studies.

3.6 Site planning and layout

Getting the location and type of development right is important, but good development solutions require equal care to be taken in matters of detailed design and layout. Some pointers are given here as to the main issues likely to arise.

The configuration of buildings on a site, and their relationship with the footway and surrounding area is crucial in making access by non-car modes of travel attractive. In order to minimise the difference between access times by car and other (slower) modes, the crucial factor is the location of the "front door" in relation to the various modes of access. Priority should be given to non-car modes in finding the best arrangement.

Parking, and access to it, should not be located between the front door and bus stops or principal footways. Road crossing points are needed to ensure good access to bus stops serving both directions. Parking should generally be to the rear of a development, or underneath the building.

See Hendon RAF and Beckton Showcase case studies.

The level of parking is discussed in 3.9 below, but the manner of its provision is also important. In town centres, private provision is generally inappropriate, and all parking should be publicly available and controlled by the borough councils to maximise its benefit for all town centre users. Elsewhere, private non-residential parking is best provided in such a way as to allow for future conversion, either to public use or to more productive development. Undercroft or basement structures tend to lock parking into the urban fabric, and thus constrain future options for reducing car use.

A particular objective to which attention should be paid is creating an environment that enhances both actual and perceived personal security. This may involve concentrating pedestrian flows, locating bus stops and waiting areas where pedestrian presence is highest, and ensuring good lighting and overlooking from neighbouring premises. Planning for “active” street frontages and a high frequency of front doors to the footway will also be desirable. Some of these principles are illustrated in the Wood Green case study.

Blending development with public transport

To be successful in attracting users, public transport has to be highly visible, and well understood. Expanding the role of public transport depends not so much on looking for more “captive” users, such as those without cars, but in making it attractive to those who do have a choice.

The design and layout of buildings should be planned to reinforce the profile and convenience of public transport. This includes the creation or maintenance of continuous street frontages, back-of-footway building lines, and simple and convenient footway alignments. In this way the aim is to integrate the planning of the pedestrian and public transport environment with urban design.

Prominent station entrances, high quality and well lit bus stops, and incorporating convenient facilities such as telephones and public toilets nearby all help to enhance the presence of public transport on the street and in people's minds. The Wood Green case study (page **) illustrates how careful planning can contribute.

The profile can also be raised by "off system" measures such as leaflets for local areas or specific events, and working with local employers and managers to promote public transport use amongst their employees, visitors and customers. Local authorities have a key role to play in achieving such measures, especially if they are encouraged at the earliest stage of development negotiations.

Detailed considerations in bus stop planning

The following points should be borne in mind:

- Bus boarders should be provided wherever possible, and designed to allow the use of high kerbs, and to prevent illegal or inconsiderate parking.
- High quality bus shelters, with real-time bus information, should be provided where possible.
- Highway and traffic powers can be used to ensure the most convenient location for bus stops for passengers (see Wood Green and Surrey Quays case studies). Too often bus stops are sited for the convenience of other traffic, and involve inconvenience for passengers;
- Bus stops for both directions should be located on the same road and as near to opposite one another as possible. This ensures maximum profile and "presence" of public transport, and also aids surveillance and personal security, especially at night;
- Pedestrian routes to public transport should be as direct as possible. New developments should always be checked for opportunities to open up more direct routes for pedestrians (see Croydon case study **);
- Pedestrian crossing places should be placed close to station entrances, and sited in relation to predominant pedestrian flows. Crossings should also be combined where possible with bus stop locations.
- Where traffic lanes do not exceed one in each direction, and where traffic delays are not excessive, consideration should be given to divided carriageway layouts which prevent other vehicles overtaking buses at stops. This not only maintains the position of the bus in the traffic stream, but can also aid the safety of passengers leaving and joining the bus. This measure is particularly important at bus stops serving schools, or locations frequented by elderly people.

By improving the interface with buses in such ways, the Boroughs can make a contribution that is just as valuable as the improvements made by the bus operators on the services themselves. Planning and traffic functions within the Borough councils need to be integrated to get the best results.

Sainsbury's, Finchley Road, L. B. Camden
Case Study: Process, Design

Over a 10-year period, at least three applications for retail and associated leisure development were submitted for this site alongside the Jubilee Line tracks between Finchley Road and West Hampstead stations.

Outline consent was granted at appeal against non-determination in September 1996. The applicants (Charterhouse Properties Ltd, Sainsbury's, LT, and BR Property Board) had submitted an outline application that excluded matters of access and layout. Camden Borough Council considered that the proposal could not be considered without these reserve matters. A particular concern was that if the store were located at the rear of the site (away from Finchley Road), it would increase traffic generation and would be inconvenient for public transport users and pedestrians. In addition, the Department of Transport recommended refusal on the grounds of incompatibility with the A41 Trunk Road (Finchley Road) as a result of traffic generation.

Prior to submitting the full detailed application, the new owners, Burford Plc, had many discussions with Camden as to how to proceed. Camden pressed for the Sainsbury's store to be relocated on the site to front Finchley Road. The decision to do this was thus a LPA initiative pursued during extensive pre-submission negotiations.

The emphasis on access at the appeal strengthened Camden's position in pushing for the re-location of the store. The original proposal to locate the store at the back of the site was due to Sainsbury's having a long lease on that part of the site. A lease for the front of the site therefore had to be included in the negotiated outcome, and this was achieved as a result of commitment by both Sainsbury's and Camden to the need for good public transport access.

3.7 Parking provision and control

Parking, more than any other aspect of development, lies at the heart of an integrated approach to land use and transport. It is a major determinant of mode choice, and it is a major consumer of land. The change from requiring all parking demands to be accommodated within the curtilage of a development, to a restraint-based approach to parking standards has opened up the need for a more comprehensive approach.

Non residential parking

Regional guidance for London includes maximum standards of private off street parking to be provided in employment generating uses. These standards are not yet being complied with especially in outer London (*London Transport Planning, "Review of Office and Retail Parking Standards in London Unitary Development Plans", 1997*) either in borough Unitary Development Plans or in individual development permissions (see Figure **). Outer London boroughs in particular have expressed

concerns that application of the maximum levels of provision will mean losing development to competing locations outside Greater London where currently there are few restrictions on parking in new developments. Developers have also expressed the view that the parking maxima would, if applied, undermine the viability of schemes. The reverse can also be true, however, as illustrated in the Wembley town centre case study.

To address this difficulty, regional guidance for the South East is to be revised to incorporate restraint-based parking standards in line with the London guidance, and this should help to level the playing field as far as parking provision is concerned.

Boroughs should be arguing for less parking, as a means of reducing dependence on the car, and ensuring that access to sites is achieved with greater use of public transport and other modes. There are still examples, however, of Boroughs arguing for more parking than developers themselves are seeking to provide. Parking provision is often in excess of peak demand, and there can be no justification for such over-provision. See Clapham Sainsbury's case study.

Extensions to existing property requiring planning permission can also trigger the maximum parking standard, thus producing a choice between more floorspace and maintaining car access. This may result in businesses moving to locations with even greater levels of car use, unless uniform standards are applied.

The change from minimum to maximum parking that is required by Guidance will mean that a more comprehensive approach to parking will need to be applied. Regional guidance (RPG3 paragraph 6.49) says the Boroughs should "develop strategies for parking which incorporate the Borough's approach to off-street, on-street and private non-residential parking, in co-operation with neighbouring authorities". LPAC also recommends the production of Borough parking plans (*London Planning Advisory Committee, "Revised Advice On A Parking Strategy For London (1997 Parking Advice)", 1997 (PA8)*). These strategies and plans could be a component of both Transport Policies and Programmes, and UDP planning policies, covering a range of issues which arise from the application of restraint-based parking provision, including:

- Green Travel Plans, which can be negotiated with developers and end users of schemes;
- Commuted payments may no longer be appropriate, and broader approach to developer contributions to transport is needed;
- Some boroughs continue with minimum standards, contrary to Guidance, to protect the commuted payment system. Considerable sums of money can be secured, for example £7 million in Kingston over 10 years, but if it is used to fund extra parking, it can run counter to policy guidance;
- More widespread use of Controlled Parking Zones to ensure appropriate use of public parking space, and to avoid problems of overspill parking when the provision off-street spaces are restricted.

Residential parking

Residential parking also can influence the level of car use and may influence car ownership. Research for LPAC (*Llewelyn-Davies for London Planning Advisory Committee, "Sustainable Residential Quality: New Approaches To Urban Living", 1998*) has demonstrated that a major increase in housing capacity can be achieved with lower provision for parking in new housing. In addition, there are potentially major gains in terms of environmental and townscape quality. Residential parking could especially be reduced near major rail stations and interchanges, and throughout Central London.

Car free housing can be built in the most accessible locations, where people can easily choose to live without a car. This is likely to be a niche market for the foreseeable future, but there may be greater scope for car-reduced housing, especially if combined with neighbourhood car fleets (local car rental schemes).

The borough of Camden has already promoted car free housing schemes, while other boroughs are giving active consideration to the possibilities within their areas. (See Camden car-free housing case study.) The Borough of Richmond Upon Thames has a housing conversion policy which allows extra dwelling units to be provided without extra parking spaces.

Chalkhill and Stonebridge Estate redevelopment, L. B. Brent

The borough is applying a 1:1 parking standard throughout, which is lower than the UDP standard. A separate standard is also being developed for social housing, along with a review of parking standards borough-wide by consultants.

Park and Ride

Park and ride is a major contributor to public transport in London, with around 80,000 (?) park and ride spaces provided at stations in the London commuter area. In addition there is a great deal of informal park and ride where people park on the streets around stations and continue their journey by rail. Park and ride activity is mainly, but not solely related to journeys to work in central London. The London Transport view is that such "railheading" should take place as far out from the centre as possible, with park and ride opportunities becoming progressively scarce and expensive towards inner London. This is to encourage drivers to switch to rail at their earliest opportunity, thus reducing car traffic and maximising public transport revenue.

Park and Ride may also be an appropriate option for shopping and other visits to town centres in outer London whose catchment areas consist of low density housing with high degrees of car dependency (see Bromley case study). The general principle, however, should be to get people to centres of activity by public transport alone. Some innovative schemes for increasing the role of public transport in outer London have already been developed.

Cycling can also be encouraged for access to stations by the provision of conveniently located and secure cycle parking facilities. Cycle security may often require lockers to be provided. Again, developer contributions can be sought for such provision.

Controlled Parking Zones

Where informal park and ride causes problems on local streets, or where demand generally exceeds supply, controlled parking zones (CPZs) are increasingly being applied. This ensures that priority is given to local residents and businesses, and at the same time encourages people to reach stations without using cars. Where schemes are less likely to cover costs from revenue, consideration can be given to funding CPZs using developer contributions, for example for schemes near suburban stations.

Stockwell Park Estate, L. B. Lambeth
A 1970s housing estate with pedestrian walkways decked over ground level parking had severe vandalism problems. Remedial works included conversion of part of the parking area to a community centre fronting onto Stockwell Road. Such reduction of parking is useful in the context of low car ownership on the estate, and the location close to Brixton town centre and good public transport.

Hospital car parking

Central Middlesex Hospital being in a relatively isolated location, is heavily reliant on car access. It is nevertheless to be massively extended with an Ambulatory Care and Diagnostic Centre.

When Greenwich Hospital closed its work transferred to Queen Elizabeth military hospital. A planning application was made by Bexley Health Trust for 416-space car park on open land to cater for additional demand. Following an appeal inquiry, in November 1997 the Secretary of State endorsed the Inspector's recommendation and rejected the application on grounds of loss of land, and accessibility implications being "against the spirit of PPG13".

3.8 Developer contributions

The process of securing developer contributions is well understood for the funding of traffic and parking infrastructure, but less so for funding public transport. Most development, however, generates additional demands on the transport system, by whatever mode. If the policy has shifted away from reliance solely on car access, then the basis for developer contributions also needs to change to fund improvements to other modes. The implementation of reduced parking provision in particular will raise the issue of funding to assist alternative means of access, including public transport.

New development may require additional capacity or new or improved facilities. Larger schemes may require diversion of bus services and additional facilities (see Silvertown case study), or even wholly new routes (see Surrey Quays case study).

Local planning authorities need to consider what scope there may be for seeking developer contributions for public transport, and for larger developments this should be reflected in requirements for Transport Impact Assessments in support of planning applications (see TIA topic paper).

A clear process and justification is needed, backed in particular by policy statements in the Development Plan. When considering specific planning applications, quantification of the public transport requirement will help in negotiating appropriate contributions. The information will include, for example, the number of buses needed, and the spread of demand through the day. Consultation with London Transport Planning or other public transport bodies can help to legitimise requests for S1O6 public transport contributions.

Developers of the least accessible sites should be expected to contribute most to fixing the accessibility problem. This would help to ensure that developers bring forward proposals that are consistent with policies concerning sustainable means of access. Development of brownfield sites, however, may often involve high "abnormal" costs such as site decontamination, leaving little margin financially for developer contributions for public transport or other transport works.

While developer contributions can be valuable in securing good non-car access to schemes, it must be recognised that there are often uncertainties attached to such development contributions, and they do not provide a substitute for secure funding of public transport improvement programmes.

As a rule, contributions should be sought for infrastructure, or capital, or one-off investment projects, rather than revenue support for services. The latter will rarely be sufficient to convert a bad location into a good one from a public transport accessibility viewpoint, and there will usually be a time limit on such revenue support, thus carrying the risk of services being withdrawn when the subsidy is no longer available. An exception is where short term revenue support acts as a way of ensuring that services are available before a development is complete.

Great West Road, L. B. Hounslow
Case study: Process, Outcome

Part of the Great West Road designated for employment with policies specific to that area in the Hounslow UDP adopted in December 1996. It is the largest and most prestigious employment area in the Borough with 384,000 ft^2 of floorspace of which 60% is purpose-built office, 9% is B8 and 7% light industrial, and a further 15% is a combination of B1 and B8. It is recognised as a key development corridor by Central Government. The uniqueness of the Great West Road is the predominance of HQ offices of international companies so it is widely recognised as an important business location.

Planning permission will not normally be granted for development other than Class B employment uses. All development proposals will be subject to the guideline plot ratio of 0.5:1 except for:

(a) redevelopment or extension of a building with a lawful office (B1) use, where the guideline ratio will be 1:1;
(b) consideration of higher plot ratios where contributions that a development can make to improving and providing new public transport will mean that journeys to work are catered for by means other than the private car.

The developer reaction to the public transport component has been very positive. The policy gives the Borough a good base for negotiation, and because developers are clear about the Borough's intentions, they are generally willing to enter an agreement. The Borough uses a formula to work out the level of contribution from any particular development.

Negotiated agreements include funding for a new station on the Hounslow loop line that is subject to a feasibility study. Even if the station is not feasible there will be provision for improving and upgrading bus services. Money is also available to upgrade existing stations. A further important element is contributions for enhancing cycle and foot paths.

At the start of negotiations, it is usual for developers to offer to contribute towards public transport if they can provide full parking on site. The policy therefore "hits at both ends" because the increase in parking is not permitted. The contribution is generally over two years. The Section 106 is usually triggered by the occupation of the building because the Borough does not want new buses that are running empty. The bus routes that the Borough subsidised a few years ago are now generally self-financing, so the emphasis is on "pump priming" rather than permanent financial support. A lot of the improvements to public transport and reduced parking are supported by Controlled Parking Zones, which the developer pays for.

The Borough has achieved a lot in terms of negotiated agreements, but there is little evidence on the ground at present, mainly because of the economic factors. For example, Samsung has not developed the Trico site as a result of the declining Far East economy. There is a suggestion also that companies formerly intending to locate (or expand) at Great West Road have decided to locate instead where full parking can be provided, such as Stockley Park (see above). Consequently, Hounslow are now looking more closely at how the Great West Road policy could be more successful.

L. B. Kingston
The Borough has carried out a significant amount of work on public transport to the centre, including subsidised rail services for shoppers and a new bus station, but at the same time the UDP calls for more parking for the town centre. The Borough has expressed a desire to retain minimum parking standards (contrary to Regional Guidance) in order to protect commuted payments that have secured considerable finance over the years.

3.9 Traffic management and public transport priority

If public transport is to play its full role in reducing the use of private cars for accessing new developments, the right operating conditions for buses and other public transport must be ensured. The planning authority must therefore work with those bodies responsible for the management of the road network.

The Bus Priority Network is the main initiative for protecting bus services from the delays and unreliability caused by congestion on the roads. The main issue in implementing effective bus priority is to make road capacity available to buses at the expense of general motor traffic. This can usually be justified by assessing the movement of people and goods, rather than simply vehicles. Reducing capacity for general traffic does not cause the traffic chaos which has often been feared (*MVA and TSU University College London, for Department of the Environment, Transport and the Regions and London Transport, "Traffic Impact Of Highway Capacity Reductions", 1998*), and which up until now has blocked bus priority schemes which take capacity from other motorised traffic.

Most of the opportunities in London for bus priority that do not affect general capacity have already been implemented. The Wood Green case study shows how improvements can be provided within existing capacity constraints.

Development can sometimes provide the opportunity to introduce new priority measures, either by opening up site opportunities (See Dalston case study) or by developer contributions for bus priority works.

Public transport improvements are not, of course, the only objective of traffic management, and provision for walking and cycling and other traffic are also important. London Transport is keen to be involved in the setting of priorities, and delivering them at the local level. The new objectives of the Red Route programme appear to provide more opportunity for improving bus operation on the key routes.

Changes can be made to bus routes to serve new areas of development, or to add to the network, but should not result in significant diversion for passengers already on the bus. The aim should be "progressive routing", by arranging routes through new development so that diversion from the most direct route is minimised (see Beckton Showcase and Silvertown case studies).

3.10 Changing mode split in existing developments

New or improved public transport services, whether or not provided in conjunction with major land use development, can help to secure mode switch from the car for travel to existing areas. In planning new developments, it is important to seize the wider benefits for existing activities in the vicinity.

When new public transport facilities are being planned, local authorties can be pro-active in making sure the local areas benefit. For example, existing offices near to new stations on the Jubilee Line extension may be able to reduce the proportion of employees and visitors arriving by car (see Southwark station example).

Local authorities can also give encouragement to occupiers of existing properties to reduce use of the car by employees and visitors. Green Travel Plans and Green Commuter Plans are increasingly found as part of the local authority "toolkit" in promoting more sustainable transport.

If successful in changing travel behaviour, such initiatives may release parking space for conversion to more productive land use, or alternatively can be brought into shared or public use. (*Sanderson, J, "Conversion of existing private non residential parking space", paper 11 in London Planning Advisory Committee, "1997 Parking advice: background papers", February 1998*). There may also be scope to provide "planning incentives" for such conversion, or for redevelopment that results in increased densities without additional parking (see 3.9 above). Such mechanisms have been used in the City of London for a number of years, and the London Wall development provides an example of where floorspace was increased with no increase in parking availability on site.

In some parts of London, the existing public transport services have insufficient capacity to avoid overcrowding at peak times. Local authorities will need to consider whether in such circumstances further intensive development should be allowed, or what scope there may be for increasing public transport capacity. An example is provided in the debate about the desirability of new tall buildings in London. If, as some have suggested, these are to be clustered together for aesthetic reasons, consideration will need to be given to the resulting clustering of public transport demand, and whether current provision is likely to be sufficient. Intensive development might be feasible at Farringdon, for example, but Crossrail would be needed to cope with the extra passenger demand.

The capacity available, and the feasibility of improving it, are matters that can be clarified through discussion with the various public transport bodies, and this should be done during the preparation of Unitary Plans, and in the process of considering applications for major development.

An appropriate way forward is for development briefs to be prepared for areas around rail stations so that public transport improvements and land use development can be considered together. This could have helped, for example, at the Angel (Islington), where intensive office and other development required a major upgrading

of the Northern Line station, but the funding and timing aspects lacked a guiding framework.

Local authorities and developers can also benefit from having a clear understanding of planned public transport improvements, and the opportunities for mode shift that they can provide.

The initiative for such improvements need not always come from public transport operators. For example, the British Airports Authority has drawn up its own plans for increasing the mode share of travel to Heathrow Airport. This was seen as essential to enable the growth of air passenger traffic to continue. A further example is provided by Canary Wharf where the developers recognised the limitations of local highway capacity, and the consequent need for a high degree of public transport accessibility. This recognition also led to contributions being made to the provision of new rail capacity.

Southwark Station, L.B. Southwark
Case Study: Design

The Jubilee Line extension includes a new station at Southwark (Blackfriars Bridge Road). The conversion of offices to residential in the vicinity is more a reflection of the respective markets for these uses in sites peripheral to the City, rather than a response to the new station. Consultants Llewelyn-Davies have prepared a concept plan for re-focusing pedestrian access within the walking catchment of the station, including a route to the new Tate gallery at Bankside, which otherwise has poor public transport access.

SECTION 4 DEVELOPMENT TYPES AND CASE STUDIES

Introduction

This section is about planning with public transport at the local level, and is intended to assist those involved with preparing and deciding on planning applications. Commentary is provided on both developer and planner perspectives, and on how these can be reconciled. The argument is necessarily somewhat simplified, but is intended to promote debate and understanding, rather than reflect the full range of views that may be encountered.

The section is structured by the main land use categories, together with a section on mixed use, and is interspersed with case study material as appropriate.

4.1 Retail

The location of retail development is determined by national planning policy (PPG6/13), which favours sites accessible by public transport. For major developments, the sequential test applies, and this can be interpreted for London as follows:

1. town centre (in the London context Central London or suburban centres);
2. edge of centre, within 300 metres of the edge of the centre (in London proximity to a rail station or major bus stops serving the centre will also be relevant);
3. other urban location served by a choice of modes of travel (such locations are unlikely to promote public transport use, unless there is a “critical mass” of other development, in which case it is likely to be a centre).

The scale of retail development is also important in relation to location, as discussed in Section 3.1.

Food or convenience shops serving a local population need not be located in or near a centre, but can still benefit from being close to a public transport stop. This is not because people will travel by rail to reach the shop, but because they can combine shopping with a public transport journey made for other purposes. This can greatly increase the proportion of shoppers using non-car modes, and thus reduce the parking requirement. At its best, the juxtaposition of shops and stations can change people’s habits away from the weekly shop by car to more frequent (but shorter) visits.

For non-food and specialised retail development, a central location is invariably a pre-requisite for good public transport access. Equally important is that the development is part of a centre with sufficient “critical mass” and diversity to justify people travelling by public transport. It is sometimes argued that retail “sheds” (such as DIY or electrical stores) depend on car use. Such developments are incompatible with public transport and non-motorised modes and with policies to reduce car dependence. Most of the goods sold are either small enough to carry from a town centre store, or are large enough to justify a home delivery system.

Local Planning Authority perspective

- Determine retail application in accordance with UDP and PPG6 sequential test to ensure appropriate location of retail use.
- Ensure parking is within maximum standards and publicly available.
- Scheme contributes to vitality and viability of the centre.
- Secure development in competition with neighbouring boroughs/centres;
- Highway authority concerns:
  - not add significantly to congestion;
  - avoid parking spilling onto streets;
  - avoids problems for pedestrians and cyclists;
  - ensure servicing provision is adequate (on or off street).
- Secure money for infrastructure improvements including public transport, walking and cycling facilities.

Developer Perspective

- Ensure that site has adequate access, particularly for car users.
- Adequate financial return on development and/or revenue.
- Maximise use of site.
- Find end user.
- Minimise planning conditions, payments.
- Exploit identified gap in market.
- Attract walk-in trade to reduce parking requirement.
- "Get ahead of the game" in competition with other retailers.
- Benefit from local authority/regeneration investment (e.g. pedestrianisation).
- Ensure rapid planning permission.

Both

- Scale of development related to accessibility of location.
- Benefits from access by choice of modes.
- Low parking requirements producing greater opportunities for attractive site, landscaping, and good access on foot.
- More intensive use of site.

Other issues

- Submission of public transport and walking catchment as well as car catchment with a retail planning application (probably within TIA) to allow the Local Planning Authority to assess the modal split and parking requirement.

Case studies

Sainsbury's Finchley Road
Hammersmith Broadway - Public Transport accessible scheme
Tesco Tooting Bec (abandoned scheme)

Sainsbury's store, Clapham High Street, L. B. Lambeth
Case Study: Policy

The Borough apparently insisted on more parking to be provided on site than the developer (Sainsbury's) thought necessary. PPG13 states (paragraph 4.6) that local planning authorities should "not require developers to provide more spaces than they themselves wish, unless there are significant road safety or traffic management implications". Even so, the store has one of the lowest ratios of car spaces to floor-space of any Sainsbury's store. When the store opened in 1997, the company claimed that the car park was underused, though demand has since been increasing.

The store fronts onto a traditional High Street and is well located close to Clapham Common underground station. A significant proportion of customers arrives on foot. With a reduced size car park, there may have been potential for residential development at the rear of the site. Other uses use could also have been considered over the shop on the High Street frontage, though this would have precluded the store's present high-tech design.

The Planning Brief for the Clapham Bus Garage site (not dated) required a minimum of 200 spaces in the car park, and a maximum of 5 for disabled drivers, and 10 Sheffield bike racks. The Sainsbury's application was for of 4656m^2 retail floorspace and A3 retail coffee bar. The planning consent included conditions for a management system for the car park, which enables it to be used by other town centre visitors. Only Sainsbury's customers, however, are able to get the charge refunded.

Brent Cross, L. B. Barnet
A classic example of car based development planned in the 1960s but extended in 1996, despite changed policies for both retail and transport.

Tooting Bec Hospital site, L. B. Wandsworth
The site is opposite a major public open space, and is unrelated to any existing centre or public transport node. A proposal by the land owner, Tesco, for a food superstore was refused after public pressure for the use of the site to conform to PPG13 and UDP policies. The site is now being developed for housing.

Tesco, Stratford, L. B. Newham
Following an inquiry, the inspector dismissed the appeal because the use of a 5-10 minute drive time catchment demonstrated the likely damage to existing centres (Source: Planning 30/1/97)

4.2 Leisure

Leisure developments have tended to result in fewer but larger facilities, sometimes with a range of leisure-related facilities, and built on sites relatively isolated from town or suburban centres. The case studies illustrate the problems created by such an approach, but also show how public transport could better be taken into account.

London has plenty of examples of successful leisure facilities which serve their immediate locality, and this is the preferred pattern of leisure use. Facilities serving a wide catchment (such as Wembley Stadium) have a specialist regional and national function, and need to be located where most people can reach them by public transport.

Out of centre car-based leisure facilities should not be approved. They are difficult to serve by public transport or by non-motorised modes, and the dependence on cars means that they are socially exclusive, and contrary to principles of sustainable development.

Leisure promoters are increasingly aware of the problems of car-based schemes in London, and there are examples of such developments failing to live up to expectations, such as the Waterworld centre outside Croydon (now closed) and the Beckton Showcase multiplex cinema (see case study). Congestion can deter customers, including when the congestion is caused by the scheme itself (e.g. Warner Village, Western Avenue).

Local Planning Authority perspective

- Scale and location of the proposal should satisfy the PPG6 sequential test.
- The facility should meet the needs of all members of the community, and be easily reachable by children and others without access to a car.
- Public transport operation should match the hours of opening.
- Ensure no problems of noise or other disturbance to residents.
- Contribution to the vitality and diversity of existing centre.
- Possibility of shared use of parking, especially if close to existing retail car parking.
- Convenient access between the facility and public transport stops and stations.
- Developer contributions for public transport, walk, cycle infrastructure improvements (not bus service subsidies, see section 3.8).

Developer perspective

- Ensure sufficient customers within catchment area (mode of travel of less concern).
- Provide sufficient parking to attract customers.
- Public transport quality for town centre schemes.
- Ease of development (site assembly, avoid “abnormal” costs).
- Speedy planning consent, especially if competing schemes.
- Ability to adapt to market fluctuation and fashion.
- Maximise use of site.

- Attract ancillary uses, such as cafes or fast food outlets.
- Avoid problems of congestion both to and within the site.

Both

- Town centre schemes are less vulnerable to market fluctuations or changes in fashion (as seen historically with the use and re-use of music halls, theatres, cinemas, bingo halls and clubs).
- Leisure facilities benefit from local populations and easy access on foot or public transport.
- Low parking demand means smaller sites can be used (especially useful in finding a town centre location).
- Scheme also benefits from mixture of activities locally.

Other issues

- Access and mode split issues resolved through public transport and walking catchment as well as car catchment submitted as part of a Transport Impact Assessment.

Case studies

National Stadium, Wembley, L. B. Brent.
Case Study: Policy, Process

The design of the New National Stadium is to be the subject of an architectural design competition. Brent Council set the standard for the design in a planning, design and development brief, approved in March 1998, and received wider recognition from the Government Office for London, the Stadium Trust and other bodies.

The Council regard public transport as key to the new development and have included modal split targets within the brief. The brief states that the "*overall objective is to enhance public transport accessibility and to improve upon the present modal split in favour of public transport"*. Development proposals should consider:

- more effective use of rail stations, particularly Wembley Park;
- creation of a safe environment for PT users;
- the proposed linking of Wembley Stadium station to Heathrow City line;
- a bus/rail interchange to the south of Wembley Stadium station; if not feasible the development must include bus stopping, waiting and turning facilities;
- a park and ride shuttle rail service from the M25/M40 areas.

Brent Council has used the modal split for existing events as the benchmark for setting targets. The present modal split is shown in table 1.

Table 1 Modal split of trips to events at Wembley Stadium

Mode	*Sporting event %*	*Concert %*
Car	*16*	*20*
Coach	*19*	*10*
Public Transport	*65*	*64*

The existing stadium seats approximately 80,000. This gives rise to the vehicle generation shown in Table 2.

Table 2 Vehicle generation by Wembley Stadium

Mode	*Sporting event*	*Concert*
Car	*4750*	*7700*
Coach	*380 coaches*	*200 coaches*
Public Transport	*52000*	*51,200*

Over a 10-year period the Council wish to achieve an 80-20 modal split in favour of public transport. The concept of the modal split target was a Local Planning Authority initiative. There were initially some doubts on the part of the Highways Department within the Borough but these seemed to centre on lack of familiarity with Transport Impact Statements and how to assess them. This has now been resolved and the Development Brief has received the full approval of the Council, including the decision of the Members to increase the level of Developer Contributions to be sought for public transport improvements via Section 106 agreements.

Beckton Showcase, L. B. Newham
Multiplex cinema at junction of A13 and North Circular Trunk roads
Case Study: Policy, Process, Design, Outcome

The Beckton Showcase scheme (a Warner development) illustrates the problems that can arise when leisure activities generating large numbers of person trips are located way from town centres. The location would not have met the criteria of the PPG6 sequential test, were that test to have been applied. Elected members of the Council were more concerned about job creation and regeneration than about accessibility or parking standards. For large schemes such as this, the Borough apparently does not apply any particular parking standard but decides on the merits of the proposal. The result is a cinema with heavy reliance on the car, and poor access by other modes, despite low car ownership rates amongst the catchment population.

The scheme thus highlights the conflict that can occur between objectives within local planning authorities, in particular sustainable accessibility and reducing car dependence on the one hand, and securing economic development on the other.

Given the scheme was to go ahead, there was still the issue of how public transport was to be provided to serve the site. There were no bus services or stations within reasonable walking distance of the site, and access on foot is also difficult due to the adjacent A13 Trunk road being on a flyover which separates the site from high density housing areas to the north. The only possibility for non-car access was therefore by negotiating new or diverted bus services.

The Borough was keen to bring buses into the site with stops in front of the cinema. Consequently, there is a condition on the planning permission that if the Borough require a bus stop on the site it shall be provided. This remains rather theoretical, however, since no operator is prepared to route buses into the site. Here is a clear case where the building could have been located next to the road and footway, instead of at the back of the car park. This would have eliminated the need to try to get buses into the site. Such an approach apparently was not considered.

Two bus routes now serve the scheme, one being diverted, the other being extended to the site, with a Section 106 agreement being used to subsidise the services, the 262 and 325, for a specified period. The services themselves are currently reasonable, with frequencies maintained into the evening. The long term viability of this will depend on patronage levels once the subsidy provision ceases. This highlights the weakness of relying on contributions to revenue rather than capital schemes. In addition, the subsidised bus services cannot overcome the fundamental problems of the poor location.

Buses stop at the edge of the site at the furthest point from the cinema entrance, at the other side of the car park.

Some buses pull into a new bus lay-by, others stop on a narrow footpath with no waiting facilities. Passengers from either stop must climb a high kerb which separates the bus stop area from the car park, and cross the car park itself.

The Borough has found it difficult to monitor the success of its Section 106 bus service provisions since the private operators have been reluctant to release ridership figures, considered to be information that would be useful to competitors and therefore confidential. The Borough also felt that the advice on the legal agreement received from London Transport could have been clearer and more useful.

4.3 Housing

All housing should be located within a few minutes walk of bus services to a significant centre. Rail services to central London should be available within about a 10-minute walk. Outside these public transport catchments, housing may still be acceptable, but should be built at a lower density. The PTAL method provides a basis for determining such density variation. Housing development in areas poorly served by public transport requires the planning of new public transport services and local facilities nearby to ensure that residents are not car dependent. The former Dockland sites provide an illustration.

Housing should be considered when proposals come forward for shops and other non-residential development. So called “shop top” housing increases the vitality of an area and helps provide “eyes on the street”. Local authorities should actively address developer concerns about perceived development risk and management issues. Equally, consideration should be given to the inclusion of non-residential uses within housing schemes, to facilitate local “origin” accessibility.

Housing which exploits public transport accessibility (and non-motorised travel) is better able to provide high environmental quality as well as high density, especially if provision for car parking is reduced (see Section 3.7).

Layout is important in promoting the use of non-car access. Direct routes to bus stops and stations that are safe, attractive and well lit must be provided. Internal roads used by buses should be linear (rather than curvilinear) with bus-friendly traffic calming measures to attenuate vehicle speeds. (*London Transport, “Bus service planning guidelines”, Version 2.2, June 1996*) Preventing through traffic in residential areas can be achieved by the provision of bus-only sections of road. Pedestrian routes should be co-ordinated with bus stops and road crossing points.

Local Planning Authority perspective

- Appropriate density in relation to public transport accessibility.
- Availability of local schools, and safe routes to them.
- Availability of other local facilities (e.g. shops, open space).
- Mix of uses within street and building blocks.
- Layout which promotes use of public transport, walking, cycling.
- Diversion of bus routes and winding routes to be avoided.
- Secure and convenient storage for bicycles.
- Opportunities for new and more direct foot access to public transport stops.

Developer perspective

- Market potential of scheme
- Ease of development (minimum abnormal or site preparation costs)
- Phased building allowing sale of early phases to assist cash-flow
- Rapid planning process (especially for speculative schemes)
- “Gap funding” for regeneration projects
- Ample parking provision

- Consider niche markets in context of risk (e.g. car-free housing, office conversions)

Both

The main issues are density, location and car provision. London has enormous potential to develop housing where high quality is achieved with good design, and reduced prominence of car parking and access. These issues are discussed in Section 3, and examples of design potential are included in the Sustainable Residential Quality report produced for LPAC. (*Llewelyn-Davies, "Sustainable Residential Quality", London Planning Advisory Committee, 1998*)

Other issues

Partnership between developers and Borough councils provides an effective means of ensuring that public transport (and other) considerations are built into the scheme, and avoiding abortive planning and design work. In regeneration projects requiring top up funding, such partnership will be particularly useful. London Transport is keen to be involved in such ad hoc partnership arrangements. (See Barking Reach case study)

Case studies

Car-free Housing, L. B. Camden
Case Study: Policy

The Borough of Camden has introduced car-free housing in the central London part of the Borough, where public transport accessibility is generally good. In such locations, where there are Controlled Parking Zones, the restrictions can be on the right to park, rather than the right to own a car. Two schemes illustrate how car-free housing can be promoted, one a private sector office conversion in Farringdon Road near the City, the other a housing association development in Stukely Street, behind Holborn Town Hall. In both schemes, no parking is provided on site, and residents will not allowed to purchase resident parking permits, or contract spaces in public off-street car parks. Developers and agents are required, as part of the Section 1O6 planning agreement, to make residents aware of this provision. This is a non-negotiable condition, which passes to the successor in title when individual units are let or sold.

The scheme by Berkeley Homes in Farringdon Rd is for 41 units aimed at the *pied à terre* market. As such, it is likely that residents will own cars, but will not be able to park them except on the same terms as other members of the public (i.e. at parking metres or at public off-street garages at normal charges).

The housing association scheme to the rear of Holborn Town Hall (Dragon's Court) is for 29 new housing units (due for completion in 1998) and includes open space and other benefits of a car-free design for permanent residents.

Housing Associations, through the UDP process, were asking for a reduction in residential parking standards in return for higher density on the grounds that residents in such housing have lower rates of car ownership. Council Members were keen to explore this approach, particularly as it would help the Borough's housing targets to be met.

There has been some reluctance by planning officers to push for car-free housing in advance of a firm policy base, but this is expected to be provided by forthcoming revisions to the UDP. Maximum parking standards across the whole Borough may also be included. Until there are adopted policies for car-free housing, it is also difficult to gauge the likely reaction of private developers, though the experience with the Farringdon Road scheme is encouraging.

4.4 Employment

From a public transport perspective, employment activity can be divided into three very broad categories which have differing location requirements:

- Local employment, mostly non-specialised and in small units.
  This can be located in suburban centres of all sizes, where it can easily be served by bus and non-motorised travel. (see photo, Balham offices)

- More specialised employment requiring large pool of labour and hence drawing on a wide catchment area.
  This should be located in Central London, or in one of the major suburban centres (e.g. Croydon, Hammersmith, Kingston, Stratford), which can be reached by public transport from a wide catchment area. The employment units may be small or large.

- Employment in heavy industrial or road transport-related activity which depends more on road and rail (or water) access than on accessibility to labour.
  Such activities should still ideally be reachable by public transport from the local labour catchment area, but the balance of environmental advantage may mean that avoiding commercial traffic in sensitive areas takes priority over employee travel.

It is important to recognise that offices or other employment located at suburban stations are unlikely to attract a significant amount of public transport use, even where there are frequent trains, and supporting bus routes. Reduced parking can help in such situations, but does not convert an unsuitable location into a suitable one.

Local Planning Authority perspective

- Attracting employment generating development to the Borough.
- Flexible application of car parking standards to meet developer and highway authority requirements (including breaching the recommended maxima if seen as necessary).
- Ensuring that employment type matches local labour market.
- Regeneration of derelict or underused sites.
- Contribution to town centre economy and vitality.
- Avoid traffic generation on local road network.
- Ensure choice of means of travel, in line with policy Guidance.
- Secure developer contributions for transport infrastructure, or to pump prime public transport services.

Developer perspective

- Certainty of what is appropriate where, in planning terms.
- Outside central London, location well served by road, and with ample car parking.
- In central London, location well served by public transport, and minimal parking.

- Responding to market in providing appropriate buildings, facilities.
- Prominent position and landmark buildings for market “edge”.
- Minimise conditions and financial contributions related to transport provision.
- Meet local authority requirements to secure rapid planning consent.

Both

Getting the right business in the right place will mean that most new employment is not car-based, but relies on travel by a choice of modes. Additional demand will be generated for public transport, and so involving operators at the planning stage will be important. Key considerations will be:

- Is there spare public transport capacity at peak times?
- Will the development require new or modified services?
- Is there a need to “pump prime” services until development is fully let?

Both developer and local authority will benefit from a development which meets the maximum parking standards in Guidance, and which therefore:

- generates little extra traffic;
- maximises productive use of the site;
- allows strong urban design;
- enables development of smaller and more difficult sites

Case studies

Centre West, L. B. Hammersmith and Fulham
Case Study: Outcome

This development, featured in the PPG13 Guide to Better Practice, makes good use of its location at the focus of Underground and bus routes. The development of mixed employment and retail uses over the station was combined with, and partly funded, a new bus station, thus strengthening the eastern end of Hammersmith town centre and improving public transport access and interchange opportunities.

Stockley Park, L. B. Hillingdon
Case Study: Process

This business development near the M4 motorway and Heathrow spur was built as a car based venture, with ample car parking, and in this respect is typical of the 1980s phenomena of so-called “business parks”. There are bus services nearby, but use of these is inconvenient, and very unlikely to appeal to people with a car available. The Great Western mainline railway passes near the site, but there is no station nearby.

Although not an example of post PPG13 development, attempts are being made to improve access by public transport, and to reduce use of the car to Stockley Park. The various initiatives may be applicable for other Boroughs and business park owners faced with the task of trying to “retrofit” car-based developments with more sustainable access. We briefly mention some of these below. Stockley Park Consortium is now using its sustainable transport initiatives as a positive selling point.

- Glaxo (B1 office) planning permission with Section 106 agreement, providing for a reduction of parking spaces when public transport improves.
- Stockley Park Consortium have launched a website to help employees find partners for sharing cars to work.
- The Consortium is continuing to subsidise Stockley Park bus services (£160,000 pa),and has offered a capital sum towards improved rail access.
- The Consortium has carried out a travel survey of the Park’s employees, and appointed a travel co-ordinator.
- A Green Commuter Plans has been drawn up which includes self-imposed target of a 20% reduction in car use over five years (from 90% mode share to 72%), made up from 5% from car sharing, 14% from public transport, and 1% from walking and cycling.

Thus, Stockley Park should have at least a quarter of its employees not using their cars to work, and this in a business park which originally had no public transport provision, and ample parking provided to meet full demand.

This case example demonstrates that developer and business interests can take independent action to help meet the policy objectives of improved public transport, even after a development scheme is completed.

Sources: MTRU; Stockley Park Transport Plan, March 1998; Estates Gazette, 5/7/97.

Roding Valley Industrial Estate office development, L. B. Barking and Dagenham
Case Study: Policy, Outcome

The site is adjacent to the North Circular Road, to the north of the A13. The nearest bus routes are more than 500 metres away, while Barking town centre, the nearest public transport node, is about 20 minutes walk.

Planning permission was granted in 1991, before either PPG13 or the latest Borough UDP (1996), and demonstrates how little consideration has in the recent past been given to accessibility by non-car modes. Public transport was not considered in the deliberations about the scheme, an office development of 35,000 sq ft. Indeed, parking was worked out on the basis of an out of town development. The site is adjacent, but not connected to, a riverside walk and nature reserve.

The poor access (except by car) may explain why, at the time of writing, the new offices had not been let.

The site was considered to be at the “entrance” to the Borough, and the Council felt it was important to mark this fact with a prominent and well designed building. Design was thus a more important consideration than achieving a use appropriate for the location in access terms.

Within the adopted UDP the site is now zoned for business and light industry. Storage or warehouse uses are discouraged, but retail warehouses are being considered in the vicinity. The Roding Valley industrial estate already has warehouse uses where retail activity is growing, thus aggravating the problem of inadequate access by non-car modes.

Public transport policies in the Borough are admittedly “a little ad-hoc” though they are now under review.

Hackney Wick rail station, L. B. Hackney
Case study: Design

Access improvements and “safe routes” to work.

As part of a planning exercise for the Lower Lea Valley, the Llewelyn-Davies consultants prepared a concept plan for the creation of new access points for Hackney Wick rail station, avoiding a detour for pedestrians coming to and from the industrial areas to the south of the railway. Additionally, a scheme of improvements to roads and footways were planned in conjunction with selected new development to provide “safe routes to work”, linking the station to the industrial area. These improvements would include more conspicuous routes for pedestrians, enhanced with better lighting and landscaping, and a new canal footbridge providing a more direct link.

4.5 Other uses (Hospitals, schools, universities etc.)

The location of institutions available for the public (whether operated by the public sector or not) should be planned on the same basis as other land uses which generate personal travel. Hospitals, universities, secondary and tertiary education facilities should all be located close to where public routes converge, especially interchanges. There is a case for ensuring that facilities are more numerous and at a smaller scale (e.g. community hospitals rather than large general hospitals), in order to reduce travel and plan for smaller catchments. While local authorities can engage in this debate, ultimately such matters may be beyond their influence.

New facilities are often planned and located by institutions on the basis of internal factors, rather than planning criteria. The ownership of sites also plays a significant part, and many of these, including major hospitals, are poorly located in terms of public transport accessibility. Local authorities should give consideration to ways of bringing major institutional uses into better locations.

Local Planning Authority perspective

- Provision of sites with good public transport accessibility in UDPs.
- Avoid negative traffic and other environmental impact in neighbourhood.
- Containment of parking within the site.
- Facilities appropriate for the community.
- Provision of special bus services, especially for hospitals.

Developer perspective

Maximise use of existing sites.
Provide parking for staff and (except education uses) visitors.
Possibility of realising capital assets of sites in accessible locations.

Both

Public transport should become a more prominent factor in institutional planning, and this will best be accomplished by local authorities working in partnership with the institutions concerned. London Transport (and other providers) need to be involved in such arrangements at the earliest possible stage.

4.6 Town Centres and Mixed Use

The policy requirements and rationale of maintaining and creating strong town centres (including small and medium sized suburban centres) is discussed in Section 3.

While many planning applications relate to single uses (dealt with under the main headings above), the aim is to promote mixed use developments, especially in centres, and along public transport corridors. This section therefore focuses on these aspects of the development process.

Local Planning Authority perspective

- Attract development to town centres in their areas, including leisure and employment as well as retail.
- Promote mixed use within sites and building blocks.
- Restrict development of such activities outside the centres (PPG6).
- Parking publicly provided and controlled.
- Avoid obstruction caused by operational parking and loading.
- Assist in site assembly, and possible use of compulsory purchase powers.
- Town centre management strategy to address developer and business concerns.
- Environmental improvements, including traffic calming and pedestrianisation.
- Ensure good urban and building design to enhance centre.
- Developer contributions to improve public transport facilities.

Developer perspective

- Certainty in terms of strategy for the area, and local authority commitment.
- Site assembly, including help through partnership with local authority.
- Exploit public transport accessibility to minimise parking requirement.
- Avoid complications of mixed use on site.
- Seek development gains where mixed use or other conditions apply (e.g. higher densities).
- Attract funding from public sources for abnormal costs and as hedge against risk.

Both

- Production of town centre strategies can help promote development, ensure that schemes are appropriate, and create certainty, or reduce risk for developers. These need to address management as well as planning issues.
- Partnership arrangements between public and private sector can help to secure funding.
- London Transport and other providers need to be involved throughout the process, bearing in mind that implementation may involve many players over a number of years.

Case studies

Given the importance of focusing non-residential development in town centres, several case studies are included demonstrating design opportunities, and some successful outcomes.

Town Centres and Mixed-Use - Case Studies

Introduction

A series of case studies has been selected to illustrate, by worked design example, the value of considering public transport in the development process. Each of the case studies tells a story of public transport integration through a series of initiatives, projects and typical areas.

Starting with a *funded demonstration project*, **Wood Green** illustrates the importance of investing in public transport and accessibility as a central theme to regeneration. This is followed by **Dalston** town centre where new public transport infrastructure forms the focus of future regeneration: *development guidelines* are put forward to show how an incremental approach could capitalise on this opportunity. These examples relate to inner London, where the acceptance of and reliance on public transport is greatest.

Croydon, an outer London centre, is developing a public transport ethos, but unlike the previous examples, is more reliant upon the private sector to regenerate its centre. The *development brief* for a key site adjacent to the station is therefore potentially a very important tool. **Bromley** has a similar opportunity site adjacent to its main station, but less public transport infrastructure and a more dispersed and affluent population. Here, park-and-ride could play a role. At the time of writing (1998), consultants were preparing a *framework plan* to guide the regeneration of the station area.

Different options and opportunities are afforded by each of these centres, but accessibility and the positive role played by public transport remains a central theme.

By way of contrast, Elm Road in **Wembley** illustrates a more problematic site where parking is the key issue for the local authority. Access by public transport is good, but the centre is under-performing partly because of the negative environmental impacts of traffic. The London Borough of Brent have prepared a *development brief* for the site which has placed great emphasis on private transport and none on public transport. Reference is made back to Wood Green for a regeneration model based on access to public transport for the wider area (including environmental improvements), and the site planning proposals for Spouters Corner and Dalston that do not sterilise the site for future opportunities through inappropriate development.

A clearly car orientated development is the Royal Leisure Park leisure centre on the **Western Avenue**. This example extends the issue of accessibility to areas where developers obviously feel there are no public transport issues or opportunities.

However, even here, near to to Park Royal underground station, there are accessibility issues that could have been addressed by the local authority and the developers.
Surrey Quays in Rotherhithe provides the final example. It involves a large regeneration area where the main structure has been focussed on existing and proposed public transport infrastructures, and accessibility fully integrated down to the location of bus stops and footpath networks. This was one of the first projects *master planned* by the London Docklands Development Corporation.

WOOD GREEN
Demonstration Project – Inner London
Case study: Policy, Process, Design

This case study is of a positive approach to town centre revitalisation, based on a revision of attitudes to traffic capacity, and a pro-active approach to enhancing the role for public transport.

In response to competition from the Brent Cross shopping centre in the early 1970's, Shopping City was built in the centre of Wood Green High Street. It was to be accessed by an elevated motorway, but this proposal was quickly abandoned because financial and environmental costs were considered too high. However, a high level of pedestrian accidents at Spouters Corner (outside Wood Green Underground station), required a traffic solution: the then current thinking dictated a traffic gyratory scheme and land was acquired to achieve this. The community rejected the gyratory proposal and the scheme was abandoned in 1994.

In light of new government and DoT thinking, a scheme was drawn up that maintained current traffic capacity and the existing road layout. Public transport, cycle and pedestrian accessibility was the focus of the scheme building on one of Wood Green's great strengths – its very high level of accessibility by public transport. In 1995 a successful TPP (Transport Policies and Programme) Bid was prepared which initiated the process of change. At the same time a Development Brief was prepared for Spouters Corner. In 1996 a successful Capital Challenge Bid was submitted and in 1997 implementation projects began on site.

Wood Green now has a highly accessible and high quality pedestrian environment focused on the public transport network. Regeneration in the local economy is noticeable and positive planning applications have been received for Spouters Corner and Shopping City: including multiplex cinema developments with zero parking requirements. At Shopping City in particular it is anticipated that the new leisure developments will extend the hours of the other activities within the centre.

SPOUTERS CORNER, WOOD GREEN
Development Brief – Inner London
Case study: Process, Design, Outcome

This case study explores the creation of a "gateway" to Wood Green centre, focussing on and reinforcing public transport accessibility. It highlights the positive

response from developers that can be achieved when the framework conditions are clear.

For several years the proposed gyratory scheme at Spouters Corner had blighted the development potential of the site. The 1995 Transport Policies and Programme (TPP) Bid contained studies that illustrated that junction capacity was adequate and that improved bus circulation, lay-bys and site access could be achieved without substantial alteration of the existing junction. This opened the way for redevelopment of the site and in 1995/6 a Development Brief was prepared by Haringey Council.

The central aim of the Development Brief is the promotion of Spouters Corner as a major arrival and distribution point for Wood Green. A key element is the reinforcement of the public transport interchange function of the site. The TPP Bid provided for bus drop-offs, layovers, pedestrian crossing points and footpaths to provide safe and direct pedestrian access between the underground station and the principal shopping street.

A further concept of the Brief was the creation a new public space or Town Square whose functional focus is the improved transport interchange. This includes the requirement for a bus service pavilion incorporating bus and underground information, toilets and waiting area, high quality shelters, seating and lighting. London Transport has agreed to inherit the new infrastructure and responsibility for maintenance.

Realisation of the plan was helped by Council ownership of the land fronting the High Road (purchased for the gyratory scheme) and as such space was available for the new square. Existing buildings were demolished and a new setback building line established.

The development site itself will provide the main gateway to the shopping street and as such a “foyer” development was recommended to provide a vibrant centre of activity (with mixed use) to heighten the sense of arrival at the town centre. Smaller scale uses fronting the main spaces and streets were recommended to achieve this, with larger scale uses set back to avoid “deadening” the main frontages.

The Development Brief has had a positive effect on the proposals to regenerate the area. Developers are also bringing forward positive planning applications, including one for a four-screen cinema with no parking requirements.

DALSTON
Development Guidelines – Inner London
Case study: Process, Design

This case study illustrates how potential benefits for the planning of a local area can be realised by pro-active anticipation of public transport improvements. Intervention at an early stage can help to ensure that opportunities are not missed for town centre revitalisation, which in turn can support the public transport improvements when these are realised.

Dalston Town Centre is a very narrow traditional shopping street with a covered shopping centre and open street market. Public transport accessibility includes Dalston Kingsland station on the North London Line, and major bus routes along Kingsland Road (a Red Route and important radial bus route into London) and Balls Pond Road/Dalston Lane. It is a deprived centre and currently part of the Dalston City Partnership (City Challenge) funding area.

The Partnership, including the Local Authority, commissioned consultants in 1996 to prepare a Town Centre Study to assess the regeneration opportunities and constraints. The output included a review of the structure of the area and opportunities for its future development, and a set of Development Guidelines to provide a framework for piecemeal implementation over a number of years.

The review of the structure, revealed several themes, all focused on accessibility. Key problems include congestion on the narrow main streets, exacerbated by service vehicles, which creates a polluted, poor quality environment. Narrow pavements also create pedestrian congestion, which is exacerbated by bus queues. However, there is limited scope for widened pavements without significantly reducing road capacity.

A particular strength of the centre lies in its diversity of activity and population. In this context the emerging “Creative Industries Quarter” provides a catalyst for regeneration. To enable this regeneration to take place it is clear that the accessibility problems, and the resultant environmental degradation, need to be resolved. Possibilities for re-structuring the centre are explored here. These include rear servicing which allows improved accessibility, better quality public spaces, and realisation of development sites, and the establishment of a clear network of pedestrian routes critical to the revitalisation of the town centre.

Major opportunities for the area include the proposed development of the Chelsea-Hackney Line, with a station to the east of Kingsland Road, and the East London Line Extension (ELLX) establishing a new station to the south of the development area. Although these proposals are currently on hold, the Development Guidelines organise a regeneration structure that supports their future implementation. Comprehensive redevelopment is therefore not in the short-term picture and a block by block approach was recommended.

Delays to the ELLX make building over the existing tunnel prohibitively expensive for developers. The opportunity therefore exists to remove these buildings to open up the site and develop a public space as a focus for regeneration. The creation of a retail spine linking the two proposed stations, and passing through the proposed square, would provide vitality to the area and relieve congestion on the pavements of Kingsland High Street. The development of bus lay-by’s and shelters adjacent to the proposed square would also provide a major arrival point on Kingsland Road. Similarly, a public transport focus can also be developed on Dalston Lane adjacent to the new ELLX station.

Within this accessibility framework, the existing urban fabric can be regenerated to respond to the shared (service only) pedestrian precinct environment. Active

frontages, including reinforcing existing uses, is key to producing a lively and secure environment which will reinforce the connectivity of the transport nodes.

Thus the Development Guidelines have provided a positive basis for future bids, partnerships and development initiatives.

CROYDON GATEWAY
Development Brief – Outer London Centre
Case study: Policy, Process, Design

This case study demonstrates the potential of development briefing to realise regeneration opportunities in a major centre, exploiting the development of new public transport infrastructure at a key transportation node.

Croydon is an outer town centre with limited access to public funds, and ambitions to regenerate and evolve to city status. Croydon attracts 40% of its workforce from outside the Borough and is the largest retail centre outside of London's West End. The Council is keen to up-grade the image of the centre and is focussing its efforts on the promotion of public transport and is currently developing Tramlink, the first new tram system in London. The new system will link sub-centres with the retail core via two main line stations and a bus station.

The Council has identified the area around East Croydon Station, Croydon Gateway, as the most important development opportunity in the town centre and key to the regeneration of the adjacent Central Business District. A new distinctive station building has recently been developed at East Croydon which is used by 70,000 passengers a day, making it one of the busiest in the country. There are excellent rail links to Central London, Gatwick, and South Eastern Counties, with the proposed Thameslink 2000 connecting to the St. Pancras terminal (Channel Tunnel trains). Tramlink will pass by the front of East Croydon station, bringing into operation a new traffic regime which places greater emphasis on priority for public transport, cyclists and pedestrians. LPAC's 1994 Strategic Advice recognised that Tramlink will increase Croydon's accessibility and expand the pool of labour and the Governments Strategic Planning Guidance for London Planning Authorities also recognises further opportunities from links with public transport initiatives in south west London. Central Croydon is also served by 37 bus routes, seventeen of which pass the Croydon Gateway.

The Gateway site has lain empty for three decades although many planning applications have been received in this time. Recently the Council prepared a Planning Brief for the site to mitigate against inappropriate development proposals. Central to the Brief is the recognition that public transport has a very important role to play in the future development of the site, especially given the excellent all-round public access links it has to start with. Proposals must meet the Council's environmental objectives, in particular reducing reliance on the use of the car, and demonstrate that best use is made of the extensive public transport provision and existing town centre parking. The scheme should create a "point of entry" to the town similar in fashion to the Broadgate development in central London – an image of

quality architecture, public space and design. As in that example, the lively environment of the station entrance provides a catalyst for positive change.

The Council believes that prosperity will be increased through inward investment by improving competitiveness. This will be achieved by improving public transport, enhancing accessibility, reducing through traffic, improving road safety and creating a more pleasant environment. There are therefore specific requirements in the Brief for public transport interchange facilities; a potential new station entrance to the north related to a public space; improved pedestrian linkages; and, increased security and public safety. The Council is also keen to capitalise on the large number of commuters in the town by holding onto them after work to support and improve the evening economy.
These aims are reinforced by the UDP's transport policies, which seek to improve generally the safety and quality of the pedestrian environment.

Organisation of the Gateway site in the Development Brief retains the existing road network, and puts the development edge up against the railway boundary, with a requirement for "interesting views" to be created. Links to the station are restricted to an internal route to the existing entrance building and a new link to the middle of the platforms. The importance of involving public transport is recognised, and the Brief states: *"The demands placed on public transport by the development will need to be fully assessed in consultation with London Transport and bus, rail and tram operators so that the contribution which public transport can make can be established."*

Potential Approach from Developers

A developer could bring added value to the area by extending the new link to the other side of the railway, which would increase the permeability and connectivity of the wider area. This would also link into the taxi ranks and drop-off facilities adjacent to the station. Links to the "front" of the station could also be achieved along the edge of the railway, providing an unique active frontage of cafes and bars – the trains entering and leaving the station are generally moving very slowly and are pollution free unlike traditional streets. This will present a positive image of both the station and the development to the very many people passing through the station each day.

Extending the main buildings over the roads to the north of the site will remove traffic from the central pedestrian areas to reinforce the emphasis of a high quality people orientated environment. It will also provide coach and service access to the rear of the site.

Recently (January 1998), discussions have taken place between developers and the Council concerning a proposed new arena for London intended to serve a catchment of more than nine million people from London and parts of the South East. Such a proposal is commensurate with the Council's aim of encouraging high profile uses for the site that do not compete with facilities already present in the town centre. The Gateway site location would offer the potential for a large proportion of visitors to arrive by public transport, along with coaches and taxis.

BROMLEY
Development Opportunity – Outer London Centre
Case study: Policy, Process, Design

This case study explores development opportunities at a key transportation node in outer London, to achieve public realm improvements and stronger public transport focus.

The site in Bromley is very similar to Croydon, but without the focus and road management opportunities afforded by Tramlink. The employee population visiting is also small in comparison (so the evening economy will rely more on residents and visitors), and the resident population is arguably more dispersed and car bound.

The main development opportunity site adjacent to the station was created by the construction of the town centre by-pass, Kentish Way, in the early 1990s.

The station area's previous function as a gateway to Bromley town centre has been lost to some extent through the development of the by-pass. The Council is currently (1998) developing a Framework Plan for the area in conjunction with a Leisure Demand Survey in response to developer interest. In addition to an empty site adjacent to the station, there are several other opportunities available in the immediate area. These include redevelopment of the station and the air space over the platforms; redevelopment of the low rise buildings opposite the station and the air space over the railway; redevelopment of the nearby hospital site; and redevelopment for leisure uses of the Bromley Mall in the High Street.

The retail centre is very strong with a newly built high quality shopping centre and pedestrianisation of the upper High Street. Most people travel by car to the town centre, causing heavy congestion on the approach roads . Most office workers in the town also travel by car and can only access the office quarter north of the station via the lower High Street. This brings a lot of traffic past the station that results in a poor pedestrian environment in this part of the town.

Public transport in Bromley is focussed on the town centre, but is of modest quality in comparison with the status of the centre. Cycle provision is also poor and access is dangerous. Bromley South station is a busy commuter station that requires better integration with other transport facilities.

WEMBLEY
Typical Town Centre Development Site, Outer London
Case study: Policy, Design

This case study explores an alternative scenario for a site where development has hitherto been inhibited by local authority planning and parking requirements. The approach is compared to that described in the Wood Green case study.

This potential development site in Wembley Town Centre is close to Wembley Central underground station (Bakerloo Line), and within walking distance of Wembley Park underground station (Metropolitan and Jubilee Lines) and Wembley

Stadium Station (heavy rail to Marylebone). The High Road is a Borough Strategic Road with several bus routes.

In August 1997, the London Borough of Brent published a *Planning and Development Brief* for the Elm Road site, a one acre development opportunity situated behind the High Road. The site was previously taken-up by Victorian terraced residential buildings and is currently used as a temporary Council operated car park providing 150 spaces.

Retail or leisure uses have been identified as preferable in the Brief, although elements of residential may be considered as part of a mixed use scheme. UDP policies permit a range of retail, office, leisure, or residential development, with the aim of reinforcing the role of Wembley as a town centre. The Council's preference is for the development of a small food store (12-12,500 sq. feet). The site is not thought suitable for family housing as there is a lack of amenity space in the area. Additionally, the Council will not give consideration to a primarily residential scheme in this town centre location.

The Council also seeks retention of the existing parking for town centre users, along with additional parking generated by the development. The Council will give consideration to decked parking, but would prefer to see an underground car park. "*(Policy) WTC11 requires that any redevelopment shall provide a range of uses which make a positive contribution to the regeneration of the whole town centre and include a substantial number of public car parking spaces."* To accommodate additional traffic generation, the Council would require improvements to the junction of Elm Road and Park Lane, in concert with a potential gyratory traffic scheme to relieve traffic on High Road. The Council also requires the creation of a substantial service road to access the rear of the properties fronting the High Road. The Brief makes no mention of public transport issues.

Potential Approach from Developers

A possible response to the challenge of the area is shown in the illustrations. The rational is explained here.

Through the development of the sites identified, there are several opportunities to greatly improve regeneration of the lower High Street, accessibility and use of public transport. The main opportunity is to re-establish the gateway function of the area focussed on public transport. Access to a supermarket adjacent to the by-pass and also to the new development can be moved to the existing controlled junction and a threshold created beyond which only public transport and private access is allowed. Taxi and drop-off facilities could also be accommodated in the new development.

If direct vehicle access to the business area can be taken from Kentish Way, this would reduce the amount of traffic passing the station and using the lower High Street.

Through redevelopment of the station and the area opposite, a pedestrian priority space can be developed with concentrated high quality bus facilities integrated with the station and adjacent employment areas. Development opportunities include

retail, office, leisure, or residential development. The lower High Street could be narrowed to provide much wider pavements and a café bar culture encouraged to extend the evening economy down through the town to the station. This will be important to provide activity on the street and thus a more secure environment. Equally, the developments must be of a high urban density to both capitalise upon the location of the public transport facilities, and to provide frontage which will further reinforce environmental security and the image of the area. Pedestrian connectivity can also be increased with new footpaths through the redevelopment linking the supermarket and other buildings to the public transport facilities.

The development of a second station entrance at the eastern end of the platforms could help reinforce this connectivity, as well as provide a presence for public transport along the new by-pass. In addition it would spread out the commuters on trains who presently tend to overcrowd the first few carriages for the short journey to London. In addition to the improvement in bus and train interchange, this will improve the quality of the experience of travelling by public transport.

ROYAL LEISURE PARK, WESTERN AVENUE
Development Site, Outer London
Case study: Policy, Process, Design, Outcome

This case study illustrates the problems of car dependence that can arise from inappropriate developments in unsuitable locations. It furthers shows missed opportunities to ameliorate such problems through attention to public transport accessibility and detailed planning were missed.

A contemporary leisure centre adjacent to the A40 Western Avenue, developed within a primary “Employment Zone”. The development was allowed to proceed in this location, as the developer was able to demonstrate that the site would generate an adequate number of local jobs. However, unlike the other “employment” uses close by, this development is in the business of attracting large numbers of visitors on a daily basis. The assumption has been that most of these visitors will arrive by car, which in turn has dictated the site layout.

The environment along the Western Avenue is not attractive for pedestrians, but Park Royal underground station is only a short walk away. However, entry to the site is physically barred where desire lines exist and little attempt has been made to capitalise upon this public transport facility. Consideration should have been given to both improvements to the link and entrance to the site, and the overall layout of the site to incorporate and attract public access other than by car.

This has been a recurrent problem over recent years in car “dominated” developments such as business, leisure and retail centres. Often there are public transport facilities close-by which are ignored through poor site design. To access these facilities, other than from a car park, can mean a following a convoluted route around a proliferation of obstacles “seeking” the entrance – this is poor urban design which treats access on foot or via public transport as second class options. Lack of local connectivity in the pedestrian network also makes for an insecure environment.

These factors help to fulfil the prophecy that people predominantly access these developments by car.

This example raises the issue of the suitability of such ribbon developments alongside major Trunk roads in London. It also highlights the need for access by public transport to be considered early in the planning application process to ensure that opportunities for access by non-car modes are not marginalised at the detailed stage.

A further issue relates to mixed use development. Although the Royal Leisure Park contains a number of leisure-related activities this in no sense generates a vital urban or public space. The reasons for this can be summarised as follows:

- lack of critical mass on an isolated site
- space not occupied by buildings dominated by access roads and parking, and the development emphasises consumer activities within the buildings, rather than encouraging non-revenue-earning leisure in public open space.

SURREY QUAYS
Regeneration Area
Case study: Design, Outcome

This case study highlights a brownfield residential regeneration area where public transport accessibility has been integrated at both the structural and detailed level.

In the early 1980's, the London Docklands Development Corporation enabled the redevelopment of the redundant Surrey Docks area of Southwark. A number of features structured the development form and plot areas of the regeneration. The site is a peninsula on the south bank of the Thames with redundant docks and the river itself, which provided a focus for community open spaces and pedestrian/cycle networks.

First impressions of the area suggest that it is a car-dominated structure typical of the early 1980's. Generally, however, the whole area has been planned and structured around access to public transport. The land-ward end of the peninsula is served by the Rotherhithe tunnel, Jamaica Road and Lower Road bus routes, and the Rotherhithe and Surrey Quays underground stations on the East London Line.

A new loop road through the peninsular provides passes both underground stations, and in addition carries three new bus routes introduced to the area, including a cross-river midibus through the tunnel. These bus routes therefore allow access to the wider transport network, and a new bus terminus located at Surrey Quays station. Within the area the bus stops are well linked into the pedestrian networks and key community facilities.

The regeneration also brought forward a large commercial and retail centre to serve both the peninsular itself and the wider area. These are related to the main public transport facilities just described. In particular, the commercial centre is close to the new Jubilee Line Extension station, Canada Water, with its interchange with the East

London Line, and new bus station, thus capitalising on a major new public transport link, reinforcing the argument for its realisation.

The regeneration of the peninsular has therefore not sought to preclude car-based development, but has shown by example how transport choice can be provided. People have been provided with the opportunities to use their cars, but also for alternatives including walking and cycling in a safe environment, and access to quality public transport. When the Jubilee Line becomes operational, accessibility via public transport will be greatly enhanced, thus further reducing the need to rely on private transport.

TOPIC FOLDER

Topic 1 Checklist for borough planners
Topic 2 Transport Impact Statements
Topic 3 PTALS
Topic 4 Parking Standards
Topic 5 Green Travel Plans
Topic 6 Bus service planning guidelines

Topic 1

Checklist 1: DEVELOPMENT CONTROL ACTION SHEET
This sheet summarises the action required to ensure that proper consideration is given to public transport when determining development proposals. The main report provides specific information needed to check each item.
***Checklists 2-4 give specific information.*

Pre-application discussion

Suitability of the site: *Is it appropriate for the proposed development in terms of UDP accessibility policies?*	
Suitability of the development: I*s it appropriate in terms of scale and purpose for the proposed location?*	
Transport Impact Statement: For a development which attracts / generates significant trips a TIA will need to be submitted with the application. *Does it meet the threshold for TIA preparation?*	
Public transport context: *Will public transport information need to be obtained from service providers?*	
Planning conditions and obligations: *Raise the developer's awareness of possible conditions and agreements at an early stage (refer to checklists 3 and 4). Could the development require or contribute to public transport improvements?*	
Orientation of the development on site: *Is the building located on the site to be as near as possible to existing public transport stops/stations?* This is to ensure that the development does not discriminate against the non-car user.	
Future development potential: Reduced car use in future could release parking space, and thus allow more development on the site. Is the	

development configured to enable this to happen? *Consider the location of first stages of development with this in mind: poor location of the buildings could inhibit future development.*	
Access design: *Is the developer aware of detailed design issues such as cycle parking, direct pedestrian access, security, street vitality?*	
Other policies: *Has the developer been made aware of Council policies relating to Green Travel Plans, parking management, travel awareness and other policies?*	

Once the application is received for determination:

Standard consultation: *undertake the usual process; if applicable, refer the TIA to public transport operator and highways/traffic staff for advice and agreement.*	
A large development might warrant additional public transport services: *Consult London Transport or other providers for advice regarding improvement of existing services or creation of new ones.*	
Outline applications: *Basic questions about public transport access should be answered at outline stage. Reserve matters of access and layout should be considered in some detail.*	

Looking at the site plan

Is the proposal accessible to Public Transport? What is the Public Transport Accessibility Level (PTAL)? Check routes from the site to nearby bus stops and stations (within 5 minute and 10 minute walk respectively). *Mark on the site plan and check when undertaking a site visit.*	
Is the "front door" of the building located on the site to best serve access to public transport? Buildings not to be sited so that pedestrians have to walk through a car park to reach the footway, bus stop or rail/tube station.	
Is it appropriate to ask for the development to be relocated? With the above in mind, consider whether it is necessary to ask the developer to relocate the building or front door to benefit the public transport user.	

Have special needs been taken into account? The layout and design should provide for people with mobility difficulties, however they arrive.	
Are the proposed vehicle access points appropriate? Interruptions to major footways and access points should be avoided, including those providing walking routes to public transport.	

Providing for cyclists

Is there cycle parking on the site? It is important to provide sufficient cycle racks or cycle storage. **Refer to Checklists 1 and 2.	
Will a condition be appropriate to ensure adequate cycle facilities? It is important to approach the developer at an early stage to discuss these issues. If people are to be persuaded to cycle, secure well-lit parking is needed.	
Are showers for staff use proposed?	
Is access for cyclists safe from conflict with vehicles and pedestrians? *Consult highways/cycling specialist on the access for cyclists to and within the site*	

Provision for the pedestrian

Access to public transport? The quality of the walk between the site and public transport is important as well as the distance. Major barriers or personal security risks need to be overcome to encourage people to use public transport. *Refer to the "Five Cs" of quality defined by LPAC*	
Will the scheme enhance the pedestrian environment? Consider pedestrian routes in terms of pavement materials, lighting, visibility for security reasons, landscaping etc. *Planning Conditions are useful here*	

Public Transport Service Provision

Is public transport capacity adequate? *Check with London Transport or other providers if necessary*	
Does the scheme justify improved services? Consider the service frequencies and routes required in relation to the use. E.g. peak hour	

services for employment, daytime services for retail, evening and weekend services for leisure. *Speak to LT or other providers for advice*	
Can local bus routes be improved? For large developments it may be appropriate to divert a bus service through the site or contribute a subsidy for a new route. *Speak to LT or other providers for advice*	

Town Centre developments

Can the scheme be served mainly by public transport (with walk and cycle)?	
Will any residual parking demand be met off-site at public car parking? Zero or minimal dedicated on-site parking should be norm for new town centre developments.	
Is there scope for shared parking use? E.g. making shopper parking available for leisure uses at evenings and weekends. *Consider use of Planning Condition*	
Is it appropriate to ask the developer for commuted payments? *Check the policies within the UDP on commuted payments and contributions to public transport (see below).*	
Does the scheme contribute to town centre vitality? *Check for mixed use, new or improved public spaces, and create new pedestrian routes to public transport*	

Planning and Development Briefs

Does the scheme fit with the Development Brief for the site? In areas of development potential the production of a Development Brief provides the Local Authority with an opportunity to incorporate the consideration of public transport at the earliest stage. In this way, developers are familiar with the likely demands at the outset.

Considering Planning Conditions
References:
Town and Country Planning Act 1990 Sections 70, 72, 73, 73a
Circular 11/95 The use of Planning Conditions

Provision for public transport services: *Consider need for provision on site for stops, turning and waiting facilities.*	

Cycle provision: *Consider requirements for the position, lighting, design and security of cycle parking, and shower facilities within the building.*	
Pedestrian provision: *Consider requirements for lighting, landscaping, attractive waiting areas, seating and shelters.*	
"**Modal split milestones":** *Consider a condition requiring a certain mode split to be achieved by a certain date. The effectiveness will require monitoring after a period. Temporary consent may therefore be considered.*	
Green Travel Plans: *Consider their preparation as a condition of consent to effect the desired mode split.*	

Planning Obligations and Contributions to Transport Facilities

References:

- Town & Country Planning Act 1990 S106, as amended by Planning & Compensation Act 1991
- Circular 1/97
- PPG13 Transport (1994), paragraph 4.10

Do contributions meet the cost of infrastructure not necessary but for the development? *Refer to TIA*	
Are contributions to other transport improvements appropriate? *Refer to TIA, PPG13 and Circular 1/97*	
Are there clearly identified schemes to which payments will contribute? *Inform developer of these*	
Contributions towards public transport: Consider use of commuted payments or other S106 agreements. *Consult London Transport for advice, e.g. for* • *New/improved rail/bus stations or facilities;* • *Park and ride schemes;* • *Bus stop infrastructure* • "*Pump Priming" new services*	
Contributions towards access roads and road layout changes: Avoid conflict between different modes accessing the site. *Consult highway and traffic engineers*	

Topic 2: Transport Impact Statements

This topic paper explains the purpose of Transport Impact Statements*, how they differ from the more traditional Traffic Impact Assessments (TIAs), and provides some pointers as to how and when they should be carried out.

According to Regional Guidance for London (RPG3) the role of Transport Impact Assessments is to evaluate “how access to particular development can be gained as far as possible by means other than the private car”.

To achieve this, such Statements will need to have a strong policy content, in line with the new development plan-led system, which may address a range of objectives including environmental quality, safety, transport quality and choice, and social inclusion. Transport Impact Statements therefore have an important role to play as an input to the panning process.

The more traditional *Traffic* Impact Assessment has been a simpler technical appraisal of the likely road traffic impact of a scheme, in order to calculate any additional road and parking capacity required as a result of the development. They have mostly provided “outputs” of planning decisions to determine appropriate planning conditions, agreements and developer contributions.

Transport Impact Statements cover all modes of travel, not just car travel. They show the expected mode split, and the basis for how this will be achieved, including an analysis of the catchment areas for each mode. They will also include any management measures to be taken that will influence the way in which people travel to the site, such as parking controls and charges and Green Travel Plans.

For this reason, they will form an important tool in the implementation of local traffic reduction, air quality or mode split targets.

Unlike Traffic Impact Assessments, the purpose is not simply to provide predicted traffic levels that have to be catered for, but to ensure that travel by all modes is consistent with policy. Thus the Transport Impact Assessment will be used to determine the impact on and provision needed for walking, cycling and public transport, as well as cars and commercial vehicles.

Negotiations with developers about financial or other contributions to the costs associated with access to their developments will also need to take account of the broader range of travel modes, leading to payments for pedestrian, cycle and public transport facilities, not just roads and parking.

Transport Impact Statements will be required for any developments that have significant trip attraction. Traditional TIA thresholds in the IHT guidelines (IHT, 1994) relate to traffic flow (both absolute and relative changes), and to gross floor area. As yet there are no established thresholds that take account of all modes of travel, though this will clearly be an important consideration in many cases. For example, a town centre development without parking may attract little extra car traffic, but may have a significant impact on public transport or pedestrian facilities.

Possible questions to be addressed by Transport Impact Statements are (see LPAC/MTRU, 1996):

1. What is the size and density of the development?
2. What activities will take place?
3. What person and goods movement will be attracted and generated?
4. What mixture of activities and uses will there be?
5. What is the degree of specialisation of the activities? (local, district, city, regional, national/international)
6. As a result of 1-5, what will be the catchment area, both for employees and visitors/customers?
7. What proportion of employees/visitors/customers live within walk (and cycle) distance?
8. What proportion of them can reach the site with a single public transport journey?
9. How does the design cater for those on foot? Is the main entrance direct onto the footway?
10. How many units of pedestrian interest per 100 metres of frontage (doorways, window displays) will result?
11. Will there be zero private parking? What demand will arise for public parking?
12. What demand will arise for loading/unloading goods? Can this be done from public space?
13. What vehicle footway crossovers will be created? What pedestrian flows will have to negotiate the new crossover(s)? How will the use of existing crossovers change?
14. What is the visual “connectedness” between activities inside and outside the buildings?
15. What time of day/week will activity be taking place? How will this contribute to the vitality of the area at different times of the day?
16. How will the development contribute to "exchange/circulation" use of adjacent/nearby public realm?
17. Questions related to the impact of vehicle traffic, as in traditional TIAs will also need to be dealt with.

Example decisions showing how Transport Impact Statements will be central to the planning process are:

- Approval if development consistent with local targets e.g. traffic reduction or mode split.
- Approval if scaled down to reduce car access, or to reduce the scale of adverse impacts.
- Approval if the mode split can be changed by, for example, altering the parking provision.
- Approval with agreements regarding new or improved public transport.
- Approval with agreements regarding improvements to the highway (including pedestrian and cycle facilities).
- Approval with agreements about Green Travel Plans or other ways of securing target mode split.
- Refusal if the impact is too great compared to the benefits

References:

Bedfordshire County Council, “Travel Assessment Guidelines”, Consultation Draft, November 1997.

Institution of Highways and Transportation, “Guidelines for Traffic Impact Assessment”, 1994 (being updated at time of writing).

David Rowe, London Borough of Hammersmith & Fulham, “Transport Impact Statements/Assessments”, in London Planning Advisory Committee *1997 Parking Advice: Background Papers,* 1998.

London Planning Advisory Committee / Metropolitan Transport Research Unit, “Putting London Back on its Feet”, September 1996.

Department of the Environment, “Strategic Guidance for London” (RPG3), 1996.

* As attempts are made to bring assessments into line with the new policy agenda, various terms are finding their way into the literature, such as “Travel Assessments” (e.g. Bedfordshire County Council, 1997), Transport Impact Statements” (London Borough of Hammersmith & Fulham, 1998) and “Travel Audits” (London Planning Advisory Committee, 1996). These are essentially striving for the same thing. The essential point is whether the analysis covers all modes, and whether it is used as an *input* to the planning decision, as opposed to traditional TIAs which mostly provided an *output* in terms of infrastructure matters to be dealt with.

Topic 3

PTALS - Public Transport Accessibility Levels

The purpose of measuring public transport accessibility is to provide a basis for matching development to location.

In line with policy guidance, it is necessary to relate the planning of developments to the availability of public transport. This is to provide choice of means of travel so that everyone is able to get to and from employment, shops and other facilities, and also to limit the amount of access that is undertaken by car.

To plan effectively with public transport it is therefore helpful to have a clear picture of how well each location is served. The PTALS method was designed to provide an empirical measure of this variation that can be plotted in the form of “accessibility contours”. These can be included in the Development Plan, and can inform decisions on individual developments.

Policies can then be related to the public transport accessibility contours such as:

- housing density allowed/required increases with public transport accessibility;
- plot ratios allowed/required increases with public transport accessibility;
- parking provision allowed/required declines with public transport accessibility.

PTALS are therefore a tool that can assist policies to increase the intensity of development where public transport is best.

The PTALS method

Originally developed by the London Borough Hammersmith & Fulham, the method is now more widely used. It was featured in the PPG13 Guide to better Practice. There is a PTALS development group, which aims to ensure consistency of approach in London. The basic method is described in Bull (1998).

The method combines walking times to public transport stops/stations with the levels of service provided at those points. The resulting values are grouped into 6 levels of accessibility, with 1 being the lowest and 6 being the highest. These are plotted onto a plan, with contour lines defining the boundaries of each level of accessibility. The contours join points of equal walking time or distance from public transport services (stops and stations).

What it can do

PTALS can measure the relative accessibility *to* public transport from any given location. This value takes account of the quality of service available. It is thus a measure of what may be termed “origin accessibility”. For example, if an office development is located near a station, PTALS gives the accessibility of the office block in relation to the service provided at the station.

In areas where the public transport network is fairly dense, this can be a sufficient indicator of overall accessibility by public transport. It is less useful, however, where public transport networks are sparser.

What it can't do

The PTALS method cannot measure the accessibility by public transport of a particular location *from* other locations. It therefore is not a measure of "destination accessibility". Taking the example of an office block near a station, it does not give the accessibility by public transport of the many points from which the employees will be travelling. This limits the usefulness of PTALS in areas with sparse public transport, as in parts of outer London, for example.

PTALS and Catchment Areas

To supplement PTALS, when development proposals are considered catchment areas need to be defined for the different modes of travel. Car catchments are usually based simply on "drive times", but public transport catchments need to allow for waiting and interchange times and the walk to and from stops. These assessments can be included in the suggested Transport Impact Statements of significant development proposals (see Topic Paper 3).

Points to watch out for

- PTALS do not constitute a policy, but a tool. For example, the maximum cut-off walk time to bus stops of 8 minutes does not imply that this is an acceptable walk distance for all trip purposes.
- PTALS are to relevant land uses, but should be interpreted appropriately.
- PTALS uses maximum walk time/distance to public transport. The calculation should include bus stops serving both directions, with the maximum related to the farthest of the pair of stops.
- The walk time should be calculated from the "front door" of buildings, not the edge of the site.
- The walk time should be based on actual time, not calculated by "crow fly" distances.
- The standard allowance should be made for service unreliability: this is a factor of 1.2 for rail and 1.8 for bus.
- Consideration should be given to the relative weighting attached to the most accessible service (full weighting), and other services within walking distance (usually weighted at half the value).

References

Department of the Environment, Department of Transport, "PPG13: A Guide to Better Practice", HMSO, 1995. (PTALS on pages 16-17)

Bull, D, "Measuring Public Transport Accessibility", Paper 3 in *London Planning Advisory Committee, "1997 Parking Advice: Background Papers", 1998.*

Topic 4

Parking Standards

This topic paper outlines the basic steps for using parking standards to influence mode split. It is confined to the issue of parking standards in new development, including material change of use and extensions. Wider parking issues are discussed in Section 3.7 of the main report.

Getting the framework right

Local authorities should:

- Adopt restraint-based parking standards in Borough Unitary Plans.
  The timescale of UDP adoption has led to delays in the adoption of parking standards in line with Guidance. Supplementary Planning Guidance should be considered where this could help speed the process.

- Ensure their consistency with national and regional Guidance (especially PPGs 1, 6 and 13, and RGP3 for London).
  Guidance is clear that standards should be set as maxima, and that the maxima should be below the estimated "full demand" level. RPG3 gives a range of maxima recommended for employment generating uses in central, inner and outer London (see table reproduced below). Borough standards should be at least as tough as those set out in RPG3. The London Planning Advisory Committee has subsequently recommended a matrix approach to relate A2 and B1 uses to varying levels of transport sustainability, in line with RPG3.

- Relate parking standards to UDP location policies
  Developments in locations where reliance on access by car is unavoidable should be avoided. Developments in locations with good access by public transport should be encourage.

- Relate parking standards to wider parking policies parking in the Borough.
  To avoid unwanted displacement of parking onto surrounding streets, restraint-based parking standards will need to be applied in the context of on-street parking controls and management policies for public off-street parking.

- Ensure cross-border compatibility with neighbouring Boroughs.
  Developers should not be encouraged to avoid limits to parking provision. Boroughs therefore should not use parking as bargaining counter to attract development. Standards must therefore be set and applied consistently across London and neighbouring south east authorities.

- Ensure that standards relate to policies and proposals in local transport plans and transport Policies and Programmes.
  The aim of restraint parking standards is to influence the mode split in favour of non-car modes. Local policies and proposals therefore need to plan positively for

the improvement and expansion of facilities for travel by public transport, walking and cycling. This means co-ordination with the transport and highway planning activities of the authority.

RPG3 Parking standards for employment generating development

Area	*One off-street space per m^2 gross floor space*
Outer London	300-600
Inner London	600-1,000
Central London	1,000-1,500

Source: RPG3 (1996) Table 6.1

Negotiating lower parking provision

Negotiating levels of parking provision has often in the past meant requiring a certain level of provision, and even recently there are instances of Boroughs requiring more parking than the developer judges to be necessary for the proposed scheme. To meet the aims of current policy, this should be reversed. Boroughs should now negotiate on the basis of as little parking as possible.

Town centres

In town centres, as in central London, it can be argued that alternatives to the car are already available. The following points can be pursued:

- On-site parking limits development intensity; incentives to reduce it can be given in the form of higher density (this applies to both residential and non-residential development).
- Where on-site parking is appropriate, this should be publicly available, not dedicated to a single user.
- Where parking already exists nearby, opportunities for joint use should be considered (e.g. shoppers' car park available for evening leisure use).
- Demand for access by non-car modes can be improved both through the design of the development itself, and through developer contributions.
- Parking in surrounding streets may already be controlled, but control zones may need to be extended to avoid parking generated by new developments.
- Parking for residential developments can be reduced in town centres to allow higher densities and better scheme design (LPAC, Llewelyn-Davies, 1998).

Some Boroughs pursue commuted payments, but these are an anachronism in the context of restraint-based parking maxima. Consideration should therefore be given to establishing a clearer rationale for access-related developer contributions, taking account of all modes. There is a clear need for research and guidance on this issue.

Other locations

The crucial factors in negotiating parking provision downwards will be concerned with:

- the accessibility of the location by public transport, walking and cycling;
- the scale of non-residential development proposals, and hence the catchment area from which they draw employees, customers and visitors;
- the vehicle and trip attracting characteristics of the development;
- the density of residential development, and the availability of facilities within easy walking distance;
- availability of public parking space, including formalised and controlled on-street space.

Each of these factors may be open for negotiation in order to get a good result in terms of accessibility and mode split. For example:

- accessibility by public transport can be improved through financial contributions;
- the scale of the scheme can be reduced to shrink car catchments, and hence impacts; vehicle trips can be reduced through Green Travel Plans, delivery schemes etc; and
- density can be varied according to public transport accessibility levels.

In areas with poor public transport accessibility, the only suitable non-residential developments are likely to be small in scale serving local catchments.

Factors likely to assist negotiations

- Clear policies relating parking to accessibility (see PTALS topic paper)
- Clear policies on location, development density and scale
- Pro-active identification of suitable development locations and opportunities
- Partnership with developers, regeneration bodies and others
- Clear cross-referencing of parking policies with other planning objectives, for example:
  Air quality targets
  Traffic reduction targets
  Social inclusion (developments accessible to all)

References:

Regional Planning Guidance 3: Guidance for London (RPG3), 1996

London Transport Planning, “Review of Office and Retail Parking Standards in London Unitary Development Plans”, 1997.

London Planning Advisory Committee, “Revised Advice On A Parking Strategy For London (1997 Parking Advice)”, 1997, matrix page 32.

London Planning Advisory Committee and Llewelyn-Davies, “Sustainable Residential Quality: New Approaches to Urban Living”, 1998.

Topic 5

Green Travel Plans

Green transport or travel plans are a deliberate intervention by corporate organisations (whether public or private) to influence travel by staff, customers and visitors. They can also embrace goods travel.

“Green Travel Plan” is an umbrella term to denote such initiatives that are designed to contribute to environmental or “green” objectives. Within this, public transport plays an important part as a more environmentally acceptable form of motorised travel.

Management, information, publicity, negotiation and other means can be used to encourage less use of cars and more use of the alternatives. This is sometimes referred to as the use of “soft measures” to distinguish the approach from the more traditional reliance on changes to infrastructure.

Green commuter plans

These are specific to reducing the use of cars for the journey to work by employees, and useful in reducing parking requirements and peak hour traffic. Experience in some authorities suggests that car use for commuting in existing organisations can be reduced by 30% within a few years (Nottingham City Council *et al*, 1995).

Caution should be exercised, however, if they are to form part of wider traffic reduction or air quality strategies, because they may not lead to overall reductions of traffic. The following points should be considered:

- Reduced car-commuting means that a car may now be available for use by other household members during the day. The impact can thus be reduced traffic at peak hours, but increased traffic for different purposes between the peak hours.
- If the commute trip shifts to public transport, this increases the “peakiness” of public transport, which undermines the commercial viability of services.
- In the medium to long term, however, the household car at home during the day may mean that the acquisition of a second car will be avoided.

Other Green Travel Plans

To tackle problems other than peak hour congestion, especially if air quality and traffic reduction targets are to be addressed, other Green Travel initiatives will need to be considered.

Examples include safe-routes-to-school projects, hospital travel plans, household “mobility management” plans, and retail home delivery services. All Green Travel initiatives can be co-ordinated through or form part of area-wide travel awareness schemes.

Local authority role?

Local authorities have the opportunity and powers to

- adopt Green Travel Plans for their own staff. *If local authorities are to require others to prepare Green Travel Plans, they should first "put their own house in order". By 1996 only one London Borough had such a plan for staff (Hurdle, 1997);*
- promote plans with other public and private sector organisations in their area;
- include green travel plans in planning negotiations with developers, and consider making these part of access related planning conditions and agreements.
- work with major employers in particular in areas where public transport is an alternative. Alternatively car sharing can improve work-related travel;
- promote Green Travel Plans as a means of reducing car share in the mode split, and reduce parking requirements.

Developer/end user role?

Developers can take the initiative to promote green travel plans, and thus gain advantages in terms of reduced parking demand, and hence more intensive productive use of development sites. The end users of developments (where different) may be required to ensure that travel outcomes are as predicted or required. This commitment may be included as a planning condition, or obligation.

Public transport role?

Public transport providers have a key role in making green travel initiatives successful. They can be involved in the following ways:

- Joining in with early discussions between developers and local authorities as to the target mode split for significant developments.
- Providing information and publicity on available services, and tailoring this to the specific requirements of each development.
- Assisting with the development of public transport information systems by local authorities, institutions (such as hospitals and schools), and commercial organisations.
- Seeking opportunities to improve and expand public transport that arise as a result of adopted Green Travel Plans.
- Monitoring public transport use to assist with evaluation of Green Travel Plans.

References

Hurdle, D, and Rajesparan, Y, "Green Commuter Plans: London Boroughs'

Progress", Centre for Independent Transport Research in London, 1997.

Nottingham City Council, Nottingham Green partnership, Transport 2000 Trust and Nottinghamshire County Council, “Green Commuter Plans: A Resource Pack for Nottingham’s Employers”, 1995 (first edition).

Smith, M, “Green Commuter Plans and Company Travel Plans”, Paper 7 in *London planning Advisory Committee, “1997 Parking Advice: Background Papers”, 1998.*

Topic 7

London Transport Buses Planning Guidelines

This topic paper provides basic information on the criteria by which London Transport Buses seek to provide a service. The information may be useful in the process of considering whether a development proposal justifies or requires the provision of additional bus services. It is based on LT Buses Planning Guidelines, June 1996, emphasising those aspects relevant to planning new, modified or improved services.

Only in comparatively rare circumstances will developments in London require a wholly new bus network. Nevertheless, the improvements and modifications that may be occasioned by new development should be planned to take account of the overall structure and aims of the public transport network. Over time, cumulative changes to the network can, is properly planned, help to achieve the wider strategic objectives.

Providing a Comprehensive Network

The aim is to provide a comprehensive network of bus services to serve residential and other areas, including employment centres, shops, hospitals, schools or other special venues that stimulate and cater for significant passenger demand.

Criterion

In **residential areas**, routes should be designed to penetrate within 400 metres of most homes. Services should provide links to areas with known demand and to local rail and other bus services where appropriate.

Factors that justify increased service provision

- High residential densities
- Low car ownership
- Hilly terrain
- Distance from bus and rail services
- Needs of the elderly and disabled.
- Where justified by demand, direct services that minimise the need for interchange between buses should be considered.

Providing a frequent network

The aim is to provide as brief a wait at the bus stop as possible.
In central and inner London, services should be sufficiently frequent so that passengers do not need to know the timetable. In quieter areas of outer London, memorable clock-face timetables should be the aim. Capacity should be sufficient to allow all passengers to board the first bus to arrive, or on high frequency routes at peak hours, to board within 10 minutes.
Criteria

- In central and inner London, and on main suburban trunk routes, every 10 minutes or better during the daytime Mondays to Saturdays (12 minutes or better at other times).
- In other areas, lower frequencies are acceptable, but no routes should have less than 2 buses per hour.
- Frequencies should be higher if necessary to meet the target of peak hour loadings not exceeding 70-80% of total capacity.
- Night buses should run at least hourly.

Providing a simple network

To aid people's understanding of the network, especially those who have the choice of other means of travel, or who are not habitual users of the system, the structure of routes and timetables should be as simple as possible.

Criteria

- Routes should run between the same terminal points throughout the week.
- First and last buses should run at the same times each day of the week (though Sunday services may start later in the morning).
- Last buses should leave major centres no earlier than midnight.
- Night bus routes should follow day routes.
- Routes should be as direct as possible, and not include any double-backs or significant diversions.
- Where timetables are used (in suburban areas or at night) "clock face" timings should be used, requiring passengers to remember only "minutes past the hour".

Economic criteria for service changes

Economic criteria are necessary to appraise bus service changes in order to establish whether they will result in an overall improvement. Across the network as a whole, the aim is to provide the best value to passengers that fares revenue and subsidy can buy, by appropriate resource allocation and good service design.

Any proposed change should be considered against:

- the extent to which it provides benefits or disbenefits to passengers (in terms of waiting, travel times, etc.) and changes in fares income; and
- the extent to which it changes net subsidy requirements.

Other points

- In general, adding resources to an overall established route or corridor is rarely financially viable.
- Subsidised services provided in conjunction with new development are unlikely to play any significant role in achieving mode shift away from the car.
- The exception to this is subsidy provided by way of "pump priming" to ensure bus services are available at the outset, and until a development scheme is fully operational.
- Limited finance is available each year to enable innovative services to be tested.