

## DEVELOPING A PEDESTRIAN STRATEGY FOR LONDON

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### 1. INTRODUCTION

This paper is based on a study carried out by the Metropolitan Transport Research Unit (MTRU) on behalf of the London Planning Advisory Committee (LPAC), to present a case study of how to develop a pedestrian strategy for a metropolitan area with the overall aim of encouraging walking as a mode of transport. As the study was not finalised at the time of writing, some aspects may differ from the published report. This first section describes the role of LPAC and explains the rationale behind a study into developing a pedestrian strategy for London. Section 2 explains the strategic importance of walking in London, whilst Section 3 proceeds to highlight examples of best practice in terms of pedestrian policy within London and beyond, including the results of an analysis of London Boroughs' Unitary Development Plans (UDPs) and Transport Policies and Programmes (TPPs). Ways in which the strategy for walking should be developed are set out in Section 4, with implementation issues explored in the Section 5. The final section then sets out the next steps in developing a pedestrian strategy for London and the key conclusions arising from the study.

#### 1.1 The role of the London Planning Advisory Committee

LPAC is a Statutory Joint Committee of the 32 London Boroughs and the City of London established to consider, advise and inform on matters relating to the planning and development of Greater London, including transport.

#### 1.2 The rationale behind developing a walking strategy for London

In carrying out the above statutory functions, LPAC produced "1994 Advice on Strategic Planning Guidance for London" (1994 Advice) which sets out land use and transport policy advice to both the Government and the Boroughs as a context to the review of Boroughs' UDPs. The transport strategy embodied in 1994 Advice involves three inter-related components - reducing the amount of travel, restraining traffic (especially the car) and improving public transport. Within this framework, the need to promote environmentally benign modes of transport (walking and cycling) was recognised.

However, little work on such modes has been done in London. Walking tends to attract little attention relative to its importance and the advantages it offers over other modes of transport. Work on walking to date has tended to focus at two levels - pedestrianisation schemes at a 'micro' level and the development of metropolitan-wide walking networks (mainly for recreational purposes). In between these two strata are several disparate strands of policy, such as walk-to-school initiatives. There is an apparent 'hole' in terms of the lack of a strategic approach tying together these themes in a synergistic manner with the overall aim of encouraging walking as a mode of transport. As a result, LPAC, in conjunction with London Transport and Transport 2000, commissioned the Metropolitan Transport Research Unit (MTRU) as consultants to carry out a study into developing a pedestrian strategy for London.

## **2. THE STRATEGIC IMPORTANCE OF WALKING**

A significant barrier to promoting the role of walking and developing an appropriate policy framework for pedestrians is the fact that walking is not perceived as being an issue of strategic importance and that it is undervalued, often hardly being considered as "transport". Such a misconception has developed from two received truths which have long been part of transport planning - firstly that "strategic" is equivalent to "long distance" and secondly that mobility is a more worthy aim than access. The recent sea-change in national planning policy (see for example PPG13: Transport, PPG13 - A guide to better practice, and Strategic Guidance for London - RPG3) in seeking to reduce the need to travel provides an opportunity to re-assess these faulty assumptions.

### **2.1 Why is walking strategic?**

The strategic dimensions to pedestrian activity can be summarised as follows:

- All walk trips are potentially (probably longer) trips by a motorised mode. An increase in the relative attractiveness of motorised modes could hence result in a switch from walking, thereby increasing the negative externalities of travel.
- The sensitivity of walking to distance means that the location of activities is a critical determinant of the amount of walking. This locational framework is in turn dependent upon the development market and the planning context, both of which have clear strategic dimensions.
- Promoting pedestrian activity is an important component of key urban initiatives, such as promoting town centre vitality and viability, recreation strategies and health promotion campaigns.
- Although carrying out policies and schemes for walking is essentially a local matter, overarching such implementation issues are non-local considerations such as traffic regulations and other legal provisions, design guidance, skills and training.

### **2.2 What is walking?**

The strategic issues noted above can be supplemented by examining data sources which highlight the importance of walking as a mode of transport. In analysing walking in this way, the sub-components of the mode must be identified in order to understand the full range of pedestrian movement and cater for it in the overall strategy. The four key elements of walking in London are as follows:

- **Access Mode** - where walking is used as the main mode between two places, for example home and workplace, shop or school.
- **Access Sub-Mode** - walking is often a necessary adjunct to another mode, for example getting to and from bus stops, stations or car parks.
- **Circulation/Exchange** - including window shopping, meeting people in the street, interfaces between shops and cafes and the street, and a whole range of public space activities.
- **Recreation/Leisure** - including long distance walking, sometimes without a destination, and local activities such as children playing in the street.

### 2.3 Walking in London

Data on walking in London is extremely poor. However, the two main sources of data which can be used to analyse walking - the London Area Transportation Survey (LATS) of 1991/92 and the National Travel Survey (NTS) which is undertaken continuously - clearly show the importance of walking as a mode of transport despite their statistical limitations.

Analysis of LATS shows that walking is a very significant mode of transport in London. It rises from 20.8% of all trips in Outer London to 28.6% in Inner London (see Figure 1). For certain trip purposes walking is even more important - for shopping it holds a share of 27.9% in Outer London, rising to 40.9% in Inner London. However, even these findings are likely to have underestimated the true amount of walking that takes place in London due to issues related to the collection and classification of data in LATS. Firstly, a cut-off point of 200 yards below which trips were not recorded was used, unlike in previous surveys in London. This has had the effects of under-representing walking in the survey and making comparison with previous years difficult. Furthermore, the figures given in LATS are for walking's share as the main mode, by distance, and hence refer only to the "access mode" from the four classes of walking set out above. Allied to this, European experience underscores the under-reporting of walking in travel surveys, with up to a third of walk trips being missed out altogether.

Although the NTS sample size in London is less than that used for LATS, the cut-off point is shorter (50 metres) and the data can be compared over time. Analysis of NTS suggests that walking is losing modal share in London, but much more slowly than in other UK urban areas. However, Figure 2 shows that there is still a great potential to convert the large number of trips over relatively short distances made by car to walk trips. Approximately 50% of car stages and about 15 % of car kilometres are for trips under 3 kilometres. Between the 1975/76 and 1992/94 versions of the NTS, walking only fell from 36% to 34% of all trips in Greater London. The 1991/93 NTS, referring to walking as the access mode, shows that in Inner London 45% of all journeys are made entirely on foot compared to 25% in Outer London. Recently, walking by residents of Inner London has increased by approximately 15% between 1985/86 and 1991/93, increasing walking's modal share by 5%. In contrast, over the same period in Outer London, walk trips have declined by 18%, reducing walking's modal share by 5%. Directional changes in types of walking in London are shown in Table 1 below.

**Table 1: Trends in Walking in London**

Type of Walking	Central London	Inner London (1)	Outer London	London Overall
Access (2)	?	+	-	0
Access sub-mode (3)	?	-	+	-
Recreation	?	?	?	?
Circulation/Exchange	+	?	?	?

Source: NTS special tabulations 1985/86 and 1991/93

+ = known increase, - = known decrease, 0 = known stability, ? = unknown

1 = including Central London, 2 = by London residents, 3 = based on trend in public transport trips

Overall, the analysis of data from LATS and NTS sets challenges for improving the quality of data on walking in the future as well as answering some questions about walking in London. Both sets of data show clearly that walking in London is still a very significant component of the transport mix, even without allowing for activities such as recreational walking, shopping, socialising or playing.

### **3. PLANNING TO PROMOTE WALKING - CURRENT PRACTICE**

This section of the paper sets out examples of current policy and practice in terms of planning for pedestrians. The research carried out as part of LPAC's pedestrians study included drawing conclusions about such issues from contacts made with practitioners in the UK and abroad. With reference to current practice within London, an analysis of London Boroughs' UDPs and TPPs was carried out to highlight the extent to which pedestrians are catered for in the Capital.

#### **3.1 Good practice - examples from abroad**

In general, few cities have attempted to produce a comprehensive pedestrian strategy. Pro-active policy is rare, as walking is often ignored or forgotten in most transport and land-use planning. Consideration of walking is largely confined to solving specific accident/safety problems or to the creation of pedestrian priority areas in city centres. However, such provision in northern European cities is generally more extensive and carried out to a higher standard than in most cities in the UK.

Data collection and analysis on walking often appears to be a problem. The Dutch national travel survey, and surveys in Swiss cities, are acknowledged to under-represent access-mode trips on foot. Few cities have data on the other three categories of walking, but Copenhagen has good information showing the increase in "circulation/exchange" activity in the city centre. Possibly the city most comparable to London is Paris. In the French capital, walk trips can be shown to have declined by 19% between 1976 and 1991, mainly due to an increase in a substitution of walking for motorised trips for the journey to work. In contrast, walking to school, and for leisure and recreation activities has increased.

Pro-active planning to encourage pedestrian activity has been a feature of several German cities. In Bremen, an integrated transport plan was adopted in 1995, including the aim of reducing the rate at which walking is declining in the city. Measures being deployed in pursuit of this aim include more green time for pedestrians at signal crossings, providing a more pedestrian-friendly street environment and experimenting with providing "all ways" pedestrian lights at junctions.

Heidelberg has recently carried out an extensive investigation into current pedestrian issues, resulting in the production of comprehensive planning guidelines for walking. The guidelines include land-use and transport measures which will improve the pedestrian environment and increase opportunities for walking. Examples include efforts to support small-scale, dispersed retail and industrial activities, pedestrian-friendly public transport interchanges, and maps of pedestrian routes and pedestrian problem areas.

Local authorities in Switzerland are obliged by law to provide a network for hikers and pedestrians. Targets are being used to promote action. For instance, a new "model city" project in Burgdorf has a target to increase the walk share of trips by a third. Again, poor data quality is hampering progress towards this target.

### **3.2 Good practice - examples from the UK**

Most innovative work with respect to pedestrians in the UK has emanated from York. Overarched by a priority hierarchy which gives precedence to walking, the city embodies several components of a strategy for pedestrians. For instance, the Deposit Draft version of the Local Plan has set target modal splits for work journeys, including an increase in the walk share from 13% to 14%. Furthermore, a pedestrian route network has been defined, showing routes to the city centre, shops, schools and other key locations. These measures are augmented by York's pedestrian audit which aims to be a design as well as a safety audit.

Elsewhere, several local authorities have produced design guidance intended to make areas more attractive for pedestrians, including Edinburgh, the London Borough of Richmond and the City of Westminster. Examples of Continental practice in encouraging walking by restricting car use via the construction of car-free housing schemes are being developed in Britain. Edinburgh is planning such schemes, whilst Cambridge has also considered introducing them.

### **3.3 Current practice in London - an overview of UDPs and TPPs**

Unitary Development Plans (UDPs) and Transport Policies and Programmes (TPPs) produced by London Boroughs tend to take a rather narrow view when examining issues related to pedestrians and walking. The policies that are present tend to be couched in terms of safety/security and recreational walking. Little data is collected to either help formulate or justify pedestrian policy. Furthermore, no Borough sets out policies directed at achieving a target for walking in general, although seven UDPs do include targets for accident reduction.

Many land use policies in UDPs impinge upon pedestrian issues. These include policies relating to development density, mixed use development, location and site layout - all aspects of the urban fabric which can be manipulated to encourage walking as a mode of transport. Such issues are covered well in many UDPs (although not necessarily with explicit reference to walking), particularly those which have been adopted after sympathetic shifts in national planning policy were published, such as PPG13: Transport in 1994.

Relating to walking issues more specifically, many UDPs and TPPs include transport policies to promote walking, particularly by promoting and/or providing pedestrian networks and routes. Traffic calming or traffic restraint schemes to benefit pedestrians are less common, but are still found in the majority of the documents. Other transport policies found in UDPs and TPPs, such as policies for highway and traffic management schemes, are less pro-active in encouraging walking and only serve to "consider" pedestrians rather than promote walking.

Town centres and recreational paths are the main foci for UDP policies aimed at improving the pedestrian environment. Road crossings and access to public transport are also seen as areas where improvements could be made. Little work, however, has been done on looking at footway capacity and widths required to accommodate various amounts and types of pedestrians, or looking at reallocating roadspace in favour of the pedestrian. Similarly, no Boroughs appear to have an organisational structure at officer level which is conducive to encouraging walking - no mention is made in the UDPs of any Borough having a Walking Officer, for instance.

Overall, although the UDPs and TPPs produced by London Boroughs do contain a range of policies aimed at pedestrians/walking, this is done in a manner which has two basic faults from the perspective of LPAC's study. Firstly, the focus of policy is unbalanced, being heavily biased in favour of initiatives aimed at the safety/security of pedestrians and recreational walking rather than encouraging walking as a mode of transport. In reviewing UDPs and drawing up new TPPs, Boroughs should seek to be more pro-active where pedestrians are concerned, taking the emphasis away from merely including reactive initiatives. Secondly, these policies should be included in the UDP and TPP in a coherent manner (with the overall aim of promoting walking as a mode of transport) rather than the disparate collection of policies which predominates at present.

#### **4. DEVELOPING A STRATEGY FOR WALKING**

Many of the examples of pedestrian schemes both in the UK and abroad are reactive: for example responding to a safety problem. Even town centre pedestrianisation schemes are often not part of an overall strategy, but usually one off "islands". Cars may well be the favoured mode to get to these improved walking places. Outside their boundaries street conditions will deteriorate as traffic rises, and people will become more inclined to drive to such centres. This argues for a more comprehensive revision of walking policy, using positive targets, and making data collection tune in with the strategies objectives and targets. This will require a co-ordinated approach including both land use and transport policies.

The purpose of a pedestrian strategy is to indicate the following:

- the desired or intended role of walking in the total transport mix, as an element in urban vitality, and as a health and recreational asset;
- the planning and transport policies and actions needed so that this role can be fulfilled;
- a timescale for action;
- the mechanisms for implementing the strategy and the agencies involved; and,
- a description of the evaluation and monitoring process.

In particular, a pedestrian strategy will need to focus on the key issues of walking and land use, and the quality of the journey.

#### **4.1 Walking and Land Use**

Planning for walking requires the application of sensitive locational and spatial policies. The reasons for this are twofold. Firstly, walking is feasible only for relatively short distances, so activities must be close together. No other mode is so sensitive to distance. Secondly, the decision to walk is influenced by the quality of the immediate surroundings. People on foot can experience the positive aspects of slow movement through the city, but equally they can more easily be deterred by negative qualities such as danger, noise, dirt and ugliness. Land use planning is the main instrument for arranging new development in such a way that walking is both feasible and desirable.

From now on the walking catchment distance should be a central measure of all developments. The framework must encourage a mix of local activities at a density which can support them and which is well suited to walking. As a result, each new development or redevelopment should draw up a full audit of its travel impact including trip generation, the likely catchment and the modal split.

#### **4.2 Total journey quality**

To those on foot small impediments mean a lot. It is interesting that so little emphasis is placed on the economic cost of poor footways. The difficulty lies in convincing people that design at the detailed "kerb" level is of vital importance. There is thus a dual meaning to quality: firstly, the total quality of achieving access and secondly, the quality of the journey itself and the walking environment at the origin or destination. It is likely, although apparently unsubstantiated by research, that people will walk more frequently and to further destinations where the conditions for walking are of a high quality.

There have been many attempts over the years to identify the specific urban qualities which are conducive to walking and enjoyment. Some concepts have been readily established in the literature, but often have been neglected in planning and transport practice. Examples are: legibility, permeability, defensible space and diversity. Traffic safety has tended to dominate the planning concerns, reflected in many measures and practices which aim to protect people from vehicles, but often at the expense of their convenience. The study carried out for LPAC has developed this work to identify a broad range of desirable attributes to improve and encourage walking under five

headings (the "Five Cs" - see Table 3) which are that walking places should be connected, convenient, comfortable, convivial and conspicuous.

#### **4.3 Is the network approach enough?**

The principles and frameworks discussed above need to be translated into more detailed operational objectives. These usually include targets, constraints and the setting of standards. Before doing so, the issue of whether an approach focusing upon pedestrian networks is sufficient needs to be answered. While the Priority (Red) Routes, bus priority and cycling routes in London are all network approaches the applicability of this approach to walking is uncertain. The study carried out for LPAC suggests a more sophisticated multi-layered approach is needed with four key elements:

- design standards and quality audits;
- identification of key walking routes between places (the network approach) and prioritising these for improvement;
- catchment areas around key attractors/nodes (including public transport interchanges); and,
- pedestrianisation/pedestrian priority areas.

#### **4.4 Targets, Timetables and Constraints**

Now that scheme appraisal is objectives-led, the use of targets is one of the most appropriate ways of guiding strategy and its implementation. Targets can be organisational (such as producing a plan or designating a pedestrian officer) or related to modal share by journey purpose, or even referring to levels of expenditure (for example spending at least a certain proportion of the transport budget on walking). Constraints also help to guide implementation by setting obvious boundaries, for example not making pedestrian crossing times longer. Setting constraints in a strategy for walking will tend to affect other highway users, since the main constraint will be to prevent walking spaces being used as a free resource to assist motorised traffic. Standards are very similar to aspirational targets in that they help to define a desirable end state, although they often represent a minimum level of provision. Where they are not being met, they automatically identify problems which need to be solved. Operational targets can set timetables for the achievement of specific standards.

The study has set out 25 targets and 8 constraints as a starting point for further development. These are set out in Table 2.

#### **4.5 Walk Mode Inventories and Audits**

Audits or inventories are a key part of the work proposed to implement and monitor the walking strategy. The Boroughs will need to carry out an inventory of the walk mode, the opportunities for walking, and the facilities provided for it. This inventory will then provide the base for monitoring improvements and changes. For consistency, Boroughs and the other agencies involved will need to agree a common approach, and guidance can then be issued on the content and techniques. Table 3 sets out some suggested headings for such an inventory.



It will also be important to develop travel audits for new developments which determine the trip generation, the likely catchment and the modal split. Such audits would go beyond the present "Traffic Impact Assessments" (which are basically only concerned with vehicle trips) to look at new developments in terms of the person trips they generate and how these can be accommodated on the various transport networks, including trips by walking.

## **5. IMPLEMENTATION**

The development and implementation of the strategy will need to involve a wide range of people and organisations, including those key agencies responsible for London's transport and land use planning. Firstly, to set the planning and transport context, the principles and targets embodied in this paper should be developed into a London-wide policy framework for Boroughs to use in their UDPs and TPPs. Boroughs would subsequently be able to include the issues and targets in their UDPs as they are reviewed.

### **5.1 Powers and resources**

The mobilisation of human and financial resources is the key factor upon which the implementation of any strategy depends. The issue of how to fund walking projects needs particular attention since the cost of individual schemes may be small and could often fall outside the protected expenditure on major projects. The power of Boroughs to progress a pedestrian strategy needs to be consistently applied according to the principles of such a task. Relevant Borough powers range from the ability to progress traffic orders to prioritise walking, to influencing land use planning decisions. Strong and clear central government guidance is required to ensure consistency across Borough boundaries on such issues.

### **5.2 Multi-Agency Action**

The question of power also raises the issue of how many agencies need to be involved. As well as the Boroughs and LPAC, there are the Traffic and Parking Directors, Traffic Control Signal Unit, London Transport, the Departments of Transport and the Environment, Government Office for London, Railtrack and the Police. In addition, there are a large number of non-governmental organisations including transport pressure groups and bodies such as London Pride and London First. From data collection through to implementation there are a range of issues which must be settled if progress is to be made. The consultants suggest that one option that could be explored would be to appoint a Walking Director for London (equivalent to those already appointed for Parking and Traffic).

### **5.3 Changing attitudes**

Both transport and planning professionals and the general public alike need to change their attitudes towards walking in order to make a strategy for pedestrians successful. The dissemination of better quality data on the importance of walking in London would help achieve this, particularly when coupled with promoting new guidelines,

demonstration projects and setting up awareness campaigns (along the themes of "It's Good to Walk" or "Getting London back on its feet", for instance).

At present, in most local authorities, the attitude held towards walking is less than clear. Usually, the main responsibility for walking lies with traffic or transport policy sections, whilst certain aspects of walking are split between other departments. For instance, recreational walking can be a matter for planning or leisure sections. Whilst it is recommended that a lead stays in the transport planning field, where much expertise in planning for pedestrians exists, a cross-departmental approach is essential for any progressive development of walking policy. In addition, a clear line of responsibility for walking issues, preferably leading to a senior officer with walking as a major part of their responsibilities, will be required.

A further challenge is how to generate the understanding and skills required throughout the transport planning and related professions if a pedestrian strategy is to be successfully implemented. This will differ significantly from the received wisdom which has led to the perpetuation of the practice of sacrificing quality in the name of safety in recent decades. A change in culture is required from universally developing subways, guard rails, pens and lengthy multi-stage crossings to taking on board wider concerns covering quality of provision, urban design, addressing the "Five C's" and the "view from the kerb".

These techniques need to be combined with measures and schemes from land use planning and engineering. Examining walking catchments for new developments and encouraging mixed use and small-scale facilities are amongst the many land-use issues to be considered. In terms of engineering, pavement widening and introducing a series of zebra crossings in local centres are areas where improvements could be considered.

#### **5.4 Guidelines, Demonstration Projects and Case Studies**

Publishing guidelines and good practice is an area where progress towards better planning for pedestrians could be made. Professional institutions (such as the Institution of Highways and Transportation) could help by producing relevant guidelines for practitioners. A complementary approach which could be tried would be to set up demonstration projects at key locations for pedestrians in London. Such locations should include major London squares, pedestrian obstacle courses on main roads (such as at Vauxhall Cross), a residential area and representative town centres in Inner and Outer London. Funds could be allocated to such projects in a similar way to those provided for the London Bus Priority Network.

Innovative case studies of good practice for pedestrians in London are already in progress in some areas. A traffic management scheme in Wood Green town centre which includes a diagonal crossing and an all-red phase outside the Underground station has just been placed on public consultation. Interestingly, the plans drew on two multi-disciplinary "brainstorm" sessions involving architects, arts, leisure and recreation departments, planners, engineers and the town centre manager. In addition, East Ham town centre has seen the implementation of pedestrian schemes which address the critical issue of shared spaces.

## 6. NEXT STEPS AND CONCLUSIONS

LPAC are now using the Consultants Report to work up draft policy advice to be considered by its Committee in September 1996. This will be followed by consultation with the Boroughs and other interested parties with final Supplementary Advice (to LPAC's 1994 Advice) on Pedestrian Policy, including a strategy for walking in London, being presented to the Committee either at the end of 1996 or early in 1997.

In parallel with this work in developing Supplementary Advice on Pedestrian Policy, LPAC is leading a London Pride Partnership initiative on walking which will seek to bring together representatives of Central and Local Government, the business sector and the voluntary sector to agree, by the end of 1996, on an action programme to improve conditions for pedestrians in London.

Also, the Department of Transport are setting up a National Walking Forum during the summer which will be responsible for developing a National Walking Strategy over the next 12 to 18 months. LPAC have been in contact with the Department of Transport about their study and hope to feed both it and the emerging advice on pedestrian policy in London into the national discussions.

This paper has shown that there is a clear need for a strategy to promote walking as a mode of transport in London. The importance of this mode has for too long been undervalued. Developing a strategy for pedestrians along the lines set out in this paper would help the London Boroughs to redress the balance.

Finally, it is clear that pedestrian policy is now set for a renaissance over the next few years as policy makers again realise the vital importance of promoting walking as a mode of transport, particularly given its key role in providing sustainable transport in cities.

*Disclaimer: The views expressed in this paper are those of the authors and do not necessarily represent those of the London Planning Advisory Committee.*

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## TABLE 2: EXAMPLE TARGETS AND CONSTRAINTS

The precise numbers and timescales in the following list obviously need further work, but we have used the information gathered, the wide ranging discussions and the study team's judgement and experience to set reasonable first drafts. These provide a focus for finalising what should become an agreed action plan.

### *Travel by foot*

T1 For health reasons London's local and central government and their agents will seek to increase kilometres walked per person by 1% per annum for the next ten years.

T2 The same authorities will also actively pursue the following modal share targets:

Journey to Work:	0.75% per annum increase over ten years
Shopping:	1.5% per annum increase over ten years (Outer)
	1% per annum increase over ten years (Inner)
Leisure:	1% per annum increase over ten years (Outer)
	0.5% per annum increase over ten years (Inner)

### *Continuous networks*

T3 All footways except those which cross the Priority Network will be provided at one level, including crossings, within ten years, with at least half the network made continuous within six years.

T4 All traffic signals in Inner London will have full pedestrian phases within ten years, with at least half the programme complete within six years.

T5 All traffic signals in built up areas of Outer London will have full pedestrian phases within ten years, with at least half the programme complete within six years.

### *Footway standards*

T6 Footway widths will be surveyed and assessed against the desired standards for the type of street (main shopping/local shopping/residential), this will be completed by December 1997 and a full report published by March 1998.

T7 Where footway standards are not being met pavements will be widened so that all shopping streets meet the standards within six years of the report's publication, and at least half meet them within three years.

T8 Residential areas may require footway widening, but as an alternative they should also be included in "walking pace places" where traffic speed must be governed by compatibility with walking. Existing legislation allows street playgrounds to be designated, subject to "permitting reasonable access to premises". Local byelaws can then be applied to such traffic. This should be pursued first in demonstration projects, then extended to most residential areas. The first target should be a demonstration project in each borough by March 1998, and for 50% of all residential areas to be covered by such orders within five years of that date.

C1 Increases in walking will not be achieved by reducing travel by cycling and public transport.

C2 No scheme affecting footways or highways will cause an increase in crossing time for those on foot.

C3 Footway width will be increased by reducing on-street parking or traffic lanes not by removing environmental features such as trees or inhibiting pavement access for retailers.

### ***Organisational***

T9 Each Borough will undertake an awareness campaign on walking, and a data collection exercise to establish the extent of each of the four categories of walking, together with a "view from the kerb" quality survey to be complete by March 1998 and publish the findings in full.

T10 Each Borough will prepare an annual report on progress in implementing the strategy and how far targets have been achieved, including a continuous awareness and monitoring programme for walking in its locality. This will be published with the TPP bid and submitted to Government.

T11 The Government Office for London will publish an overview of walking in London based on the borough reports.

C4 Transport grant or credit approval will not be given unless the walking report is completed.

C5 Transport grant and supplementary credit approval will be held back if targets for improving walking provision are not met.

C6 Where there is competition for resources, especially for signal alterations, priority will be given to the walking strategy, followed by bus priority, followed by traffic management.

T12 By December 1997 each borough will identify a point of contact for the public for walking policy issues (as opposed to reporting pavement problems).

### ***Crossing standards***

C7 New pedestrian crossings will be designed so that no more than one traffic lane in each direction has to be crossed or one lane in either direction. They will be at the same level as the footway and have approaches designed to slow down vehicles.

T13 Existing zebra crossings will be brought within the standard for new crossings within six years.

T14 A new index of "crossing opportunities" per 100 metres will be developed with crossings which provide greater opportunity, for example diagonal crossings, and greater priority, for example raised and with the road narrowed to a single lane, scoring more highly. This will be completed by December 1997.

T15 Minimum standards for crossing opportunities will be set for streets fulfilling different functions, for example High Streets and secondary shopping streets, and streets will be assessed against this criteria. Action will be taken to bring them up to standard within ten years, with half those identified as sub standard completed within six years.

### ***Development control***

T16 All new developments will be audited for catchment area and modal share targets as follows:

Shopping: 50% of predicted users must live or work within walking distance. No more than 20% of predicted users will come by car

Other Employment: 25% of predicted users must live within walking distance. No more than 20% of predicted users will come by car

Other Facilities (leisure, health, education): 50% of predicted users must live or work within walking distance. No more than 30% of predicted users will come by car

T17 All planning applications must submit a statement on walking which sets out how people will come by foot, what provision will be made as part of the design and how walking

there will be made attractive. A detailed audit for pedestrian access extending 500 metres from the site perimeter should be included.

T18 New housing should be planned at sufficient density to sustain local shops and facilities, and provision made for such facilities, with nominated uses paying low rent and rates.

T19 Developments which provide mainly shopping or offices must include a range of facilities, which generate street activity outside normal working hours: in any case larger developments will not be allowed outside definable centres which have a 24 hour function.

#### ***Public transport links***

T20 Stations and bus stops will be audited for the quality of their access by foot in a programme jointly agreed between the public transport operators and the Boroughs. This will be completed by March 1998 and the results included in the Borough Walking Report for that year.

T21 As the first stop and station audits are completed, demonstration projects should be set up as soon as possible so that by the time the audits are finished, at least one project per Borough will be in place.

#### ***Right of way***

T22 Rights of way are a familiar issue in the countryside, but many have been interrupted in London as part of large developments or redevelopments. These interruptions should be identified and discussions held with the new owners to see how this can be remedied. At the very least they should be restored when redevelopment takes place. Thames side routes are restricted in this way and such networks should establish 24 hour access using persuasion or whatever powers are appropriate.

C8 Rights of way should not be interrupted by new development or redevelopment.

#### ***Developing networks***

T23 Networks for access by foot will be built up by identifying key destinations such as parks, shopping streets, swimming pools, cinemas and other leisure facilities, and major employment centres and the links between them. These links will then be subject to the quality audit procedure, and the trip assessed for total journey quality by foot. There will be wide variations between boroughs and therefore no network length targets are proposed here. However, an organisational target can be set to identify networks, prioritise which ones are to be improved first, and set out a programme. Some of the other targets which are network wide, such as T3-T5, T8. and T13-T15 will in any case contribute to the improvement of such networks.

#### ***Demonstration projects***

T24 In time for this year's TPP round at least one Central London square, a shopping centre and a residential area in each of Inner and Outer London, and a "difficult case" such as Vauxhall Cross should be identified as demonstration projects for implementation in 1997-99.

#### ***Creating expertise***

T25 In tune with, and drawing on, the demonstration projects all agencies involved in transport in London, together with the professional institutions, should embark on a major awareness and education exercise aimed at practitioners. New guidelines and good practise guides will be needed, launched at a major conference at the end of 1997.

## TABLE 3: WALKING INVENTORY

### 1. WALKING ACTIVITY

Extent of walking activity in each of walk categories (Access Mode, Access Sub-Mode, Circulation, Recreation)  
Walk mode share in the mode split, for both Access Mode and Access Sub-Mode categories  
Breakdown by trip purpose, person type  
Analyse goods carrying and "pedestrian vehicle" activity

### 2. ACCIDENTS AND ROAD DANGER

Accident data are already available  
Road danger identification will include data on traffic volumes and speeds, and their barrier effects

### 3. WALKING OPPORTUNITY

Analysis of the circumstances relevant to walking activity:  
Land use density, mix  
Range, scale and distribution of local facilities  
Public transport accessibility and level of service  
Demographic profile: age, infirmity, household structure

### 4. WALKING QUALITY

An inventory based on the "Five Cs"

#### *Connectedness*

Identify gaps in the network and detours necessary  
Identify breaks in network due to vehicle crossovers, junctions

#### *Convenience*

Convenience of crossing roads (e.g. at will, with help, with protection)  
Is it direct, or are there deviations from desire lines?  
At junctions, is there priority over motor traffic? How long do people have to wait?  
How much time do people have when crossing?  
How much control do people have (e.g. do they have to "apply" to cross)?

#### *Comfort*

Is the footway level, smooth, non-slip?  
Is the route at a continuous level?  
Air quality  
Proximity to moving traffic  
Absence of footway parking  
Uncrowded, a margin of quality over and above bare capacity  
Is the route broad enough for its use, and unobstructed?  
Lighting quality  
Micro climate, weather protection

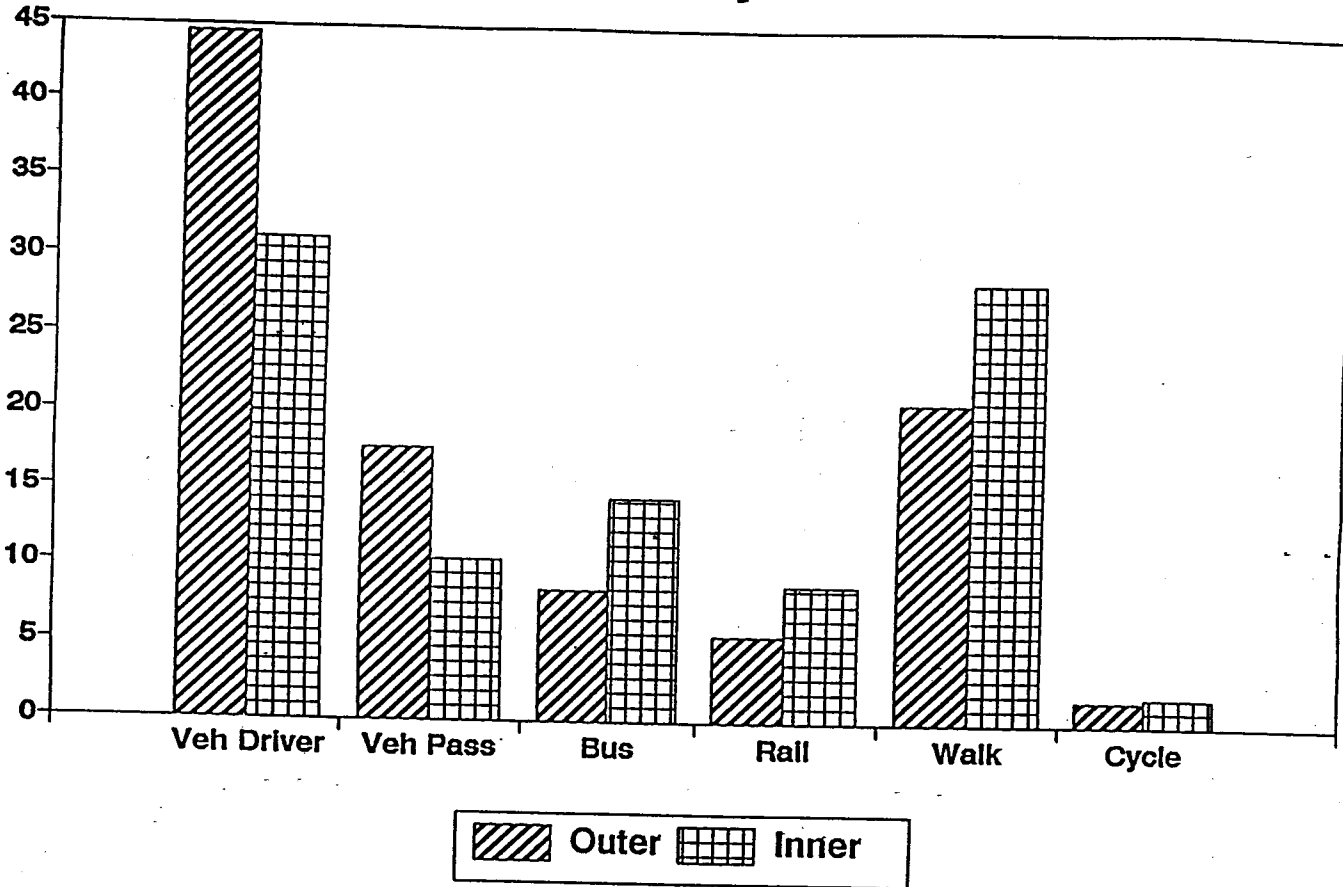
#### *Conviviality*

Diversity of activity  
Times at which there is activity  
Ground floor interest and activity (e.g. units per 100 metres)  
Cleanliness  
Quality of design and landscaping  
Furniture and equipment, for walking, and for "staying" (e.g. seating, litter bins, public toilets)

#### *Conspicuity*

Street names comprehensive, visible from eye level, well lit  
Property numbers comprehensive  
Public buildings and other key locations signposted  
Bus stops and stations signposted  
Local and service information provided at bus stops and stations  
Bus stops and stations as local focal points (with kiosk, telephone, public conveniences etc.)  
Recreation routes waymarked  
Less obvious routes signed (e.g. through housing estates to local centre or school)

**Fig 1 Share of trips by foot  
As % of all journeys: LATS 1991**



**Figure 2: Car Stages in London in the morning peak by trip length  
Source LATS 1991**

