

Planning for Walking



of regular travellers who made a change to their travel during the Games have continued with that change, equivalent to around one in ten (11 per cent) of all regular London travellers.

A series of stations were identified as ‘hotspots’ during the Games, stations that would be exceptionally busy during the Games. In general, the travel behaviour and choices of commuters through the hotspot stations was similar to all commuters. The vast majority had expected their station to be busier than normal and as a result nearly all had thought about how they would travel during the Games, although many decided to wait and see what happened before committing to a change.

Transport for London concluded that the change would not have taken place to the same extent without TDM – those who were aware of the “Get Ahead of the Games” campaign and tools were more likely to change. Businesses used the information provided by TfL to get senior level buy-in and allocate resources. The awareness of and engagement with the campaign undoubtedly contributed to the preparedness of London travellers for the Games, and the level of change in travel behaviour seen throughout the Games.

The TDM approach used for the Games can be usefully applied to situations where travellers face a major change to network supply or demand, such as a line or station upgrade or a major event.

3.4 Walking improves air quality
As road traffic is responsible for about 70% of the three most dangerous pollutants (nitrogen dioxide, particulates and ozone), such emissions and noise pollution are cut if the use of cars can be reduced. Short car trips contribute relatively more pollution, due to cold starts, and so encouraging a switch from car to walk is particularly beneficial.

4. Current Conditions and Challenges

4.1 Problems faced by pedestrians
Where walking conditions are less than ideal, pedestrians face challenges caused by a combination of poor planning for pedestrians, poor maintenance and management of pedestrian routes, conflicts with motor vehicles and lack of personal security, the last possibly increased by the recent trend to reduce street lighting or turn off lighting part way through the night.

The box below gives a list of problems faced by pedestrians, from the CIHT guideline *Providing for journeys on foot* (IHT, 2000a).

Pedestrians’ common concerns can be judged from research, undertaken for Living Streets in 2012, which asked Welsh adults which, if any, of the following problems they had encountered on their local streets (Table 2).

Table 2: Problems encountered by pedestrians (2012)

Problem	Percentage
Litter or dog fouling	76
Broken or cracked pavements	66
People parking on the pavement	62
Potholes in pavements	58
Pavements that have been badly patched up after street works	54
People cycling on the pavement	53
Fly tipping, graffiti or abandoned cars	41
Street clutter and/or obstructions on the pavement	39
Badly managed street works	32
Street lighting not working/not enough street lighting or street lighting being turned off or removed	23

Source: Welsh Government (2014) Design Guidance p.24

The NCC report ‘What’s wrong with walking?’ (NCC, 1987) ranked a range of pedestrian concerns, most of which result from poor street management. Dog and animal fouling, badly maintained paving and domestic litter were all major concerns, as was parking cars and bicycles, and riding bicycles, on footways. Little appears to have changed between 1985 and 2012.

The CIHT guidelines *Providing for journeys on foot* (IHT, 2000a) reports on many real or perceived deterrents to walking. Some of the less obvious problems are listed in the box overleaf.

Problems faced by pedestrians

A Poor-quality Pedestrian Environment

- inadequate footway maintenance/ reinstatement and lack of snow clearance and deicing
- litter and a general appearance of neglect
- dog fouling
- splashing by drivers
- buildings that turn their backs on the street and present pedestrians with blank walls, ugly street scenes and an absence of reassuring surveillance
- cul-de-sac housing layouts that turn suburban estates into mazes and increase walking distances to shops and other local services
- lack of benches and public lavatories
- the absence of road signs for visitors on foot
- steep gradients and/or steps

Inadequate Pedestrian Safety

- fear of road accidents
- aggressively designed vehicles and, at night, high-powered headlights
- obstructions on footways: roadworks, rubbish bins and sacks, poorly sited traffic sign poles, bus shelters, locked bicycles and parked cars

- inadequate or broken street lighting in residential streets and at pedestrian crossings on main roads
- lack of or inadequate footways, particularly in and between villages and the narrower streets of old towns and cities
- illegal cycling on pavements and the sharing of some off road paths with cyclists
- inadequate green time at signal-controlled crossings

Inadequate Personal Security

- graffiti, fear of assault and the withdrawal of police from local streets
- highly publicised child killings and abductions that have made some parents fearful of letting children walk unaccompanied
- dangerous dogs
- the presence of beggars (some of them aggressive) and intimidating drunks

Source: MORI (1986) and National Consumer Council (1987). Cited in IHT 2000 (edited)

4.2 Road safety and fear of traffic
The risk for pedestrians of being involved in road accidents can be measured in three ways: the number of pedestrian casualties, the casualty rate per passing vehicle and the casualty rate per distance walked. By all three measures, pedestrian safety has improved greatly in the past 20 to 40 years (Figures 7, 8 and 9, derived from Reported Road Casualties Great Britain, DfT, annual). Pedestrian deaths declined from approximately 3,000 in 1970 to approximately 400 in 2013.

Another risk to pedestrians is from tripping or falling on pedestrian pavements. These incidents are not recorded as transport accidents, and no central statistics of them are kept. The NCC report cited above (NCC, 1987) quotes from mortality records for England and Wales that in 1984, 189 people died in “street and highway accidental falls.” It also includes two surveys, by MORI and by Consumers’ Association, which asked about pavement accidents in the preceding 12 months. Approximately one in five respondents in the MORI survey had experienced a pedestrian accident; 7% had tripped or fallen, 11% had tripped or slipped on wet leaves, snow, ice or rubbish and 3% had walked into overhanging obstructions. NCC estimated that 2.3 to 3.4 million people were injured annually by pavement



Poor quality pavement

The “5Cs” of Good Walking Networks

- 1. Connected:** Walking routes should connect all areas with key “attractors” such as public transport stops, schools, work and leisure destinations. Routes should connect locally and at district level, forming a comprehensive network.
 - 2. Convivial:** Walking routes and public spaces should be pleasant to use and allow walkers and other road users to interact. They should be safe, inviting and enlivened by diverse activities. Ground floors of buildings should be continuously interesting.
 - 3. Conspicuous:** Routes should be clear and legible, if necessary, with the help of signposting and waymarking. Street names and property numbers should be comprehensively provided.
 - 4. Comfortable:** Comfortable walking requires high-quality pavements, attractive landscapes and buildings and as much freedom as possible from the noise, fumes and harassment of vehicles. Opportunities for rest and shelter should be provided.
 - 5. Convenient:** Routes should be direct and designed for the convenience of those on foot, not those in vehicles. This should apply to all users, including those whose mobility is impaired. Road crossings should be provided as of right and on desire lines.
- Transport for London: “Improving Walkability: Good practice guidance on improving pedestrian conditions as part of development opportunities,” September 2005. (Edited)

TfL defines the “5Cs” of good walking networks in Improving walkability (TfL 2005). These are shown in the box above.

Plans for walking will often refer to a user hierarchy. This provides that in the planning, designing and maintenance of most urban roads, the greatest priority is given to meeting the needs of pedestrians.

Numerous DfT documents define “road user hierarchies,” in which pedestrians and pedal cyclists are given the highest priority and private car users the lowest. *Manual for Streets* (DfT, 2007) defines a “hierarchy of consideration,” whereby designers should think about pedestrians’ needs first. It also recommends that increased consideration should be given to the “place” function of streets. This approach to addressing the classification of streets needs to be considered across built-up areas, including rural towns and villages, so that a better balance between different functions and street users is achieved.

The booklet *Street Design for All* (Davis, 2014) contains advice on how to make streets high-quality places, while permitting the necessary movement of vehicles. It contains many examples of good practice and emphasises the vital importance of quality design of all aspects of a street.

The CIHT guidelines *Providing for journeys on foot* contains a section on the appraisal of pedestrian schemes (IHT, 2000a). This states:

Providing for walking is now a priority of transport policy. An increasing proportion of local transport funds is likely to be directed towards pedestrian-friendly schemes. This brings with it a greater need to ensure that the schemes (physical schemes and policy measures) are effective and properly prioritised.

Local walking plans may also need to include appraisal policies. Such assessments, undertaken prior to scheme implementation, are intended to ensure that pedestrians’ needs are met. The main reasons for carrying out appraisal are:

- to demonstrate that schemes have been selected rationally and in accordance with objectives
- to compare and prioritise different approaches to design
- to compare and prioritise competing pedestrian schemes
- to compare pedestrian schemes with improvements to other forms of transport
- to demonstrate that schemes represent value for money
- to comply with the requirements of the funding regime, in particular the local transport plan guidance

Assessment criteria are often a combination of:

- severity of the problem
- degree of benefit predicted
- ease of implementation
- policy priority
- cost

Details of assessment schemes, and methods for assessing the effectiveness of a scheme after implementation, are given in *Designing for walking* (CIHT, 2015).

An example of a comprehensive set of walking policies is provided by those developed by Plymouth City Council, as shown in the box below.

6.2 Pedestrian networks

A town’s pedestrian network consists of its footways (pavements) provided, wherever possible, on both sides of carriageways, plus footpaths which do not follow highways. These routes should connect all parts of a town, including its centre, to one another and link with footpaths running into the countryside to adjacent settlements. Paths along river banks, canal towpaths, paths across open spaces, bridges of all kinds and diverse shortcuts complete such networks.

The Department of the Environment Northern Ireland guidelines *Creating Places* (DOENI, 2000) lists priorities for pedestrian routes in residential developments:

Main objectives

To help reduce the use of cars and encourage walking and cycling and provide links to public transport, the routes provided for pedestrians and cyclists should be laid out and designed to:

- be as direct as practicable in relation to local facilities, bus stops and railway halts
- provide attractive routes and accommodate conveniently and safely the numbers of pedestrians and cyclists likely to use the routes
- help minimise the hazards associated with vehicular traffic
- help enhance the appearance of developments by providing space for planting
- have the easiest practicable gradients (taking into account the special needs of people whose mobility is impaired)

Design Guidance Active Travel (Wales) Act 2013 (Welsh Government 2014) sets out a process for planning a pedestrian network, summarised in the box overleaf.

Plymouth City Council – Walking Policies

Achieving our aims

New planning policy will encourage higher population densities and the siting of new facilities within existing urban areas. In order to ensure that people walk more, pedestrian policies need to be improved too. Plymouth City Council will take action to increase the proportion of journeys made on foot.

Road user hierarchy

In order to promote sustainable transport, the following road user hierarchy will govern the design of all developments and be used to review existing provision:

- pedestrians and people with disabilities
- cyclists
- public transport users
- commercial and business vehicles and private motorists

Road space reallocation

The extent of footways will be reviewed in the light of the potential demand for walking and the needs of people with mobility and visual impairments.

The review will assess where a footway is required but does not exist and where the current width is inadequate. Road space will be reallocated to pedestrians at the expense of motorised traffic where a fairer distribution attainable.

Pedestrian priority

Home Zones (residential streets in which the road space is shared between motor vehicles and other road users with the needs of pedestrians, including children, and cyclists coming first) will be introduced into Plymouth. In such areas maximum vehicle speeds will be restricted to 5 to 8 mph. Narrowed and built-up junctions and cul-de-sacs create barriers to traffic and indicate to drivers that they are entering a pedestrian priority zone. By building up the level of the road and getting rid of divisive kerbs, streets are made available to all types of users. When equipped with seats, shelters and good lighting, they provide a safe and secure pedestrian environment. The resulting improvements in quality of life for residents include reductions in car and street crime and road safety benefits.

<http://www.plymouth.gov.uk/psacheivingouraims>



Footpath linking culs-de-sac

Culs-de-sac need special attention, as the deterrent to walking they and gated communities pose should be recognised and, if possible, eliminated. Wherever possible, culs-de-sac should be linked by footpaths (ways for walkers not alongside roads) to provide through routes for walkers and cyclists despite being dead ends for motor vehicles. They should provide direct pedestrian paths to bus stops and neighbourhood centres. These through routes will not be used unless people are aware of them, so they should be made clearly visible and signed.

Pedestrian routes should be plotted on local maps to check permeability. Figure 14 shows an example from Manual for Streets (DfT, 2007).

An analysis of movement within an existing settlement will help identify any changes required for it to mesh with a new development. It could also influence movement patterns required within the new development. For new developments, an understanding of how an existing area functions in terms of movement and place enables the proposed points of connection and linkage to be identified, both within and from the site, so that important desire lines are achieved. This process will help ensure that a new development enhances the

existing movement framework of an area rather than disrupting or severing it. Mapping footpaths as well as streets displays the full range of routes and ensures that parts of an area are not isolated.

The importance of following desire lines

Networks of routes for pedestrians should be based on the understanding that pedestrians prefer the shortest, most direct paths between their origins and their destinations. Road crossings should be safe both objectively and as perceived by pedestrians. They should not require pedestrians to divert from direct routes or cause excessive delays. Footways and footpaths should link main trip generators as directly as possible. Pedestrians prefer to see places to which they are heading, and although gentle curves will generally be followed, sharp changes in direction will not. Walkers can only be deflected from shortcuts if these are blocked, which is undesirable and often requires guardrail or other street clutter.

Most walking trips begin at home, but most town-centre trips begin and end at public buildings or transport interchanges. Locating building entrances well is important for the convenience of pedestrians and public transport passengers. Front doors should be close to and face streets, bus stops and other walking routes. Car parks should generally be placed behind buildings and no nearer the front door than the local walking route or public transport stop ("Planning for Public Transport in Developments" IHT, 2000b).

Changes in level should be avoided where possible, but when one is inevitable, the needs of those with

disabilities must be considered. Bridges, high-level walkways and subways should be avoided, unless they relate naturally to the main entrances of nearby buildings. Subways and footbridges are usually unpopular as they generally require people to deviate from their desire line and can feel threatening and unsafe. There is a move in recent years to remove them and replace them with at-grade crossings.

6.3 Land use planning for pedestrians

Most people will only walk if their destination is less than a mile away. Land use patterns most conducive to walking are thus mixed in use and resemble patchworks of "walkable neighbourhoods," with a typical catchment of around 800 m or 10 minutes' walk (see 6.4 below).

The DETR publication Encouraging walking (DETR, 2000) says:

Land use planning is the most important long term solution to both our strategic and practical transport needs. Integrated planning reduces the need for travel and makes jobs and services more easily accessible to all. We cannot emphasise enough the importance of this aim for planners. We need to change the way we plan and put greater emphasis on enabling access by walking, as well as cycling and public transport.

Achieving this change will necessitate following all the points about attractive routes already made in these guidelines. When these routes are mapped, it will become clear whether they are comprehensive and penetrate to all parts of the settlement.

Network Planning

The role of pedestrian network planning for utility trips in built-up areas is generally not to provide new walking routes per se, but to improve the existing network in order to encourage people to make more short trips on foot.

The question of where to focus investment is critical, and so this guidance outlines processes for identifying which parts of the pedestrian network should be prioritised for improvement, based around three possible approaches.

- A) Walking trip attractors;
- B) Funnel routes associated with land-form barriers; and
- C) Footway maintenance classification.

A process map for the recommended methodology, including the three approaches, is shown in Figure 5.1.

Design Guidance Active Travel (Wales) Act 2013 (Welsh Government 2014) section 5.1

Figure 5.1: Recommended Process for Network Planning for Walking

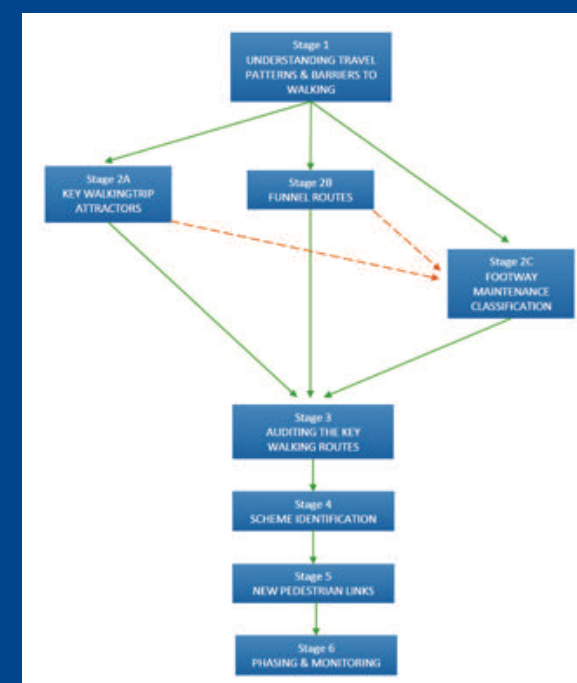


Figure 13: Proposed movement for the redevelopment of RAF Halton (from Manual for Streets, DfT, 2007)

