In 2011 THSG adopted the following recommendations for healthy and sustainable transport.
They were largely written from a UK perspective and are under review to correct that and to take account of developments in evidence and in thinking.
Those recommendations which have been replaced by updated policy documents are shown in small type.
Those which we no longer stand by have been struck through.
Examples of good practice which were cited in support of our recommendations are shown in italics, but it should be borne in mind that the descriptions were accurate in 2011 and events will have moved on.

010. We recommend that local transport planning continues to be seen as important and as relevant to health, and that those involved in local transport planning (such as the LTP3 process in England) take full account of the above strategies, build health impact assessment into their planning process and pursue the following priority actions.
011. All local transport plans should include an assessment of the carbon footprint of the local transport system and an estimate of the extent to which the plan will reduce it.
012. All local transport plans should include firm plans, committed resources and a target date for completing a cycle network usable by new cyclists as well as established cyclists and for providing cycle parking.
013. All local transport plans should include a timetable (with firm plans and committed resources) for closing rat runs so as to reduce the number of households experiencing heavy street traffic and so as to contribute to recommendation 012.
014 In developing their cycle network, all local transport plans should use the revised hierarchy of provision recommended in chapter 14 which gives high priority to linking quiet streets to create a comprehensive quiet cycle network.
015 All local transport plans should include firm plans, committed resources and a target date for improving pedestrian routes by removing engineering obstacles to pedestrians, providing safe crossing points over busy roads, and enhancing pedestrian signage.
016. All local transport plans should include firm plans, committed resources and a target date for aesthetic enhancement of pedestrian routes.
017 All local transport plans should develop plans for bus priority measures which will ensure that the bus network operates freely. Transport planners should have the confidence to transfer road space for this purpose, recognising that the significance of the Downs-Thomson Corollary of Pigou's Theorem is that a free-flowing bus network will ease congestion but additional road space will not.
018. All local transport plans should focus any efforts directed at congestion upon improved public transport rather than new roads. Where bypasses are built to divert traffic, the bypass should be of no greater capacity and no faster than the road it replaces (to avoid traffic generation) and the old road should be closed to through traffic and traffic calmed. Under no circumstances should money be wasted on enhancing the capacity of the road system. Capacity issues should be addressed by public transport or rail alternatives.
019. All local transport plans should address road safety by area-wide 20mph speed limits in residential areas and at accident black spots on main roads.

Greenways for the Olympics and London (GOAL)

GOAL is Sustrans' contribution to the Olympic legacy, but with wider impact. It is the strategic masterplan, combining all of Sustrans' practical collaboration with London authorities to develop a London-wide network of greenways and traffic-calmed streets, passing to and through the capital's green spaces and facilitating large numbers of daily active travel trips.
An intensive monitoring programme is designed into the GOAL implementation work; automatic cycle and pedestrian counters will be supported by face to face user surveys, currently at 13 sites.
www.sustrans.org.uk/sustrans-near-you/london will present implementation and usage information.

020 We recommend that those engaged in spatial planning recognise the significance of the Appleyard / Lintell / Hart findings and proceed on the basis that it is entirely plausible that within the near future it may come to be considered that heavy traffic in a road renders houses bordering that road unfit for long term human habitation.

021. There should be a strict prohibition on new development of any kind being accessed via a residential road (other than a major road with residential development along it) if this would increase the flow of traffic along the road to a steady flow. If it is necessary, in order to avoid this, for the main car parks of a new development to be some distance away with the final access being on foot, then so be it.

022 There should be a strict prohibition on residential properties being built with their principal pedestrian access being from a main road, with exceptions for owner-occupied plots purchased before the policy was adopted, holiday homes, or properties to be used as temporary lodgings.

023 In new residential developments there should be a strict limit on the number of properties that might be accessed by a residential road. Developments larger than this should either have multiple access points or a non-residential access road.

024 Where residential properties have already been built on a main road, spatial planners should facilitate measures to address this, including reorientation of the properties' relationships to the road, shared gardens or conversion to holiday homes, temporary lodgings, or business premises.

025. The Home Zone should be adopted as the norm for all new residential streets.

026 All future large residential developments should be divided into residential cells, so as to prevent the creation of new rat runs. There should, however, be pedestrian and cycle links between the cells, with only motor vehicles being prevented from passing through.

027. Residential developments should have a pedestrian-permeable street design, with good cycle routes and aesthetically attractive pedestrian routes through them.

030.We also recommend that Government recognises the importance of spatial planning to health and other social values, that the NICE work programme on spatial planning cancelled by Ministers in December 2010 be reinstated and that those engaged in spatial planning adopt a policy that the health of the people shall be a material consideration to any development proposal, build health impact assessment into their procedures, and pursue the following actions.

031. Spatial planning should aim to ensure that the whole population can access the sources of a healthy lifestyle – recreational exercise opportunities, affordable healthy

food shopping, parks and countryside, work, education, places of social interaction, health facilities.
032. Spatial planning should aim to ensure that people are provided with opportunities to build exercise into their daily lives more easily than to avoid it.
033 Spatial planning should have a goal that people spend as much as possible of their day in surroundings that are green and aesthetically attractive and should to that end make as much use as possible of street trees, grass, open space, green roofs and living walls, .
034 Spatial planners should aim to make it easy for people to obtain facilities as close as possible to where they live and work. Much of the movement that we call 'increased mobility' is a human benefit but much of it is not – much of it is the hardship of having to travel a long way to find something that once was local.
035. In making provision for transport infrastructure spatial planners should move away from thinking 'car' and towards a future that is 'train, bus, cycle and foot'.
036. Insofar as spatial planning must be intimately linked to economic development, it must recognise good environments as an economic driver since the knowledge-based industries of the future, much freer in the choice of where to site themselves, will want to place themselves where it is pleasant to live.
037. Two of the aims of town planning should be firstly, to minimised journey lengths, by resisting the trend to fewer and larger facilities, and secondly, to ensure that all facilities are easily accessible by foot, bicycle and public transport. This is particularly important for shops, schools, health services, local authority services, recreational facilities and places of employment.
038. Planning should ensure that residential developments can be serviced by public transport. Particular care needs to be taken with areas of low residential density since these tend to be difficult to serve by public transport.
040. We recommend that those involved in financing, designing and providing public transport systems cooperate together to provide a National Integrated Transport Web (perhaps with a brand name like Transweb).
041 There should be a Transweb station within 1km of each settlement in rural areas and each place of residence, business, work or public recourse (such as parks or beauty spots) in urban areas; within 5km of almost all places of residence, business, work or public recourse outside settlements (with exceptions being predominantly for places intended to be accessed only on foot or situated a long way from a public highway); and within 15km of any point on the public road network.
042. Transweb stations should have a service in each direction at least every 20 minutes in urban areas, at least every 30 minutes for mainland rural settlements, at least every hour for other places of residence and (when open) of work or business, and at least every three hours in almost all cases. Where services of this frequency cannot be justified on a scheduled basis they should be provided on a demand-responsive basis.
043. Local services should be reintroduced on almost all railways in the national rail network with the reopening, at least as a tram stop, of almost all stations that have been closed if the line on which they were situated remains and with the opening of new stations or tram stops where communities, workplaces, business developments or places of significant public recourse adjoin the track. These stations should normally be served by a new tram/train stopping service, although in some cases there may be other solutions (examples are given in the text of chapter 15 of Health on the Move 2).

044 Highways authorities should have the power to establish a street tramway on any road on which public vehicular rights exist. This will not only facilitate the expansion of light rail systems but the construction of such tramways for the use of tram/trains will help address issues of rail capacity at junctions and other bottlenecks.
045 In view of its successful adoption in Europe, the British perception of the tram/train as an untried technology requiring extensive evaluation and careful consideration should be abandoned.
046. High frequency mid-distance bus services stopping typically about once every 8km and high frequency long-distance coach services stopping typically about once every 20km should operate on almost all motorways and should serve on a rotational basis local Transweb stations situated typically every half a mile or so along the motorway.
047. There should be serious consideration given to reopening a reserved track public transport service along the corridor of each railway that has been closed This will not always be justified and may sometimes be achieved by a bus, coach or tram service along a parallel road (if appropriate bus/tram priority can be achieved). However, reopening of the railway will be appropriate in many cases. To that end there should be a statutory power for public transport authorities to authorise the construction of heavy rail or light rail infrastructure or busways along any disused railway formation. Provided certain conditions can be met, Transport & Works Act procedures and planning permission should not be needed. These conditions should be that it does not interfere with the use of the formation for walking and cycling, preserves any highway rights or private rights of access that have used the formation, makes compensation for any displaced commercial or agricultural use, makes a wayleave payment to the owner of the land on a fixed scale, does not affect any established residential use of the land (or alternatively makes arrangements acceptable to both the owner and the occupier), meets proper noise standards for residential properties bordering the track and arranges protection for wildlife, tree cover and habitat. (In making this recommendation we have no wish to add our voice to any general pressures for relaxation of planning controls nor to oppose the empowerment of local communities in development control but we believe that the special circumstances of a type of development essential to climate change and public health, requiring linear developments passing through several communities and capable of being obstructed at any one point, are exceptional and that the conditions we propose are rigorous and protective of legitimate concerns).
048. The Transweb system should link to cycling through cycle hire, cycle carriage and cycle storage, although not all Transweb stations and services need have cycle facilities if a station with cycle services is within a reasonable cycling distance over good quality cycle routes.
049. The Transweb system should also include high frequency or limited stop bus services with bus priority, links to stations (such as travelators, gondelbahns and people movers and demand responsive services) and, where necessary, ferries.
04X. The Transweb system should operate as an interconnected system with through ticketing.
04XI. The contribution of the Transweb system to reducing congestion should be identified and a commensurate funding stream established, based on road charges.

Integrated national timetable in Switzerland

A wide range of public transport operators in Switzerland, including the national railways, private railways, cantons, the Postbus operators and bus companies

cooperate in the production of an integrated national timetable, which produces a wholly integrated transport system reaching to every part of the country, notwithstanding the problems created by rural areas intersected by mountains and lakes.

Public health proposals for Greater Manchester LTP2

The Directors of Public Health of Greater Manchester recommended a proposal similar to the Transweb scheme in their Advice to LTP2. They developed proposals for orbital rail services (using disused rail formation and underused orbital rail lines with street tramways to bypass areas of rail capacity restriction) and orbital bus services (many of them using the orbital M60) to augment the predominantly radial nature of transport in the conurbation. They included proposals for motorway bus stops. They identified areas of the county more than three miles from a railway station and suggested ways to link them to the train/cycle network. They proposed cycle vans on trains. They proposed demand-responsive services for rural and overnight services. They proposed the inclusion of the proposals in the suggested Greater Manchester TIF bid (congestion charge scheme funding public transport development) by expanding the funding in the scheme with road charges. They were unable to persuade Greater Manchester transport leaders to adopt the proposals but they were able to secure the incorporation of evaluation of some elements of their proposals into the Greater Manchester TIF bid.

Unfortunately, the proposals, like the entire Greater Manchester TIF package, failed due to lack of political will and defeat at a referendum. Tragically one of the arguments successfully deployed against the Greater Manchester package in the referendum was that its benefits were not universal and its costs fell unfairly – arguments which could not have been used if the public health proposals had been adopted.

050 We recommend that public transport operators commit to the goals and Strategies of a healthy and sustainable transport system and in particular commit to growing public transport usage in place of the car instead of merely finding the cheapest way to convey their captive customers

051. Public transport operators should commit to the Transweb concept. They should work together to design the Transweb network and should campaign for it to be established.

052. Bus operators should be aware of the fact that bus usage is higher in cities with rail-based public transport systems and they should view the rail system not as a competitor but rather as the part of the public transport system at the cutting edge of competition with the car that will benefit the entire system.

053. Train operators (and other public transport operators when they operate in areas that are not rail-served) should view the train/cycle combination as a major potential source of business and revenue and should aim to promote it and make high quality provision for it.

054 Bus, taxi and community transport operators should work together to design an effective demand-responsive transport system.

055 Public transport operators and the ambulance service should work together to create a universal public transport system for those whose use of mainstream public transport is affected by impairments. Various levels of provision should exist for different levels of impairment. The system should also be available to those affected by temporary difficulties.

056 Public transport operators should make better provision for shopping and for luggage, recognising that they are in competition with the car boot.
057.Public transport operators should consider the complex journeys made by those with childcare needs and should develop effective solutions, perhaps including the provision of childcare at public transport interchanges, the adjustment of connections at bus stops close to childcare establishments, or demand responsive feeder services.

Examples of Demand Responsive Transport (DRT)

Suffolk Links is a DRT service which provides connections to bus and train links in rural areas.

It collects people who are not able to access a bus directly, by picking them up from a convenient point. Where appropriate, Suffolk Links connects with other bus services for onward travel to further destinations. Where this is not possible, end to end journeys are possible, although only within each service area.

The service can be booked by telephoning Suffolk Links up to a week before travel. Bookings are made on a first come, first served basis. Booking times and hours of operation vary between each Suffolk Links service. Each vehicle is fully accessible with low steps, hand rails and a lift for wheelchair access. Potential users are asked to let the operator know at the time of booking if assistance is required.

Journeys are charged like a bus fare. Passengers are informed of the fare when booking a journey; tickets are issued when boarding. Concessionary passes and Explore cards are valid on all journeys. It is possible to buy through fares for many journeys, to avoid paying twice.

(www.suffolkonboard.com/suffolk_links_demand_responsive_transport)

Other examples include traintaxi, which provides information for business travellers of the availability of taxis to travel the final few miles between rail stations and the eventual destination

(www.nbtn.org.uk/news/story/215) and the Wiltshire Wigglybus (www.drtbus.co.uk/) .

060 We recommend the active marketing of cycling.

061. All authorities and agencies should project positive images of cycling as a safe and healthy option for local travel.
062 Steps should be taken to ensure that the media are enabled and assisted to present cycling issues accurately, especially with respect to the low risk of injury and the high risk from sedentary living, and that factual inaccuracies in unhelpful coverage be pointed out.
063 The NHS should promote the importance of cycling in improving health and longevity, and should include it in health trainer schemes, exercise referral schemes, cardiac rehabilitation programmes, weight management programmes, obesity treatment and the like.
064 Cycling is also an important weight management intervention for those with healthy body weight, not only those who already have problems, and should be promoted as such.
065 There should be promotion of cycle training.
066 Care should be taken that any helmet promotion does not undermine the image of cycling as safe, or overstate the message. Risk assessment shows it is no more rational to wear a helmet for cycling than it is when walking, driving or playing football or rugby.
See Section 7.4 of Health on the Move 2 for more details on cycle helmet evidence.
067 Train operators should regard the train/cycle combination as a potential major

source of traffic and revenue and should actively promote it as a mode of transport of comparable flexibility to the private car.

Bikeability

Bikeability is 'cycling proficiency' for the 21st century, designed to give the next generation the
skills and confidence to ride their bikes on today's roads. There are three levels. Level 1starts when children can already ride a bike; it teaches control of the bicycle in a traffic-free environment, such as a school playground. Level 2 introduces children aged 10-11y to cycling safely on roads, while level 3 (for secondary school children, aged 11-18y) covers a wider variety of road conditions and more challenging traffic situations (see www.dft.gov.uk/bikeability/)

Bike It

Bike It is a Sustrans programme which works intensively with schools to increase levels of cycling to school and establish a pro-cycling culture. A typical work programme includes school assemblies and classroom work; assistance with school travel plans, cycle storage, and cycle training; after school cycle skills sessions; and family-friendly school travel events and rides.
In 2008, Bike It worked with 89,000 children in over 400 schools; the proportion of children cycling every day doubled from 4% to 8%; those cycling at least once a week rose from 14% to 26%, and those never cycling to school fell from 75% to 55%.
More information at www.sustrans.org.uk/what-we-do/bike-it

070 There should be a marketing initiative to promote the concept of healthy transport.

071. In addition to the active promotion of cycling referred to in recommendation 060, there should be similar promotion of walking.
072. The impossibility of addressing congestion in a universally car-based system should be actively pointed out, to encourage people to accept that only responsible limited use of cars is compatible with their benefits being enjoyed at all. The low average speed of traffic in cities should be emphasised.
073. The benefits of the lifestyles involved in our proposed healthy transport system should be holistically promoted to show that a healthy transport system is empowering rather than
constricting.
074 The role of congestion as a Tragedy of the Commons should be explained to demonstrate the flaw in a libertarian approach and point out that only collective choices will empower us to achieve what we all want.
075. Physical activity should have a much higher profile in publicity about obesity; moderate activity built into everyday life should have a much higher profile in publicity about physical activity; and transport should be prominent in such publicity (alongside the use of stairs and children's independent play).
076 The present dislike of health and safety restrictions should be built on and turned to positive purpose by emphasising the need for proportionate risk judgments and the danger of risk averse approaches.
077 There should be an attempt to promote a clear vision of how the healthy transport system fits together.
078. Analogies like the replacement of the horse by the railway, the construction of the sewers, and the cleaning of the air should be used to counter the argument that these proposals are unrealistic.

080 We recommend that employers take steps to promote active travel, low emissions and safe driving.

081. All places of work and business should have safe and secure bicycle storage and all places of work should offer access to changing and showering facilities.

082. All employers should operate policies such as compressed hours and homeworking which allow their employees to come to work on no more than four days a week (with a medium term objective of introducing three day weekends with most workers also working at least one day a week at home, reducing work attendance to three days).

083. All employers who offer subsidised parking, company cars or lease cars should offer subsidies to cycle purchase and public transport use to at least the same extent. All employers should offer a salary sacrifice scheme for bicycles and for public transport season tickets.

084. All employers should offer cycle proficiency lessons and maintenance workshops in conjunction with Local Authorities and other providers, especially those in the third sector.

085. All employers should support a bicycle user group (BUG) and provide a stock of bicycle tools at the workplace for members of the BUG.

086. All employers should pay a minimum business cycle mileage rate of 20p per mile and should restrict the mileage rate for car usage to marginal cost only at a fixed level irrespective of engine size and set at a level appropriate for small cars.

087. All employers should limit the provision of company cars or lease cars to electric vehicles or vehicles meeting class A emissions standards and should consider the use of electric pool cars and a bicycle pool.

088. All employers should consider journeys frequently made by their employees which are best made by public transport and should ban mileage claims for such journeys, except in certain circumstances (eg employee with a disability rendering them unable to access current public transport). They should consider a contract with the public transport operator to cover all journeys made by their staff on these routes.

089. All employers should have safe driving guidelines. These should prohibit the use of mobile phones whilst a vehicle is moving, warn against driving whilst tired, and emphasise the need to comply with speed limits and not exceed 20mph in residential streets. Lorry drivers should be repeatedly warned of the dangers of trapping cyclists when turning left. “How well am I driving?” numbers should be the norm on all commercial vehicles.

Travel Actively

The *Travel Active* consortium (see chapter 14, Box 14.1) is delivering 50 projects to increase everyday walking and cycling, supported by the National Heart Forum and National Obesity Forum. The total programme costs over £30 million, with £20 million coming from the Big Lottery Fund. Target groups are those who are most at need of increasing their physical activity levels. These include young people, older people, women, people from black and minority ethnic groups, people with physical health issues, and people with mental health issues.

Between 2008 and 2012, the project partners aim to enable two million people to become more physically active. There is a robust monitoring programme, to identify the outcomes, which will be disseminated widely.

More information at www.travelactively.org.uk

090. We recommend that highways authorities
(a) devote at least 10% of their resources to walking and cycling;
(b) distinguish clearly between residential streets and other roads and recognise that the prime purpose of the former is community interaction, its role
as a highway being secondary;
(c) recognise the importance of lower speed limits.

091. We recommend that the National Cycle Network and the Long Distance Footpath Network be 'trunked', thereby putting the core of the national cycle and walking networks on the same footing as the core of the vehicular road network. The Highways Agency should invest 10% of its resources in the improvement and development of these two networks, the provision of safe crossings over Highways Agency roads which sever walking and cycling routes, and the provision of cycling facilities on or parallel to all trunk roads on which it is unsafe to cycle and for which there is no parallel National Cycle Network route.

092. Local highways authorities should have clear plans for the development of walking and cycling networks. These should comply with recommendations 012 to 016 above directed to local transport planners; highways engineers should strenuously object to any failure of a local transport plan to address these recommendations.

093. Local highways authorities should require the Home Zone to be the normal layout of all new residential streets and should support conversion of existing streets where possible.

094. Local highways authorities should be receptive to proposals for the closure of rat runs.

095. For cycle provision all highways authorities should adopt the revised hierarchy of provision recommended in chapter 14, which gives high priority to linking quiet streets to create a comprehensive quiet cycle network but also takes steps to support cyclists using main roads.

096. All highways authorities should ensure that the bus network operates freely and should have the confidence to transfer road space for this purpose, recognising that the significance of the Downs-Thomson Corollary of Pigou's Theorem is that a free flowing bus network will ease congestion but additional road space will not.

097. Highways authorities should not promote new roads as a response to congestion. Where bypasses are built to divert traffic, the bypass should be of no greater capacity and no faster than the road it replaces (to avoid traffic generation) and the old road should be closed to through traffic and traffic-calmed. Under no circumstances should money be wasted on enhancing the capacity of the road system. Capacity issues should be addressed by public transport or rail alternatives.

098. Highways authorities faced with congestion which might in the past have been addressed by new road building should consider solutions based on public transport alternatives. The Highways Agency should enter into discussions with Network Rail about rail alternatives to new roads, including rolling motorways and other car-carrying and lorry-carrying services.

099. Legislation should be introduced distinguishing the legal position of roads, streets and quiet lanes. Only on roads (class I,II and III roads and other roads designated by the highways authority) should there be an unrestricted right of through motorised vehicular passage. In streets, the right of motorised vehicular passage should be limited to access and to other uses explicitly and exceptionally permitted by the highways authority except that slow moving personalised vehicles

like invalid carriages, mobility scooters, motorised wheelchairs, lawn mowers and vehicles controlled by pedestrians should still be allowed through use to take short cuts. “Access” should include use by buses serving bus stops in the street. In quiet lanes the same restrictions should apply but agricultural vehicles should still have a right of through passage and highways authorities should consider finding ways to permit limited use to preserve the opportunity for country drives.
09X. Highways authorities should introduce town-wide 20 mph speed limits in urban areas and should reduce speed limits on many rural roads.

DIY Streets

DIY Streets is Sustrans' innovative approach to making streets safer and more attractive, using Home zone principles at lower cost, by supporting residents in re-designing their own streets.
The approach is initially being piloted in 11 communities, moving to a national scale in the near future.
Project evaluation has concentrated on the process and on learning from it. As impacts on behaviour become clear these will be reported by Sustrans.
See www.sustrans.org.uk/what-we-do/liveable-neighbourhoods/diy-streets

The National Cycle Network

The National Cycle Network has been developed since 1995 by local authorities, major landowners, national and local voluntary groups, business, and others, coordinated by Sustrans.
It passes within a mile of 55% of the UK population and is continually being extended and improved. One-third of the Network is traffic-free, the remainder on quiet or traffic-calmed streets.
In 2008 the Network carried 386 million trips, roughly 50:50 walking and cycling, for all purposes. 71% of users surveyed claim that the Network helps them increase their physical activity levels, while 134 million trips could have been made by car.
See www.sustrans.org.uk/resources/research-and-monitoring, including annual usage reports with demographic, trip purpose, carbon, physical activity and economic analysis

Connect2

Connect2 is a Sustrans programme to develop 79 local walking and cycling networks, mainly in urban areas, around the UK, partly funded by £50 million from the Big Lottery Fund, allocated on the basis of a national public vote. When complete, Connect2 will invest over £150 million and transform travel options in many of the project locations.
Connect2 is currently in development. When complete, the 79 projects will offer improved walking and/or cycling options to approximately six million people – 10% of the UK population.
Connect2 is being studied by a cross-disciplinary research team, called i-Connect, with leading physical activity, climate and transport specialists.
More information at www.sustrans.org.uk/what-we-do/connect2

ACTION BY GOVERNMENT

100. We recommend that the Dept for Transport and its counterparts in the devolved administrations should fully recognise the vision of a healthy transport system, recognise its importance as a measure that will save tens of thousands of lives and contribute to addressing climate change, and regard its implementation as a major objective. It should involve its public health adviser in decisions at the highest level, should use health impact assessment

routinely and should ensure that public health issues are fully understood by all its policymaking staff.
101. Government should consider incorporating the DfT into a new department with responsibilities for transport, physical activity and food and a remit of addressing obesity. Such a department, perhaps called the Dept of Walking, Cycling, Transport and Sport should have a high standing in the pecking order of Government departments.
102.DfT should endorse the goals and strategies of a healthy and sustainable transport system.
103. DfT should issue guidance in relation to LTP3 in line with our recommendations 010 to 019.
104. Local authority and other transport planners should read, and follow the guidance in, the DfT publications *cycle Friendly Infrastructure* and *Cycling by Design*. However this should be revised to take account of the situations described in section 14.6.1 where dedicated infrastructure should, exceptionally, have a high priority.
105. DfT should modify highways guidance to emphasise the need for a cycle network and a walking network, and to emphasise the need for aesthetic enhancement of the walking network.
106. DfT should give clear guidance to highways authorities and planning authorities that the prime role of residential streets is community interaction and that their role as a highway is secondary to this; DfT should revise design guidance accordingly. It should implement the legislative change proposed in recommendation 099.
107. Aviation policy should be changed to favour high speed rail and recognise the need to make progress towards a limited role of aviation only for flights across major bodies of water or polar ice cap, flights to islands, and local journeys in trackless wilderness. The first step should be the replacement of domestic flights within the mainland of Great Britain by high speed rail and collaborative discussions with other countries to eliminate short haul mainland flights in Europe and replace them with high speed rail.
108. DfT should abandon the concept of focussing public transport on the most popular journeys and replace it with a recognition of the need for a comprehensive network. It should:
(a) take steps to draw together the partnership necessary to create Transweb (recommendations 040 to 04XI);
(b) expand the role of the tram/train without awaiting the outcome of the present very limited experiments. The experimentation has already been done in Europe.
(c) put in place a programme of rail reopening;
(d) put in place motorway bus and coach services;
(e) be willing to abandon bus deregulation as a failed experiment if it stands in the way of the collaborative development of Transweb.

110. Government should find Parliamentary time for a Transport and Health Act.
111. Statutory effect should be given to the policy of developing Transweb and to the consequent rail reopenings, motorway bus and coach systems and coordinated system development.
112. Statutory duties should be laid on NHS bodies, public transport authorities, Transweb, highways authorities and spatial planning bodies in relation to the promotion of walking and cycling, enforced by a new Walking & Cycling Authority

which should be an NHS body (with performance management functions), part of the Public Health Service, an inspectorate and a highways authority with default powers.
113. Statutory effect should be given to the role of residential streets in community interaction. This should include the legislation suggested in recommendation 099.
114. The drink driving limit should be reduced to 50mg/100 ml with new lesser offences at 35mg/100ml (fixed penalty notice and 3 penalty points) and 20mg/100ml (fixed penalty notice without penalty points)
115. (a) The normal speed limit in urban residential areas should be 20mph.
(b) A speed limit of 10mph should normally apply in Home Zones, car parks and other settings where pedestrians mix with manoeuvring vehicles, drives and other in-site roads where all forms of traffic are mixed; pedestrianised areas at times when the restriction is suspended; and on byways open to all traffic.
(c) A speed limit of 5mph should normally apply when exercising private or other exceptional motor vehicle rights on bridleways, footpaths, pedestrian zones or restricted byways.
(d) The normal speed limit on all-purpose rural roads should be reduced to 40mph.
(e) This should be reduced to 30mph on any road where pedestrians use the same roadspace as motor vehicles, and 20 mph on any such road which is single track or on any quiet lane.
(f) There should be provision to increase the 40mph rural limit to 50mph (or the 20mph urban limit to 30mph) on A or B roads but only if there is separate roadspace provided for pedestrians and cyclists (either on or parallel to the road), there is adequate provision of safe crossing points, and the road is neither residential nor used for shopping (unless the access to shops or houses is separated from the through carriageway into a distinct enclosed street-like access area). A further increase from 50mph to 60 mph or from 30mph to 40mph should be possible on an A road if the provision for pedestrians and cyclists and any access area for houses or shops is separated from the carriageway by a fence, railing, hedge or crash barrier. A further increase from 60mph to 70mph should be possible on a dual carriageway and a similar increase from 40mph to 50mph should be possible on non-residential non-shopping dual carriageways in urban areas, provided adequate noise abatement is also implemented.
116. Only in cases of deliberate self-harm or malicious behaviour should it be possible for a driver to plead contributory negligence by a pedestrian or cyclist in a residential street or in a side street which forms part of a cycle network. Indeed, in such settings liability for a collision
between a motor vehicle and a pedestrian or cyclist should be presumed to lie with the motor driver and the presumption should be rebuttable only by evidence of self-harm, malicious behaviour or extreme unpredictable stupid behaviour going well beyond normal carelessness and well beyond the unpredictability of behaviour a driver should expect of pedestrians in a relaxed hazard free home setting. In other settings contributory negligence should not be ruled out but should not be used as a covert restriction on road usage. The failure to wear a cycle helmet is not contributory negligence.
117. Spatial planners should have greater powers to pursue the provision of local facilities, including powers to establish local multi-user outposts (such as neighbourhood work stations or local shops that also serve as ordering points for goods from large supermarkets) and finance them by a levy on the operators of the central facilities.
120. We recommend
(a) that fiscal measures be taken to ensure that the cost of motor vehicle use is

fully felt at the time of use. If there is no appetite for increased motoring taxation this should be offset by reducing other costs of motoring.
(b) that fiscal measures be taken to ensure that the cost of traffic generation is felt by organisations with poor corporate travel planning;
(c) that fiscal measures be taken to encourage car clubs.

121. There should be no exemption of either road transport or aviation from carbon emissions trading schemes.

122. Universal road charging should be introduced. As well as charges by the mile there should be charges per journey (to increase the price per mile of short journeys which could have been walked or cycled), mileage based congestion charges for use of roads at times of heavy congestion, supplementary charges for journeys ending in the centres of towns and cities well served by radial public transport, and charges for travel above the speed limit where this has, for some reason, not led to prosecution or fixed penalty.

123 There should, however, be provision (possibly, for administrative reasons, limited to regular journeys) to claim rebates for journeys for which adequate public transport is not available and there should be provision for public transport authorities to enter into gain-sharing agreements with the road charging agency where better public transport diminishes those rebates.

124. As well as road charging, there should continue to be emissions-oriented taxes such as fuel duty.

125 We see no reason to hold back from increased taxation of motoring, given the economic climate, the gap in the public finances, the need to invest in new transport infrastructure, and the relative decline in the cost of motoring. Certainly, there should be a year on year increase in the cost of motoring by more than the cost of public transport. However, if there is no appetite to increase motoring taxation, the above charges should still be implemented even if it is thought they have to be offset by reductions in those motoring costs not based on mileage or emissions.

If this situation applies the following might be a suitable order of priority for such measures:

First, the elimination of all taxes and public charges on motoring which are not mileage, fuel or emissions related, such as vehicle excise duty, driving test fees, fees for driving licenses, VAT on cars and car accessories, car club membership etc.

Secondly, subsidies to the administrative costs of car clubs.

Thirdly, the replacement of other compulsory charges by public subsidies. This could apply to things like basic insurance (charged at a high rate, with low risk drivers obtaining rebates or extra cover by opting out of the Treasury scheme and taking out a policy with an insurance company) and MOT fees and should extend to car clubs.

Fourthly, if necessary to achieve the desired level of offset, the partial state reimbursement, up to a fixed limit, of charges for essential safety-related car maintenance (including allowances for work done by the owner personally subject to certification that the work was necessary and was done satisfactorily) and a proportion of breakdown service membership. It should also cover all maintenance and breakdown provision by car clubs, thus treating these clubs preferentially.

126. Developers should be required to pay for the public transport, walking and cycling infrastructure necessary to serve their development and to compensate for the motor vehicle traffic likely to be generated.

127. ~~A proportion of employers' national insurance contributions should be replaced by a new tax for each employee-day on which an employee drives to work.~~

128 There should be a tax on all free or low cost private non-residential car parking provision (including estimates of the use made by customers of free on street parking).

129 There should be provision for public transport authorities to enter into gain-sharing agreements with developers, businesses and employers where new services facilitate travel planning which reduces the burden of the above taxes.

130.The Government should have a coordinated approach to addressing climate change in which the contribution of each sector is clearly recognised, quantified and enforced. *(Transport, energy, waste and the purchase of low carbon products each have their place in this strategy; our recommendations are limited to those relating to transport).*

131. The contribution of modal shift to this strategy should be clearly recognised, with objectives for reducing motor vehicle emissions by promoting active transport, for a shift to electric traction, for the use of lower-emission vehicles and for a shift from aviation to high-speed rail.

132. There should be an element of the strategy directed to substantially reducing the carbon emissions produced in the manufacture of electricity, so that the shift to electric traction can be effective in its climate change objectives.

133. The contribution of commuting to this strategy should be clearly recognised by goals for employers aimed at moving towards a normal week consisting of three days of working at the place of work, one day of working at home and three days not

working. This should be largely achieved by increased productivity and by changes in working methods but may also entail the lengthening of the (fewer) working days.
134. The contribution to the strategy to be made by spatial planning should be clearly recognised as involving the reversal of the trend towards centralised facilities and the provision of more facilities locally, thus reducing the need to travel. Spatial planners will need more powers to this end (see recommendation 117).
135. The Department of Health should ensure that the NHS Operating Framework requires that the NHS reverses so far as feasible its current trend to centralisation of provision, recognising that there are diseconomies of scale as well as economies, promotes active transport, uses travel planning to reduce car use by its staff when coming to work and by its patients when attending appointments and uses local procurement when feasible. These transport goals should sit alongside energy use in healthcare buildings and the carbon contributions of NHS procurement and waste disposal as the NHS contribution to the strategy.
140. The Government should pursue a programme aimed at achieving a more rational approach to risk. This is much broader than transport but the following recommendations are transport related.
141. We have already made recommendations relating to a more rational approach to the risk of cycling (see 061, 062, 066, 076, 116)
142. The Department of Justice and the Law Commission should ensure appropriate legal changes and appropriate training of the judiciary and legal profession to ensure that the law reflects a rational approach to risk in areas such as judicial review, personal injury litigation, etc.
143. Those concerned with rail safety should recognise that the overall safety of the transport system is undermined if the development of the railway system is obstructed by unnecessary restrictions and bureaucracy supposedly related to safety but in fact of little value. The traditional approach of the Railways Inspectorate had much to commend it and it is unfortunate that it has been undermined by newer organisations which sometimes appear to lack common sense.
144. All transport safety organisations should recognise that if safety regulations come to be perceived as a bureaucratic burden, that attitude will affect the important regulations as well as the unimportant ones and overall safety will be reduced. It should be widely recognised that one of the characteristics of a risk-averse system is the existence of unnecessary attention to minor risks alongside blatant disregard of serious ones.
145. The cost and timescale of railway construction work has risen considerably more than construction work in general. There should be a review of how far that is due to unnecessary safety bureaucracy.
150. Effective systems of interdepartmental coordination of policy should be put in place to prevent Government departments undermining core areas of strategy. Climate change reduction, risk and obesity strategies should be protected by this system.
151. The Home Office should revise its alleygating guidance to emphasise the importance of maintaining pedestrian permeability and to remove the present suggestion that a diversion of 450 metres on a significant pedestrian route is insignificant.
152. The police and others responsible for the enforcement of traffic regulation should be more positive about enforcing traffic laws that relate to safety (including those relating to pavement parking and speeding). Breaking of traffic laws should

have the same status as any other criminal activity that puts members of the general public at risk.
153. All Government departments should review their attitude to centralisation and localisation of
facilities and pursue a localisation agenda.
154. Post Offices have considerable potential for the provision of local financial facilities and local shopping facilities (including acting as ordering points for goods from more distant facilities). Royal Mail should engage with this potential and the Post Office closure programme should be reversed.
155. There should be a programme for the development of a broadband network of sufficient speed to sustain the use of virtual reality for meetings and conferences.
156. Telemedicine, tele-education, tele-advice and other similar processes should be considered as ways to help maintain small local facilities in all fields of Government and the public services.
157. The Office for Fair Trading should discontinue the practice of regarding cooperation between public transport operators as anticompetitive. This attitude hinders public transport's effective competition with the car.
160. The European Union should recognise that because of climate change and safety, rail should be promoted as an alternative to the car, lorry and plane as much as possible. The European Union should develop an international high speed rail network as an alternative to much current aviation and should also develop a Europe wide train/cycle network.
161. The European Union should enter into discussions with the United States, Russia, China, India, the African Union, Arab countries, ASEAN and the OAS with a view to establishing an international and intercontinental network of very high speed trains (at least 600kph – perhaps maglev). The development of this network should include the construction of the Bering Straits Railway, of a tunnel under the Straits of Gibraltar, and of a railway from Russia to Japan via sea
tunnels and Sakhalin Island.
162. Whilst this international and intercontinental network would probably, in Europe, mainly serve capital cities and financial centres, it should be supported by a European high speed network (at least 300kph, probably conventional trains) linking the cities and regions of Europe to each other and to the international and intercontinental network. The EU should pursue the creation of such a network.
163. When these networks are fully in place, it should be possible to reduce the volume of aviation considerably and EU policy should aim at managing such a decline. The immediate aim should be the rail replacement of most short haul European internal air services. There is
however likely to be a continuing need for aviation for
□□business journeys over 2,500km;
□□leisure journeys over 4,000 km;
□□relief for rail services from Northern Europe to the Mediterranean on summer weekends and from all parts of the Europe to winter sports destinations on winter weekends;
□□flights on routes which are substantially shortened by crossing large expanses of water or polar ice cap;
□□flights from the mainland to islands which are too far from shore to rely on ferries or tunnels;
□□local journeys in very remote areas such as the Arctic.

164. The EU should examine whether the construction of high speed railways could be speeded up by the conversion of motorways either as a deliberate substitution, or by the vehicular usage remaining in the form of vehicle-carrying trains or by the roadspace needed being diminished by the use of automated highways, with the consequent freeing of space for conversion to a railway.
165. The train/cycle combination should be promoted as a distinct transport mode, with a European network ensuring that the whole of Europe is:
□□within reasonable cycling distance (perhaps 5km in urban areas, 10km in rural areas and 15km in remote areas);
□□over a safe cycle route from a cycle-Metro station with cycle hire, cycle parking and cycle storage deposit schemes (cycles which are being left for more than two days being moved to a central storage point until the date they are needed again);,
□□each such station being served by a cycle-carrying public transport system (typically, a train but in rural areas it could be a cycle-carrying bus and on islands it could be a ferry);
□□operating frequently (typically with a scheduled service every 15 minutes in urban areas, every 30 minutes in rural areas or every hour in remote areas, but where this is not economically viable demand responsive services could be provided);
□□these local services feeding into the European network of interurban, interregional, intercity and international trains, all of which should have a cycle van attached for the conveyance of bicycles;
□□with proper provisions for cyclists to change trains at major interchanges in significant numbers without obstructing classic passengers.
166. The trains which provide this network would in most cases also function as part of the classic network and would also serve stations which are designed to be accessed on foot over shorter distances. However, for the cycle/train mode to be promoted as a viable alternative to the car, the additional provision needed will be more than just a small modification of the rail network. It will need additional rail vehicles, additional facilities at stations, additional stations, and additional cycle links to stations. It will be in every sense a new network for a new mode.
167. The rail developments necessary for a European high speed rail network and for a cycle/train network would contribute significantly to developing rail to compete more effectively with the car. Urban areas (and rural areas where possible) should also have Metro services within walking distance. This may not be a Europe-wide issue but the EU should be prepared to deploy funding in appropriate circumstances.
168. The EU should ensure that it is fully understood that cities with rail-based public transport systems are more effective at modal shift from the car, to the point that they actually have more bus usage than cities with bus-based systems. In bus-based systems, public transport seems to be a residual mode for those without cars and the buses actually compete with walking and cycling rather than with the car.

170. The European Union should generally commit to the goals and strategies of a healthy and sustainable transport system.
171 Safety requirements and emission requirements on vehicles are important. The development of vehicle design measures to protect pedestrians and cyclists from collisions is a priority.
172. Road pricing is needed to reduce road traffic and ensure that the externalities of emissions and congestion are taken into account in the market.

173. The EU should consider the strategic aspects of transport for people with impairments or encumbrances.
174. EU regional policies should recognise the contribution of transport to health inequalities both by limiting access to health-promoting lifestyles and by differential application of the negative features of transport and should recognise lack of transport as an obstacle to work creation in poorer areas.
175. The EU should establish a European Transport & Health Observatory.
176. There should be European funding of transport behaviour change programmes.
177. There should be European funding of walking and cycling transport schemes.
178. The EU should require formal Health Impact Assessment in Strategic Environmental Assessments.
179. To account for commuting, the EU should change the weekly limit on hours under the Working Time Directive by
(a) adding 10 hours
(b) providing for 2 hours to be deducted for every day on which the worker is required to start and finish work other than at home.
180 Government and the European Union should commit to the principle that freight should be moved off the roads onto rail or water as a contribution to climate change and safety.
190 Government, the European Union and international economic organisations should find ways to finance the developments that are necessary to implement this strategy.
Finance and economics lie beyond the scope of this publication. However, it is essential that humanity does not allow resources that could be mobilised in solving its climate change, obesity and transport problems to lie idle for lack of a means of exchange. Consideration could be given to international quantitative easing focussed on climate change, to Keynesian methods of public sector accounting which take account of funds created by employment or economic growth, to ways of capturing changes in land value or economic opportunity resulting from transport changes, to bonds on which repayment was tied to economic development or particular funding streams, or to arrangements in which the right to levy road charges was offered to consortia who put in place a walking, cycling and Transweb network, subject to their attaining specified performance standards.

HEALTH PROFESSIONS
200. We recommend that the public health system should actively promote the goals and strategies of a healthy and sustainable transport system
201**.** All Directors of Public Health should designate a consultant or senior manager to pursue the above goals and strategies.
202 Directors of Public Health should make full use of health impact assessment and the right of independent advocacy to create pressures for a healthy transport policy benefiting their population**.**
203. Public health professional organisations and campaigns should ensure there is effective national advocacy for a healthy transport system.
204. Transport should have a prominent place in the obesity strategies of local authorities, Primary Care Trusts, and their successor public health organisations.
210. Clinicians should be aware of aspects of transport and health relevant to their practice

211. Chapter 11 of this publication should be used as a basis for clinical awareness of transport and health.
212. The transport implications of disability should be understood by all those dealing with rehabilitation and with disability.
213. Each clinician should be aware of transport-related contributions to the aetiology of conditions which they treat.
214. All GPs, surgeons and physicians need to understand the relationship between health and driving.
215. All clinicians who advise exercise should be sufficiently well informed about walking and cycling to include it in their advice.

220. Transport and health should have appropriate exposure in medical education.

221. Recommendations 210 to 215 should be reflected in appropriate educational material.
222. Transport should figure prominently in public health training in relation to obesity, climate change, risk and the place of health in public policy.

230 Medical organisations should support the goals and strategies of a healthy and sustainable transport system

240. Medical organisations that wish to be active in the promotion of cycle helmets should adopt a similar attitude to the wearing of helmets by pedestrians, drivers, footballers and rugby players, so that the risk is not exaggerated.

250. The biomedical and epidemiological aspects of the research agenda set out in chapter 22 of Health on the Move 2 should be funded and pursued.