Department for
Regional
Development
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DISCUSSION PAPER ON

BARRIERS TO ACTIVE TRAVEL

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1.0 Introduction

The objective of this discussion paper is to present a synopsis of the barriers to active travel.

The focus of the discussion will be on the following key barriers:

- Physical
- Personal (ingrained habits or perceived barriers)

2.0 Summary of barriers

"One of the major barriers to more walking and cycling is that their full potential and benefits are not always fully appreciated by decision makers involved in local and community projects. This can result in a missed opportunity to deliver higher value for money schemes that support a wider range of objectives for communities, individuals and the nation at large". [1] (Active Travel Strategy DfT)

There are a number of barriers to people walking and cycling more and these can be both physical as well as personal (habits), these are listed below:-

Physical barriers

- Location and design of most common destinations
- Built environment – Design of streets – poor or no cycle lanes, narrow footpaths, badly lit streets, hilly areas
- Fast moving traffic
- Poor signage
- Lack of funding and commitment from Government
- Implementation of national policy delivered at the local level.

Personal barriers

- Behavioural attitudes
- Perceptions/Reality of Road Safety
- Personal security (stranger danger)
- Increase in car ownership levels
- Distance
- Convenience

3.0 Physical barriers and evidence base

3.1 Location and design of most common destinations – too far, on busy roads

"There is a risk that transport and spatial layout of cities will be increasingly designed to cater for longer distance mobility. As a result, this:

- May reduce the diversity of goods and services available in local areas;
- Could "lock-out" short walking trips as a viable transport mode;
- Could "lock-in" car dependency;
- Will accelerate the negative impacts of transport (such as increasing emissions, reduced health, reduced social cohesion and enjoyment of space." (DfT – TS)
- Could affect economic development as education and job opportunities highly linked to private car ownership (leading to limited opportunities and potentially increasing benefit dependency among non car owners)
- Could affect social stability for the above reasons (as carless households are typically lower income and may experience and/or perceive increasing social exclusion)

Badland et al state "Over the last few decades, immense urban changes have occurred in many industrialized countries, including reduced population density in cities and increased sprawl of housing, resulting in the residential migration to suburban developments. In many cases, urban design has caused a population-level reliance on automobiles for daily travel, reduced accessibility to facilities and alterations of community perceptions and cohesion. Concurrently, many countries are reporting low physical activity levels and increases in obesity prevalence. Although the link between the urban environment and health has been established, understanding the impact of the built environment on physical activity behaviour has been inadequately addressed by both the health and transport sectors".[2]

Health promotion, transport, and urban design policies all have similar objectives. These are to produce practical, cost-efficient, and successful

interventions that apply to a broad cross-section of the population. Urban design principles can easily be aligned with ecological health models to increase incidental physical activity, and therefore total energy expenditure. Examples of these collaborative approaches include restricting city blocks to pedestrian only access, placing car parks away from building entrances, and making stairways more accessible and convenient. The aforementioned design modifications are conducive to physical activity, providing small individual changes. At the population-level, such changes could bring considerable long-term benefits, including reductions in healthcare expenditure, local traffic congestion, pollution, and infrastructure costs. Despite these advantages, the potential for such changes is based on a limited understanding of travel behaviour influences.

3.2 Built environment – Design of streets – poor or no cycle lanes, narrow footpaths, badly lit streets, hilly areas

"The level of active travel is strongly affected by accessibility to local facilities. Access to green, natural environments and to local social networks are factors in mental well being. The wider sub-regional pattern of housing, economic development, land use and transport is a determinant of social exclusion and therefore health inequalities." [3]

"Spatial and land use planning sets the contours of urban spaces and uses, and is therefore one of the most crucial and far reaching functions in society. Not only does this affect the economy, but policies and decisions on the built environment also shape health, as they influence people's ability to access jobs, services and leisure opportunities, be physically active, and build social networks. The quality of the built environment is vital for reducing inequalities in health, which cause both individual suffering and societal loss, through unused human potential."[3]

Land use and spatial planning can improve access to jobs and services. Locating key job hubs close to residential areas, as well as integrating good transport links with land use development, improves physical access to jobs, education and other essential services for all population groups. This can

strengthen equity, as it reduces or simplifies travel, which can be a barrier for vulnerable groups. In particular it can benefit people from lower socioeconomic backgrounds, who are less likely to own a car but more likely to have low paid jobs. [3 page 6]

Good public transport systems can similarly facilitate economic activity and prosperity, by widening the reasonable area for job search; this can be particularly important for the aforementioned groups, whose job options often are restricted due to limited qualifications. [3a]

Mixed land use can also improve access by altering perceptions. Especially in more deprived neighbourhoods, mental images of where suitable jobs are located and what places are safe to go to can affect job search. [3b]

Places that offer local destinations of interest, such as shops, schools, services and greenspace, within a reasonable distance can encourage people to walk and cycle, which is vital for preventing and treating obesity, as well as reducing emissions from motorized travel. Tackling obesity can bring about considerable savings, as it has been estimated that obesity and associated conditions cost the UK economy about, and may cost £50 billion per year by 2050. [3 page 6]

Research in Australia has suggested that micro-urban design environments, such as the quality of pedestrian realm and public crossings can also be significant in whether parents allow their children to walk to school [4]

3.3 Fast moving traffic

Roads with heavy or fast moving traffic can be noisy or intimidating and a significant barrier for pedestrians and cyclists. Although the roads in the UK are now among the safest in the world, cyclists and pedestrians remain particularly vulnerable road users. In NI there currently are over 1.02 million cars on our roads and it rises daily.

The PSNI statistical report states that between 1/4/09 to 31/3/10 there were 6187 road traffic collisions which resulted in 9,675 casualties, of which 101 were killed, 995 were seriously injured and 8,579 were slightly injured. They

listed 'excessive speed having regard to conditions' (697 – 11%)[5] as the second most common cause of injury road traffic collisions in 2009/10.

Table 1: Most Common Principal Causation Factors in Reported Injury Road Traffic Collisions - 2009/10

Principal Factor	Number of Injury Collisions	Killed	Seriously Injured	Slightly injured	Total Casualties
Inattention or attention diverted	952	4	87	1,426	1,517
Excessive speed having regard to conditions	697	28	195	934	1,157
Driving too close	681	1	21	1,074	1,096
Emerging from minor road/driveway without care	628	3	54	986	1,043
Alcohol or drugs (All road users)	369	23	120	439	582
Crossing/entering road junction w/o care	367	5	57	525	587
Turning right w/o care	282	4	49	439	492
Pedestrian heedless of traffic	225	4	59	177	240

More importantly 'excessive speed having regard to conditions' is the most common cause of fatal and serious injury road traffic collisions (158 collisions) Out of these 158 collisions 28 people were killed and 195 were seriously injured. 56 of the 158 collisions (35%) involved children under 16 and resulted in 3 children being killed and 107 being seriously injured.

These figures show that there should be a continued focus on road safety improvements in order to reduce pedestrian casualties. Badland et al state that "modifying traffic patterns through calming mechanisms, such as road humps, may be a logical way to influence physical activity levels."
Jacobsen et al carried out a study to examine the impact of traffic on levels of walking and cycling and concluded that "Interventions to reduce traffic speed and volume are likely to promote walking and cycling and thus result in public health gains". [6]

3.4 Poor signage

People would regularly complain that there is not enough information or signs for walking and cycling routes. This is not just a local problem as confirmed by ASTUTE. Advancing sustainable Transport in Urban areas to promote energy efficiency (ASTUTE)[7] was a three-year project, funded by the European Commission, Intelligent Energy Executive Agency (IEEA) 2006-9. The ASTUTE project was made up of partner organisations based in 6 European partner cities. Ultimately, ASTUTE aimed to identify, understand and overcome the barriers that prevent increasing the use of sustainable, environmentally friendly and energy efficient modes transport such as walking or cycling throughout Europe. They identified 10 barriers to walking and 44 sub-barriers, (see Appendix A). One of these barriers is:-

- **Inadequate Information** and includes the sub-barrier

- Lack of convenient signage on walking/cycling routes

Having access to information is a powerful motivator for people, as it supports a sense of control and personal initiative. Lack of information creates uncertainty, which often is a real barrier to changing behaviour, particularly for vulnerable groups and also others who need certainty, eg. families with tight schedules. Anecdotal evidence collected by Belfast Healthy Cities around older people and transport indicated that older people in Belfast saw information as a particular weakness in the transport system, which they felt

hindered them from using alternatives to the private car, and also reduced their opportunities for a social life. Participants also indicated that they would like to avail of public transport, as well as walking, if they knew where to get easily understood, accessible and reliable information.

More work needs to be done to ensure that the public are aware and have all the necessary information on all active travel routes.

3.5 Lack of funding and commitment from Government

Identifying and obtaining appropriate funding for both capital investment and for operation is a recognised barrier for the effective planning and implementation of transport and land-use schemes by local authorities. This issue has been addressed within the UK DISTILLATE project (Design and Implementation Support Tools for Integrated Local Land use, Transport and the Environment), a UK EPSRC (Engineering and Physical Sciences Research Council) funded project, which seeks to enable significant improvements in the ways in which sustainable transport and land-use strategies are developed and delivered in the UK. More effective and efficient selection, planning and delivery of schemes and projects will enhance the sustainability of urban areas and the quality of life of people who live in them. The majority of barriers to identifying and obtaining funding for transport schemes appear to be related to political and institutional aspects, rather than the funding sources themselves.[8]

Table 2. Barriers to funding [8](adapted from Hull et al., 2006).

Type of barrier	**Progress towards more sustainable urban transport systems**	**Other sector's ability to engage in policy formulation and with the implementation of transport schemes at the local level.**	**Funding-related barriers**
Technical	Analytical capabilities and technical decision-making skills		
Institutional	Complexities of organisational collaboration in the process of transport planning	Territorial and/or temporal mismatches between service delivery activities across different sectors	Adverse effect on the availability of staff time (e.g. because of cost efficiency agendas)
	Lack of local control over the implementation and operation of schemes	Organisational constraints (time, resources, leadership, interests, structures and systems)	Difficulties occur in delineating contributions between partners in joint funding packages across sectors
	Professional mindsets	Clarity and consistency of communication between sectors (horizontal interaction)	
Political	Societal constraints on the development of 'sustainable' strategies	Political influences adversely affecting cross-sector policy integration	
	National government unwillingness to use its own executive actions to support transport policies	Impact of direction and decisions of central government (vertical/diagonal integration)	
	Politics		
Funding-specific	Strength of focus on narrow transport priorities	High levels of funding uncertainty	Adverse impacts upon scheme prioritisation and delivery processes

Type of barrier	Progress towards more sustainable urban transport systems	Other sector's ability to engage in policy formulation and with the implementation of transport schemes at the local level.	Funding-related barriers
			due to specific funding pots/streams
	Funding for sustainable urban transport solutions		
Other	Physical characteristics of local areas		

3.6 Implementation of national policy delivered at the local level.

"The realisation of sustainable transport systems in UK towns and cities relies upon the smooth implementation of national policy delivered at the local level". [9] A questionnaire survey carried out as part of a UK EPSRC programme of research named DISTILLATE (Design and Implementation Support Tools for Integrated Local Land-use, Transport and Environment) identified that during the delivery process for sustainable local-surface transport solutions (SLSTS) the most problematic stages and barriers to delivery were funding, modelling, monitoring & evaluation, strategy option generation and strategic appraisal.

During the above research some local authorities complained of a lack of policy integration in central government yet the importance of "joined-up government" was highlighted in an influential Cabinet Office report in 2001 and also by the Audit Commission in 2004. Foxon et al states "current policy-making processes often work against a more integrated approach, because: long-term social and environmental problems tend to receive relatively low priority; the inter-related nature of these problems and radical uncertainties in future costs and benefits creates additional levels of complexity; and the goals required to ensure sustainability are contested". [10]

Gaffron states that “when looking at the widely divergent realities, with which pedestrians and cyclists are confronted in different local authorities, it is clear that the abstract common goals set at the national policy level are translated into very different local results.”[11] The findings of Gaffron’s study strongly underline the importance of a well worked out national policy framework. All main national policy documents which deal with walking and cycling policies were identified as important factors in local policy adoption and implementation. Therefore, if documents are launched as guidance documents and not national strategies, as was the British national strategy for walking – Encouraging Walking (DETR, 2000a), then they are likely to be a significant barrier to greater progress being made at the local level for this mode.

3.7 Summary of Physical Barriers

More walking or cycling for short journeys has benefits for individuals in terms of their health – they are more likely to achieve a healthy weight and to have improved mental well-being.

The built environment can both constrain and help facilitate walking or cycling and other forms of physical activity. Understanding and developing innovative ways to encourage greater use of local environments for physical activity will help contribute to a reduction in the prevalence of obesity.

The obesogenic environment which gives rise to obesity and poor health include problems such as congestion, accessibility, and the living and working environment and all present significant challenges for Government. Many services and facilities are difficult to access for non-car users due to their location or a design which inhibits pedestrian or bicycle access, for example lack of footpaths, absence of safe road crossings or the lack of secure facilities for bicycles.

As well as the negative health impacts associated with reduced access, community severance can disrupt social networks and reduce social support

and social cohesiveness. These can lead to some groups, such as the elderly and disabled people being more vulnerable to these changes which can lead to poorer health outcomes.

4.0 Personal barriers and evidence base

4.1Behavioural attitudes

Many studies have shown that parents have strong concerns about the environmental conditions along the walk to school. The major types of concerns include those of perceived street-crossing danger, traffic danger, general difficulty walking, perceived distance and crime danger.

New urbanist community designs, which include moderate densities, well-connected streets and multiple walkable destinations, have been found to support more adult walking in the neighbourhood. [12]

A recent literature review on walking and cycling for the Victorian Department of Transport in Australia stresses that perceptions of the environment can often be more important than the actual environment itself. In other words, if an area is perceived as unpleasant or unsafe, or if active travel is perceived as inconvenient, it matters little if the physical infrastructure in fact is of acceptable quality. [12b]

The report recommends investing in activities with citizens that support them to change their perceptions, eg. through trying it out in a supported setting, or being involved in planning physical interventions. It suggests this is important in particular once an acceptable level of infrastructure has been achieved.

Billie Giles-Corti, a leading academic in the field of built environment and physical activity, produced a paper on the impact of the built environment and behavioural influences on physical activity. [12c] The paper states “In the last decade, interest in the impact of the built environment on physical activity has grown. Policies and community and neighbourhood infrastructure provide opportunities to be active, and facilitate incidental physical activity, such as walking for transport or use of stairs. Theoretical ecological models provide a basis for physical activity research and practice, focussing attention on multiple levels of influence on behaviour (i.e., individual, social-environmental

and physical environmental). However, few studies have quantified the relative contribution of these correlates on behaviour, leaving policy-makers and practitioners wondering about where to target their efforts: people or places? This paper draws on theory, evidence to date and case studies to argue that comprehensive interventions targeting both people and places are required to increase physical activity. The joint influence of place and people is discussed in the context of data showing that the likelihood of walking at recommended levels is nearly eight times higher (OR 7.84; 95% CI 4.41–13.91) in people with both a supportive environment and positive cognitions compared with those low on both. To increase physical activity requires multi-sector partnerships and comprehensive long-term multi-pronged interventions that include short-, medium- and long-term strategies aimed at bringing about cultural shifts favouring physical activity over sedentary alternatives, and the creation of a supportive built environment. The health sector can contribute by implementing public education programs, workforce development, building the evidence-base and advocating for change. However, to improve policies and infrastructure in places the commitment of sectors outside of health is critical."

4.2 Safety concerns - Road Safety and Personal Safety

Safety concerns relate to both road safety and personal safety. Road Safety is paramount and is most often quoted by parents as the main reason for not letting their children walk or cycle to school. Due to the increase in cars and the fact that drivers are travelling at excessive speed leads to further road traffic fatalities and injuries. Police Service of NI state that excessive speed having regard to conditions was the most common single cause of fatal and serious injuries.

The NI Road Safety Strategy, published in 2002[13], set two targets for reducing the number of people Killed or Seriously Injured (KSI) on our roads. These are:

- To reduce the number of people KSI each year by one-third from the 1996-2000 average of 1750 to fewer than 1200 by 2012. *This target was achieved in 2007/08*

- To reduce by 50% the number of children KSI each year from the 1996-2000 average of 250 to fewer than 125 by 2012. *This target was achieved in 2007/08.*

DOE's Consultation on Preparing a Road Safety Strategy for NI 2010-2020 [14] proposes the following targets for 2020 (all would be measured against a baseline of the 2004-2008 average figures) :

- To reduce the number of people killed in road collisions by at least 40% by 2020.
- To reduce the number of people seriously injured in road collisions by at least 45% by 2020.
- To reduce the number of children (aged 0 to 15) killed or seriously injured in road collisions by at least 55% by 2020.
- To reduce the number of young people (aged 16 to 24) killed or seriously injured in road collisions by at least 55% by 2020.

Napier et al state "We believe that the provision of a walkable environment is a necessary, but not sufficient condition for reclaiming the walk to school. Societal pressures have created the expectations that children do not walk to school, in part due to parental and child perceptions that walking to school is neither safe nor convenient. Some researchers have claimed that today's children are part of a "bubble wrap" generation where children's active travel around home is restricted by a combination of parental anxieties, time pressures, and environmental changes (Malone, 2007). Indeed, compared to the past, children throughout the world are less likely to be able to walk without adult accompaniment from homes to a variety of destinations ([Kyttä, 2004] and [Prezza et al., 2005]). We ask whether a new walkable community design can support more school walks, despite national declines in walking to school (McDonald, 2007a) and general trends toward protectiveness among parents (Carver et al., 2005). Thus we test the separate and combined effects of community design, parent perceptions, children perceptions, and child BMI on reported walks to school for students in more and less walkable communities". " Results showed that children and parents often agreed on walking barriers, except an interaction showed that, in the less walkable

community, parents perceived worse barriers than did their children. Perceptions of barriers increased from walkable, to mixed, to less walkable communities. Students walked more when they attended the school in the walkable community, they lived near school, parents and children perceived fewer barriers to walking and children had lower BMI scores. Thus the walk to school is embedded within multiple types of supports, all of which should be addressed to encourage walking to school." [12]

In addition, people's perceptions of personal safety can act as a deterrent to walking with many people being deterred from making journeys, particularly at night, as they fear being attacked. A vicious cycle arises with people not walking as an area is perceived to be unsafe and having fewer people around making an area feel less safe. Such concerns can be addressed in a number of ways. Lighting is obviously particularly important, but so is the general 'feel' of a place. For example, an area that feels uncared for with lots of litter and graffiti is unlikely to be attractive for pedestrians. Allowing for informal surveillance in the design of buildings and the activities encouraged in an area can not only help encourage walking but should also result in a more attractive public realm generally, for example, ensuring walking routes are overlooked will address pedestrian's concerns about personal safety and should also reduce anti-social behaviour in those areas. [15]

It should also be noted that street layout is a key, but complex issue for safety. Well connected and permeable street patterns (eg. grids) offer a choice of routes, which encourages use and can increase footfall, which improves safety. Cul-de-sacs and crescent patterns, meanwhile, limit route choice and can discourage active travel, as the bending layout is harder to monitor. However, cul-de-sacs have become associated with greater perceived safety (as it may be more difficult for eg. assailants to escape) and privacy, and therefore permeable streets must offer good lighting and appropriate privacy as well as overlooking, to help overcome these potential concerns

4.3 Distance

People have to travel further for jobs, schools and shopping due to the dispersal of housing in NI. The 2006-08 Travel Survey for NI (TSNI)[16] states

that those living in the Belfast area travelled an average of 3,505 miles per year, compared to 6,405 and 6,344 for those in the East and West respectively. Car travel made up 81% of the total distance travelled in NI. Pre-World War II, cities were highly localized places that subsisted on the premise of low automobile ownership. The infrastructure that existed allowed daily requirements to be achieved within a comfortable walking distance, or with the combination of transit. Post-war economics led to increased disposable income and decentralization of cities to suburban centres and single land uses (Frank et al., 2003). As a result, automobiles are relied on for travelling the long inter-destination distances associated with suburban sprawl. Traffic congestion, single-occupant automobile travel, increased pollution, rising infrastructure costs, and degeneration of communities have now become serious concerns for transport sectors in developed nations (Lavisso-Mourey and McGinnis, 2003 and Frank et al., 2003) [17]

4.4 Convenience and increase in car ownership levels

"Car use has continued to become cheaper and more available relative to buses". Car ownership rates continue to rise; in NI the number of vehicles registered from 1999 to 2008 has increased by 29.7% from 720,645 to 1024396.

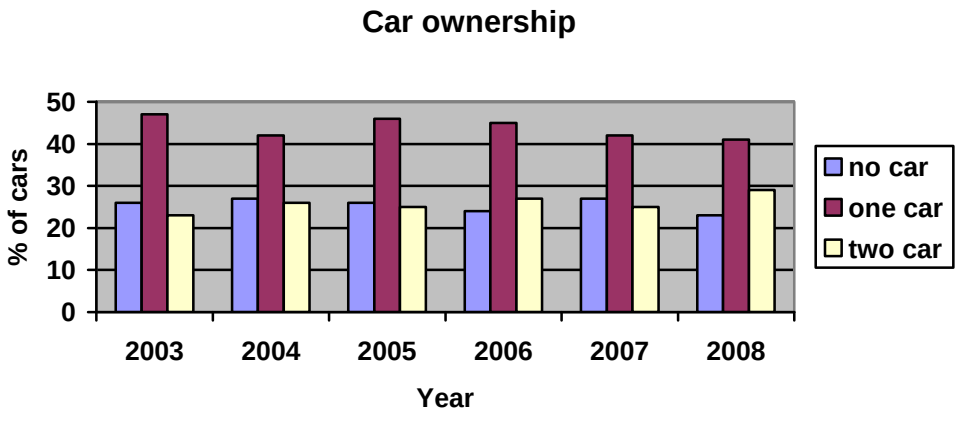

Fig. 1 Car ownership in NI

"The consequences of the increase in car travel can be witnessed in everyday life and is summarised as follows:

- **Increase in peak hour congestion**

Congestion can be described as a temporary impairment of connectivity during periods of high demand, or when system capacity is temporarily reduced e.g. by a collision. Increasing car use on a constrained road network is impacting on reliability and increasing congestion, and the forecasts are for it to get worse. The cost (financial and loss of time) of congestion is highest in large urban areas during peak times.

The Eddington Transport Study [18] estimated that congestion costs the UK £7-8 billion of GDP per annum rising to £22 billion by 2025 if left unchecked. A PA Consulting report published in 2008 predicted that congestion costs in the North of Ireland are approximately £250m per year[19]

Economic assessments demonstrate the excellent value for money arising from spending on walking and cycling. [20]

Therefore, we need to consider how we make the best use of the road space we have already.

- **Increase in pollution**

Exhaust fumes from cars emit Carbon Monoxide (CO), Carbon Dioxide (CO_2), Nitrogen Dioxide (NO_2) Benzene and Particulate Matters (PM_{10}). Road transport is also the main cause of Ozone (summertime smog). It does not come directly from vehicles but it is created by chemical reactions between other nitrogen oxides and hydrocarbons. Researchers have demonstrated that these gases can have an adverse effect on health.

- Nitrogen dioxide – this may aggravate asthma symptoms. It can cause a tightening of the chest and reduces lung functions. It can make the airways more sensitive to allergens such as house dust mites. By disrupting the body's natural cleansing mechanisms, it may increase the body's susceptibility to viral infections.
- Carbon monoxide – this slows reflexes, impairs thinking and causes drowsiness by reducing the oxygen-carrying capacity of the blood. It can increase the likelihood of exercise-related pain in people with coronary heart disease.
- Benzene – this is a known carcinogen which can cause leukaemia.

- Ozone – this irritates the mucus membrane of the respiratory system, causing coughing, choking and impaired lung function, particularly in people who exercise. Other symptoms' include headaches, eye/nose/throat irritation and chest pain on deep breathing. It can make the airways more sensitive to allergens such as pollen. It can also impair defences against bacteria and viruses. (www.foe.co.uk)

- In NI 182,000 people have asthma and 36,000 of these are children

➢ **People are less aware of their local environment as they have less opportunity to interact with it.**

"People are often unsatisfied with the space they live and travel in because of transport." [21] This is having a negative impact on people's quality of life.

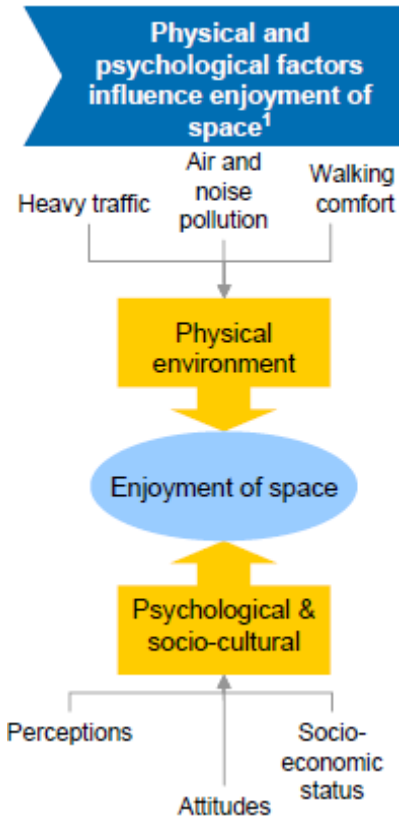

Figure 2

The cabinet office report[22] states that "A US study found that neighbourhoods with better connectivity and higher quality facilities generated three times

more pedestrians per resident than neighbourhoods with disconnected street networks and substandard facilities. “ It also comments that people living on streets with heavy traffic are less likely to be friends with neighbours compared to people living on streets with light traffic.

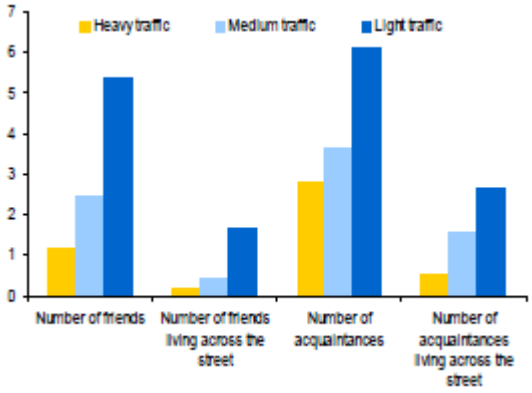

Figure 3

The Belfast Healthy Cities report on Healthy Places states that “Active lifestyles can strengthen communities and make them safer. Active travel offers important opportunities for social interaction which can both support mental wellbeing and encourage social cohesion.”

- **Children have less opportunity to develop road safety and personal safety skills**

The growth in accompanied travel to school for children, particularly by car, has led to speculation about the impact this has on child development of road safety and personal development skills. A number of studies have been carried out on the effect, but none has proved conclusive.

Joshi et al, 1999[23] looked at how the children’s journey to school was having an impact on their spatial skills, knowledge and perceptions of the environment. They found that children who were accompanied to school performed as well as their unaccompanied peers in spatial ability tests and showed no greater concern with stranger danger. However, they showed a greater tendency to cite traffic danger in their responses.

Lamb et al [24] carried out a study on the children’s acquisition and retention of safety skills: the lifeskills program.

Timperio et al, 2004[25] looked at the perceptions about the local neighbourhood and walking and cycling among children.
Woodside et al [26] looked at road safety and the journey to school: perception or reality.
The conclusions of all these studies are that children are less likely to walk to school due to parental decisions on road safety and personal safety.

- **Lack of exercise leading to unfit children and increased obesity levels**

In recent years, there has been increasing concern about the impact of people's lifestyles on their health and particularly about the rising levels of obesity with the associated costs to the NHS and society generally. Adopting more active travel habits means that people undertake increased levels of physical activity as part of their daily routine rather than it being an extra activity that they have to fit in. This means that people are more likely to maintain an active lifestyle on a long-term basis and has significant implications in terms of the resulting improvements to their health.
NICE (the National Institute for Health and Clinical Excellence) states that active travel is perhaps the best way to increase physical activity, and tackle the obesity epidemic, at a population level, as it is relatively easy to incorporate into daily routines.[26a]
Napier et al state "The trip to and from school provides children with 10 opportunities to walk during the school week."

The Department of Health, Social Services and Public Safety established a cross-sectoral Obesity Prevention Steering Group to oversee and drive forward the delivery of the Fit Futures Implementation Plan and develop an overarching Obesity Prevention Framework ("A Fitter Future for All") for Northern Ireland, which is hoped to be launched for public consultation later in 2010. Within the Framework outcomes have been written that relate specifically to the development of Physical Activity as part of a healthy lifestyle across the life course of the population of Northern Ireland. These outcomes have been developed by relevant representatives from a range of

Government Departments, stakeholders and agencies through a specialised Physical Activity Advisory Group and include specific activities in relation to the following:

- Pregnant women and young children;
- Access to safe facilities within local areas;
- Increased opportunities for physical activity
- Improved and increased information;
- Responsibilties and opportunties for employers;
- Planning and green spaces; and
- Active Travel.

It is hoped that through the Framework, people will choose to increase their participation in physical activity and eat a healthier balanced diet which will, over the long term, decrease the prevalence of obesity and the occurrences of obesity-related diseases such as Type 2 Diabetes and therefore reduce the future impacts and costs to our public services.

Meanwhile, the UK government's Foresight programme's investigation into obesity identified problems in the environment that compound the problem, and stated that changes in the environment are required, alongside other measures around personal choice, food, marketing etc . [26b]

The NI Cycling strategy 2007 states "Other reports have highlighted the alarming increase in obesity, which has massive resource implications on the health and social care system and a detrimental effect on the individual. For example, for every £50 spent on obesity treatment and related costs, less than 99p is spent on prevention." [27]

Townshend et al [28] carried out research on how the urban environments do not support healthy lifestyle choices and are implicated in the obesity pandemic and concluded that by "providing highly accessible, good quality green space which is perceived as safe to use at the neighbourhood level should lead to an increase in the propensity of people to undertake exercise, either through active transportation or recreation. (see Fig.3)

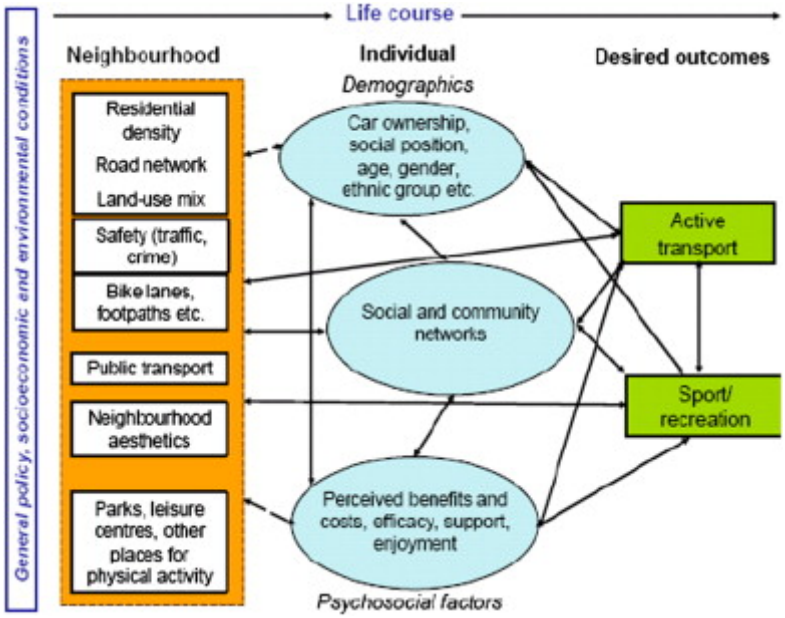

Figure 4: Evidence informed model of potential determinants of sport/physical activity (Foster et al., 2005).

- **Travel habits developed early in life are difficult to change**

The habitual nature of most travel behaviour can act as a significant barrier to walking/cycling for those who currently drive or use public transport for all or most of their journeys. People may be unfamiliar with alternatives to their regular mode of transport and may be deterred from walking/cycling even for relatively short journeys. Travel habits are often formed early in life and in recent years there has been a lot of work undertaken on school travel planning in London, and concerted walking promotion activity through the Walk to School and Walk on Wednesday campaigns. The provision of safer routes to school and measures such as walking buses also help to address parents' safety concerns about children walking to school. A number of these initiatives are also ongoing in Northern Ireland and are promoted by Travelwise. Such initiatives have the benefit of getting the message home early of the benefits to the individual and the environment from walking, and should be actively encouraged and promoted.

4.5 Summary of Personal Barriers

Behavioural attitudes need to be changed if we are to encourage society to address their personal travel arrangements. Programmes

which raise awareness of and encourage active travel must take into account all of the barriers which challenge negative perceptions and attitudes where appropriate and providing realistic and targeted solutions.

It is important that we try to encourage both children and adults to increase the amount of Physical activity that they do on a daily basis as this will help meet the Chief Medical Officer's recommendation for physical activity which are as follows:

- Children and young people should achieve a total of at least 60 minutes of at least moderate intensity physical activity each day.
- For general health benefits, adults should achieve a total of at least 30 minutes a day of at least moderate intensity physical activity on five or more days of the week.
- The recommendations for adults are also appropriate for older adults. Regular physical activity is particularly important for the maintenance of mobility and independent living.

5.0 Conclusion

"Current traffic planning in the UK favours the motor vehicle. More consideration needs to be given to space allocation, particularly for pedestrians and cyclists. Changes in emphasis, especially within our current areas, would make short trips of 1-2 miles, usually taken by car, more realistic, accessible and usually quicker by bike, and in some cases, also quicker by walking. "[29]

The cabinet office report suggests "a growing need for a shared long-term vision for urban transport by all decision makers which rebalances its competing demands. Otherwise, growing levels of traffic, primarily by car, will continue to worsen congestion. Greater levels of traffic will also create more spaces people find disagreeable and further discourage walking and cycling. Traffic can be dangerous and contribute to reduced life expectancy through

toxic emissions and causes noise disturbance. Vehicles also emit a substantial quantity of the UK's carbon emissions and in some places have created inequalities in access to transport."

TRACEY ARLOW
Travelwise NI
20 August 2010

Appendix A

ASTUTE

Advancing Sustainable Transport in Urban areas to promote energy efficiency (ASTUTE) is a three year project, part of the Intelligent Energy for Europe's (IEE) STEER Programme. Its aim is to increase the number of walking and cycling journeys in Urban Areas. It has identified the barriers which public and private sector organisations face in promoting walking and cycling. These have in turn allowed them to formulate the ASTUTE toolkit which comprises many best practice examples which can help overcome these barriers. There are a total of 10 main barriers and 44 sub-barriers.

Sub barriers - Listed under barrier

1 - Safety and Security Concerns

- Unsafe routes for cycling/walking
- Lack of definite regulations on cycling
- Fear of theft or criminal damage to bicycles

2 - Inadequate Information

- Lack of information on how to reach destination safely
- Lack of information about walking/cycling routes
- Lack of convenient signage on walking/cycling routes
- Ineffectiveness of promotional campaigns
- Lack of information about walking and cycling facilities
- Lack of skills to promote walking and cycling amongst businesses and citizens
- Insufficient communication between city departments and citizens

3 - Inadequate Urban Environment and Design

- Lack of penetrability of city areas to walking and cycling
- Low level of importance of pedestrian use in the city centres
- Unattractiveness and low level of quality of urban environment for walking and cycling
- Climatical and topographical barriers

4 - Lack of Infrastructure and Support

- Lack of integrating existing networks
- Ineligible or lack of parking facilities in the city reduces the modal share
- Inadequate public transportation accessibility
- Lack of cycle tracks
- Lack of facilities of bike using (loaning, storage and repair facilities
- Lack of maintenance of the infrastructure

5 - Poor Public Perception and Lack of Awareness

- Lack of public interest
- Public approach of walking/cycling
- Low attractiveness of bicycle for longer journeys (e.g. commuters)
- Cultural barriers against cycling

6 - Accessibility and Health Issues

- Low level of environmental and health awareness among citizens
- Lack of competence of citizens / organizations and lack of power to enforce their interests
- Exclusion of people reduced mobility / minority / elderly / residents living areas difficult to access
- Low fitness levels among citizens

7 - Lack of Public Sector Support

- Transport policy prioritising private car/public transport
- Lack of co-ordination between city departments and NGOs responsible for walking and cycling
- Lack of appreciation of the value of marketing campaigns
- Lack of integrated planning of cycling and walking/pedestrian traffic
- Purchasing and keeping political support behind project

8 - Lack of Private Sector Support

- Lack of financial incentives to develop a travel plan for employees / school
- Lack of skills to implement actions for sustainable transport
- Insensitivity of companies towards employee transport preferences
- Inadequate resources and knowledge by employers to implement travel plan
- Inadequate facilities of walking/cycling in the workplaces (cycle park, changing room, shower)
- Inadequate incentives by employers to encourage walking/cycling to the workplace

9 - Congestion and Air Pollution

- Unbalanced level of utilization on public transport vehicles
- Level of car traffic and air pollution
- Reduced accessibility for businesses due to congestion

10 - Lack of Education and Training

- Lack of cycling and bicycle maintenance skills
- Children inadequate road safety skills

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