

# Improving Health in the North East through Transport Solutions

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## Executive Summary

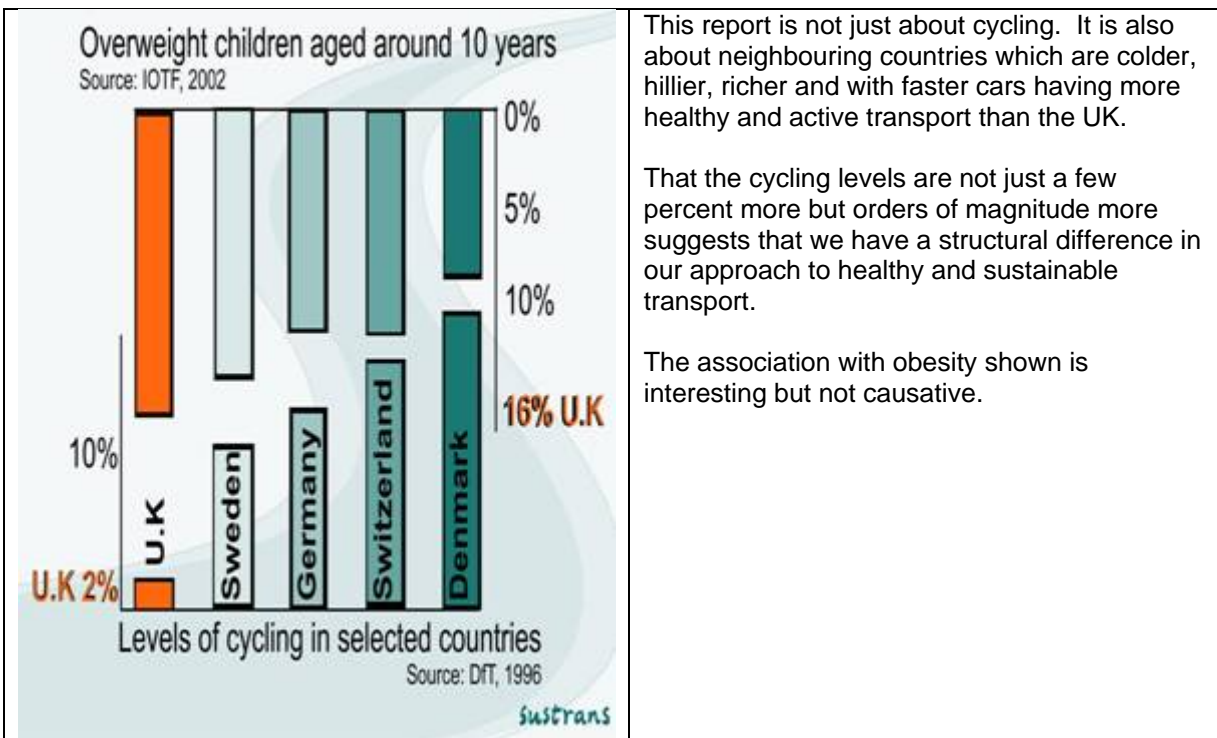
The Economy Culture and Environment Regional Advisory Group is one of ten theme groups operating as part of the Regional Director of Public Health’s ‘Better Health Fairer Health’ strategy. The group commissioned this report to help them clarify the direction of their work around transport and health, especially in relation to the growing obesity epidemic. The report was produced by consultants Atkins with Nick Cavill Associates and the Universities of Newcastle and Oxford.

This report is not intended to be a comprehensive good practice guide or academic research. There are existing reports that fulfil this role in some detail and these are listed as references in the main report, which is available upon request.

This executive summary is intended to demonstrate how the investigation followed a clear, logical path, based on a series of questions: It is longer than usual in order to encourage reading among as wide an audience as possible in order to generate debate.

### Does Public Health North East need to get involved in Transport ?

It would appear so. Transport is more than just moving about from A to B: it is a reflection of how we organise our lives. The fact that most Northern European countries have not just 5% more cycling than the UK but 500% more suggests there is a structural difference and not just one associated with personal preferences.



This report is not just about cycling. It is also about neighbouring countries which are colder, hillier, richer and with faster cars having more healthy and active transport than the UK.

That the cycling levels are not just a few percent more but orders of magnitude more suggests that we have a structural difference in our approach to healthy and sustainable transport.

The association with obesity shown is interesting but not causative.

The current attitude towards land use and road planning has tended to be influenced by an interpretation of guidance called “Secured by Design”. Intended as a sensible precaution, this guidance has been used to justify developments which include no footpaths or cycleways as they were deemed to be ‘insecure’. Common sense can be lost in this process, as shown in the illustration below, with similar examples reported by several officers in the region.



Figure 1: An example of how new housing layouts might restrict healthy and active transport  
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The residents of such developments are facing a lifetime of inherent car use and inactivity. The burden of any resultant ill-health will be carried by the health sector.

Transport and land use planning would appear to be the area in most need of representation from the public health sector.

### Do we need a change in Legislation?

A key difficulty is that legislation and guidance already exist to rectify the mismatch between health and transport. The problem is that policies are not always coherent and consistent. A desirable quality of flexibility in policies can lead to undesirable vagueness. The opportunities for selective interpretation of policies do not always favour health interests. Obvious regional priorities such as economic viability may prevail over health.

Unlike other areas (such as horse riding, for example) there is no effective lobby group. Within the transport sector the very important aspect of road safety has understandably dominated, and proposed new DfT objectives are based on "Safety, security and health" (in that order).

Local authorities are now working towards Local Area Agreements. These require partnership working and, being relatively new, offer an opportunity for the health sector to have influence on wider public policies.

The new emphasis on carbon reduction will influence public policies. It will be important for the health sector to ensure that initiatives such as Health Impact Assessments adapt to become part of a wider appraisal process.

### What do we know already about the links between health and transport?

There have been three very good reports, written by experts and tested against practitioners. These key reports are:

- National Institute for Health and Clinical Excellence (NICE, 2008). Promoting and creating built or natural environments that encourage and support physical activity.
- National Heart Forum (2007). Building Health: Creating and enhancing places for healthy, active lives. What needs to be done?
- Foresight (HMSO, 2007). Tackling Obesities: Future Choices.

The findings of these reports regarding the impact of transport on health can be summarised as follows

Policy intervention	Potential health-related outcomes						
	Promoting physical activity	Reducing crashes and road traffic injury	Reducing air pollution	Reducing noise pollution	Reducing greenhouse gas emissions	Increasing social inclusion	Improving access
Promotion of safe walking and cycling	+	+	+	+	+	+	+
Investment in infrastructure for safer walking and cycling	+	+	+	+	+	+	+
Travel planning and accessibility planning	+	+	+	+	+	+	+
Traffic-calming and speed reduction in residential areas	+	+	+	+	+	+	+
Enforcement of speed limits/ speed management	+	+	+	+	+	+	+
Reducing transport demand (e.g. promoting telecommunication)	+	+	+	+	+	+	+
Congestion charging (road pricing) and parking charges	+	+	+	+	+	+	+
Cleaner fuels and more efficient vehicles	○	○	+	○	+	+	○
Noise reduction	○	○	○	+	○	+	○
Safer cars (including safety for pedestrians)	+	+	○	○	○	+	○
Enforcement (e.g. seatbelts/child restraints)	+	+	○	○	○	+	○

+ Policy intervention likely to lead to positive health-related outcome  
 ○ Policy intervention not likely to lead to health-related outcome

All three key reports include recommendations. Our team mapped these against each other to avoid duplication and came up with a list of 21 separate items. In order to reduce these to a manageable size and to create a conceptual framework we looked to an approach based on considering the obligations people have to travel, their opportunities for changing to healthier and more sustainable modes, and their inclination to change. For convenience this can be thought of as the three Ns of Needs, Networks and “Niceties”.

**Are there mechanisms by which things could be improved?**

There are three key groups within the transport profession who are able to help support healthy transport:

**Accessibility Planning:** This considers how to access goods and services with the minimum of travel. Sending a single audiologist to a village hall, for example, rather than sending dozens of rural patients over long distances. Each local authority has an accessibility planning team that sometimes (though not always) has health sector participation.

**Sustainable Transport:** There are specialists promoting sustainable travel to school in every local authority, thanks to a grant from DfT/DCSF. The majority of NE authorities also have someone who specialises in workplace travel plans. Local networks exist such as ACT TravelWise (chaired from Durham CC) who would welcome more contact with the health sector.

**Road Safety:** The local authorities are increasingly developing road safety partnerships. These mainly include police and road safety officers, but there would be some scope for involvement from the health sector.

In the key area of land use and transport planning there are currently no obvious partnership opportunities and this would therefore need more effort to build relationships and establish common ground.

**What is the Current Level of Knowledge in the Transport Sector?**

This would require a statistically sound survey to say for sure. Among those contacted for this project there was surprise at how the number of road accident fatalities in the UK in 2007 was only 2946, a low figure in comparison to deaths from heart disease, obesity and respiratory diseases (including those associated with traffic emissions). More work is needed to establish the exact relevant statistics for the North East.

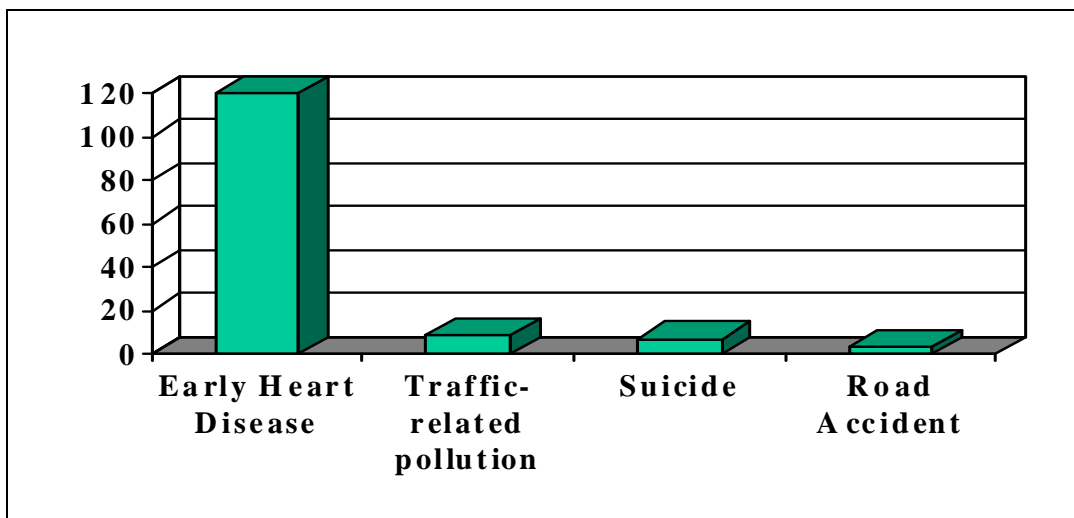


Figure 2: An indicative diagram to show some mortality causes with various levels of links to transport (as measured in 2007). Many transport officers were surprised by the relatively low incidence of road deaths.

The links between traffic, transport and overall wellbeing are not often discussed. The Newcastle Living Streets branch organised a seminar for transport planners on Social Capital which was the first of its type in the UK.

There is virtually no research on the links between transport and mental health. Many local officers were shocked to hear that suicide kills two times more people than road accidents.

There is thus scope to raise awareness of transport professionals in the basics of public health.

## What about the NHS ?

As such a phenomenally large organisation, the NHS is an obvious place to start examining the links between transport and health. In the same way that transport needs health-proofing, health needs transport-proofing. There is already a mechanism for improving the all round sustainability of NHS premises in the form of the 'Good Corporate Citizen' initiative. This is being further enhanced by the new CO2 strategy.

The Newcastle City hospitals have demonstrated how travel to health premises can be made more healthy and sustainable, and the rest of the region would benefit from copying this example of good practice.

## Conclusion

Overall there is evidence to support the links between transport and health. The current practice appears lacking, especially in the area of transport and land use planning. This, if left unchecked, is likely to increase long term health problems via inbuilt inactivity.

The main benefit from linking transport with health could be to increase physical activity. In order to do this congestion charging would be effective but hard to implement. Slower speed limits would be the next most effective and influencing road layouts to encourage walking and cycling would be the best long-term action.

There are already mechanisms in place that could help foster a coordinated approach and partners are in place in the North East waiting for a health input. Darlington is a national demonstration town for healthy and sustainable transport.

It is less clear how improvements can be made in overall transport strategies and land use planning. Some policies appear to lack consistency or are being selectively ignored in a way that does not always favour health. There is therefore a need for some intervention. This should take place at the senior decision-making level and also at the grass roots via personal contact and advocacy.

The action table in the appendix to the main report contains detailed suggestions as to how the regional director for public health could take this forward if the decision is taken to proceed. In order to inform the decision making process the literature review, expert judgment and consultation were combined to give a best estimate of the impact and overall priority of the possible actions as shown below.

	<b>Recommendation (and links to the action table)</b>	<b>Likely Impact</b>	<b>Suggested Priority level for Action</b>
<b>NEED TO TRAVEL</b>	1: National, Regional and Local transport strategies should consider health implications of transport (1,2,6,8,11,12,16,24)	Medium	Medium
	2: New developments should be planned so as to reduce car use and encourage healthy and active transport (13,14,17,18,19)	High	Very high
	3: All large occupancy sites (including hospitals themselves) should have Sustainable Travel Plans (5)	Medium	High
	4: The evaluation of transport projects should include consideration of the costs it imposes on health. Projects that capture these costs, such as congestion charging are good for health. (7,10,15,25)	Very High	High
<b>NETWORKS</b>	5: Traffic Engineering and Urban design should promote active and healthy transport. 20mph should be the normal speed in urban areas. (9,19)	High	Very High
<b>NICETIES</b>	6: Health should form an active part of all relevant local area Partnerships (4,23)	Medium	Medium
	7: Social marketing campaigns should be targeted at the public and at internal stakeholders. (20,21,22,26)	High	High

Some regional contributors thought that this would require “a team of three”. This is likely to be an overestimate but it does appear that the scope of the interaction between health and transport would justify an examination of the opportunities for future resourcing.

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# 1. Introduction

The Economy Culture and Environment Regional Advisory Group is one of ten theme groups operating as part of the Regional Director of Public Health's 'Better Health Fairer Health' strategy. The vision of this strategy is that the North East will have the best and fairest health and well-being and will be recognised for its outstanding and sustainable quality of life.

This group has been set up to inform the Regional Director of Public Health and the Public Health Board on the strategic direction to take to ensure that future transport planning and infrastructure has health improvement at its core.

The group commissioned this report to help them clarify the direction of their work around transport and health, especially in relation to the growing obesity epidemic. The report was produced by Atkins with Nick Cavill associates and the Universities of Newcastle and Oxford.

This report is not intended to be a comprehensive good practice guide. There are existing reports that fulfil this role in some detail and these are listed as references.

Road Safety deserves special mention in that it is clearly an important health problem related to transport. It is well documented and well researched, however. Its limited mention in this report is not a reflection of any lack of priority or importance, but of the availability of knowledge elsewhere.

## 2. Background

Health, given its fundamental importance, is under-represented when it comes to making decisions that include transport and the built environment

There have been many recent reports on the links between health and transport but these have had little impact on transport practitioners.

The mis-match of motivational targets in agencies with influence on transport and the built-environment means that measures supporting health are not always a key priority

To illustrate the need for action, the response of the British Heart Foundation (BHF) to the Foresight report on Obesity was : "The report on the obesity crisis in England is not so much a wake up call as an echo of alarm bells that have been ringing for over 30 years... This report, whilst welcome, confirms much of what we already know, and have known since the first reports started warning of this crisis in the mid 1970s," said Peter Hollins, chief executive of the heart charity. The work described here, therefore, was very much concerned with what should be done, rather than adding to the literature mountain.

### 2.1 Transport Policies & Health

#### 2.1.1 Central Government: Department for Transport

The guidance for the latest DfT strategy "Developing a Sustainable Transport System" shown below includes the recommendation that that the approach to transport should support "safety, security and health". It does not necessarily intend that the order of priority should be safety, followed by security followed by health, but there is little reassurance that appropriate priority for health in the policy has been considered.

Local Highway Authorities are guided by the Local Transport Plan. The DfT guidance for the Local Transport Plans for 2006-2011 required highway authorities to demonstrate how they would tackle congestion, air-quality, safety and accessibility. Health was barely mentioned and it is hard to find

authorities that have done anything effective to improve health directly as a result of the LTP guidance.

Consultation for both policies Delivering a Sustainable Transport System and Local Transport Plan round 3 are now open. There is a window of opportunity (until April 2009) to respond to the consultation and it is vitally important that these should include an appreciation of health at an appropriate level.

The Five goals of the UK Transport Strategy are:

- to support national economic competitiveness and growth, by delivering reliable and efficient transport networks;
- to reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change;
- to contribute to better safety, security and health and longer life-expectancy by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are beneficial to health;
- to promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society; and
- to improve quality of life for transport users and non-transport users, and to promote a healthy natural environment.

### 2.1.2 Central Government CO2 Targets

Across the public sector there is the expectation that policies and practice should contribute towards the UK target for reducing greenhouse gases. The exact methodology by which climate change will be measured has not been established and there are various methods for doing a CO2 appraisal being created by several agencies.

The NHS recently consulted on its CO2 strategy and NHS Chief Executive, David Nicholson CBE launched "Saving Carbon, Improving Health" in London on the 27th January 2009.

As this is such a key government aim it will be necessary for any new policy proposal to take into account the need to integrate with CO2 objectives.

### 2.1.3 Regional Government

The selection process for major transport schemes in the region is set out in the proposals for a Regional Funding Allocation. This is guided by the DfT strategy DASTS outlined above; though the ability to deliver such large projects efficiently is a key criterion as are local economic concerns.

The Integrated Regional Framework for the North East (IRF) has been developed by Sustaine, the regional champion body for sustainable development, with support from the North East Assembly, One NorthEast, Government Office for the North East and other regional partners. The document presents a shared vision for the region and maps out the direction that the region needs to take. It aims to put sustainable development at the heart of all regional strategies, plans and policies, and provides a practical appraisal tool to help decision makers check that they are making a coherent and positive contribution towards sustainability.

The IRF points out that the top ten key areas that the region should be concerned with are; strengthening the economy; adapting to and mitigating against climate change; living within environmental limits; developing a more sustainable employment market; establishing a strong learning and skills base; improving health and wellbeing and reducing health inequalities; protecting and enhancing the environment; building sustainable communities; developing sustainable transport; and promoting and respecting the region's culture and heritage.

### 2.1.4 Local Area Agreements and Local Strategic Partnership

A local strategic partnership (LSP) is a non-statutory body that brings together the different parts of the public, private, voluntary and community sectors working at a local level. The lead player in the LSP is the local authority and other players will include the police and the primary care trust.

The LSP creates a long-term vision for the area to tackle local needs. The vision is set out in the sustainable community strategy (SCS). New Local Area Agreements (LAAs) form the heart of the new local performance framework. They help deliver the ambitions for the place and its people, set out in the Sustainable Community Strategy. The Sustainable Community Strategy must contribute to sustainable development. According to the guidance, for a local priority or policy to be sustainable, it should respect five principles:

- living within environmental limits;
- a strong, healthy and just society;
- achieving a sustainable economy;
- promoting good governance; and
- using sound science responsibly

Responsible local authorities are required by the Local Government Act to consult 'such other persons as appear to it to be appropriate'. The biggest dividend in joint working is probably in preventive health. Many of the underlying determinants of ill health, such as housing, employment, air quality, crime and community safety are in the local authority domain.

### 2.1.5 Local Area Agreements National Indicators

All LAAs are required to select from a national set of indicators against which to monitor progress. These include items related to education, social services, health and transport though the intention is that these should not be seen as specific to a service but to guide all those who can have some influence. As an example the following indicators may have relevance to transport and health cooperation:

#### **Safer and Stronger Communities**

NI 004 Percentage of people who feel they can influence decisions in their locality

NI 005 Overall/general satisfaction with local area

NI 017 Perceptions of anti-social behaviour

#### **Health and Wellbeing - Adults and Children**

NI 119 Self-reported measure of people's overall health and wellbeing

NI 120 All-age all cause mortality rate PSA 18

NI 121 Mortality rate from all circulatory diseases at ages under 75 DH DSO

#### **Children and Young People**

NI 048 Children killed or seriously injured in road traffic accidents

NI 198 Children traveling to school - mode of transport usually used

#### **Tackling Climate Change**

NI 185 CO<sub>2</sub> reduction from Local Authority operations

NI 186 Per capita reduction in CO<sub>2</sub> emissions in the LA area

NI 194 Air quality - % reduction in NO<sub>x</sub> and primary PM<sub>10</sub> emissions through local authority's estate and operations

#### **Environmental Improvements**

NI 195 Improved street and environmental cleanliness (levels of litter, detritus, graffiti and fly posting)

NI 197 Improved local biodiversity - proportion of local sites where positive conservation management has been or is being implemented

#### **Transport**

NI 167 Congestion - average journey time per mile during the morning peak

NI 175 Access to services and facilities by public transport, walking and cycling

NI 198 Children traveling to school - mode of transport usually used

Indicator NI188 is an interesting target in that it measures an area's level of readiness for climate change. This idea of a level, rather than a statistical measurement, could be a model for a local indicator to measure the extent to which local authorities are concerned about health via transport.

In practice none of the transport officers interviewed have had any involvement so far with LAA leads for any National Indicator outside of their remit (for example the school travel officers had not been contacted by the obesity leads)..

### 2.1.6 Local Area Agreements Joint Strategic Needs Assessment

A new feature of the health improvement landscape that supports the LAA process and also provides an added impetus to partnership working is the joint strategic needs assessment (JSNA). The Local Government and Public Involvement in Health Act 2007 places a duty on local authorities and PCTs to undertake JSNAs, defined as a "joint analysis of predicted health and well-being outcomes, what the community wants and a view of future needs".

It remains to be seen whether in practice this is seen narrowly as an assessment of the need for health facilities or used as an opportunity to assess the wider needs for wellbeing. One of the problems identified by regional planners is, for example that when consulting on a housing development that includes no footpaths the only comments many expect from a PCT are such as "there are 60 homes proposed and the local GP has spare capacity so we have no comment".

## 2.2 "Be Active, Be Healthy!"

Be Active, Be Healthy establishes a new framework for the delivery of physical activity aligned with sport. Published in Feb 2009 it includes a breakdown of the estimated overall costs of physical inactivity (approx £8.3Bn per year in the UK).

Be active, be healthy also sets out new ideas for Local Authorities and Primary Care Trusts to help determine and respond to the needs of their local populations, providing and encouraging more physical activity, which will benefit individuals and communities, as well as delivering overall cost savings.

References to transport are included but are necessarily short. Change of travel mode is expected to arise from work "to highlight the true costs to an individual of short car journeys". It also says that "individually tailored advice and support, goal setting and feedback are particularly effective" (though it does not say how this effectiveness compares with a more strategic marketing approach).

It is claimed that future policy reviews will "assess the need to strengthen planning policy or provide additional guidance" which could overcome the problem of planning guidance already being in existence but sometimes ignored. Certainly the interview with North East practitioners suggests a guide to overcoming bad practice would be better than a set of "innovative design guidelines to promote opportunities for sport and physical activity in the design and layout of new developments"

It is encouraging that this renewed focus on physical activity does acknowledge the part that active travel can play. This should help to build partnerships, as local sport and physical activity coordinators begin to look for ways of achieving their targets.

## 2.3 Local Authority Planning

Each local planning authority is currently preparing a Local Development Framework. This is a folder of documents that sets out how an area may change over the coming years. Some of the most important elements of the Local Development Framework are included in the 'folder of

documents' which include supplementary planning guides. As an example, the London Borough of Greenwich has published a guide to health considerations in transport.

The LDF guidance as written emphasises that “good design must be the aim of all those involved in the development process and should be encouraged everywhere”. Planning Policy Guidance note 3 (PPG3) calls upon local planning authorities to “promote design and layouts which are safe and take account of public health, crime prevention and community safety considerations”.

PPG13: also says that local authorities **should** (Note it does not say “must”) give priority to people over ease of traffic movement and plan to provide more road space to pedestrians, cyclists and public transport in town centres, local neighbourhoods and other areas with a mixture of land uses;

(Additional relevant planning guidance is listed in the Appendix).

### 2.3.1 Development Control

Development control is the process of dealing with individual development proposals to ensure that they meet local, regional and national planning policies and guidelines. Each proposal is assessed on its own merits, taking into account policy, need, local circumstances and public opinion.

A minor application, which may be able to be considered by the Planning Officer under delegated powers, rather than having to be considered by the Planning Committee, should be considered within 8 weeks. Major applications should be considered within 13 weeks but can take considerably longer depending on the complexity of the issues and the amount of agreement which has been reached during pre-application discussions with the Local Authority.

Local Authorities are under considerable pressure to achieve key targets for consideration of planning applications within the agreed statutory period (8 or 13 weeks). This can encourage Local Authorities prioritise making a decision within the time period, to the detriment of the true and timely consideration of all issues concerned.

It is recognised by the sustainable transport officers in the region that they should be doing more to promote more sustainable developments. Since health and sustainability goals match there is a clear opportunity for joint working here.

### 2.3.2 Transport Assessments

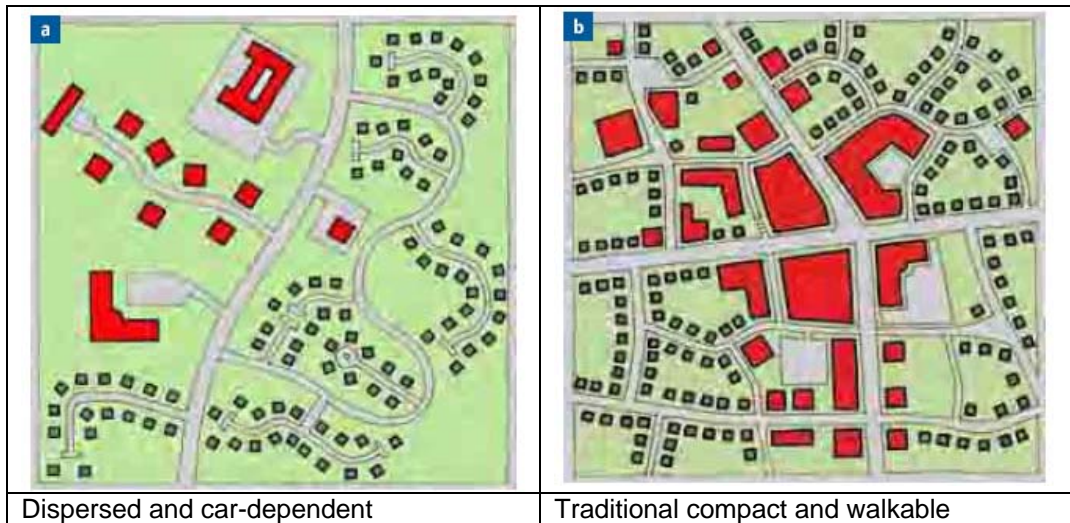
When a large planning application is submitted the developer will be asked to include a transport assessment. Traditionally this mainly set out to ensure that traffic could access the site safely and without adding to congestion. There is a move in the guidance towards including sustainable (and hence healthy) transport considerations but respondents said that actual practice is changing slowly.

The transport assessment should take place before development permission is granted and therefore offers the best potential for input from the health sector to ensure that measures to promote healthy travel are built in from the start.

### 2.3.3 Urban Design

The guidance document Urban Design in the Planning System describes Urban Design as “the art of making places for people. It includes the way places work and matters such as community safety, as well as how they look. It concerns the connections between people and places, movement and urban form, nature and the built fabric, and the processes for ensuring successful villages, towns and cities.’

Guidance on how this should be applied is given in the document “Manual for Streets” which as an example shows contrasting forms of development pattern that will have implications for health as shown in the diagram below.



The discipline of urban design is relatively new and is often confused with surface-level beautification such as using coloured paving. It is therefore notable that Newcastle University has a thriving department of urban design. Middlesbrough Council recently engaged Newcastle University to do a short training course to its staff involved in planning and development control. This covered general design and some specialist areas such as sustainability. Clearly it would be relatively easy to create a similar healthy design course to be rolled out across the region.

#### 2.3.4 Secured by Design

Secured by Design is a police initiative to encourage the building industry to adopt crime prevention measures in the design of developments to assist in reducing the opportunity for crime and the fear of crime, creating a safer and more secure environment. Secured by Design is owned by the Association of Chief Police Officers (ACPO) and has the support of the Home Office Crime Reduction & Community Safety Group and the Planning Section of The Office of the Deputy Prime Minister (ODPM).

The Secured by Design architectural advice on stronger door locks is sensible and it is true that footpaths that are isolated, dark and unattractive are undesirable both for users and non-using neighbours. As the diagrams from Manual for Streets show, however, a pedestrian link does not have to be all bad and it is undesirable for SBD to be used as an excuse to build on footpaths.



Andrew Cameron WSP

Figure 6.4 Raised crossover, but located away from the desire line for pedestrians and therefore ignored – the crossover should be nearer the junction with, in this case, a steeper ramp for vehicles entering the side street.



Stuart Reid TRIL

Figure 6.6 Uninviting pedestrian link – narrow, not well overlooked, unlit and deserted.



Tim Phoenix, Llewelyn Davies Young

Figure 6.5 Inviting pedestrian link.



Andrew Cameron WSP

Figure 6.7 Overlooked shared route for pedestrians and vehicles, Poundbury, Dorset.

Figure 3: Extract from "Manual for Streets" showing how security and health can co-exist

In reality however, local authorities in general, and individual police in particular, have interpreted the guidance more narrowly. The (low crime) borough of Fareham, for example says in its planning guidance "Leaking" culs-de-sac should be avoided, that is, where they are opened up at their closed ends by footpaths" a quick trawl through the response by police to planning applications soon turns up statements such as those in the box below. Note the use of emotive language. There was little in the full statements to balance the understandable need for security with the longer lasting health benefits. As a result footpaths everywhere are at risk.

the cycle/footpath that appears to run through and around the proposed development and connects with Phase 1 ....gives **criminals ease of access** to most properties, can become a 'purpose built Rat Run and may adversely affect householder privacy, security and may appear threatening. *Selby*  
 The path was **well used particularly by elderly residents** during the time of the visit ..... but the path being used for **drug dealing** or as an escape would be near on impossible to achieve without targeted police action. *Redditch*  
 The proposed bus link and footpath across the recreation ground **would create nuisance** to residents of Freeman Road through noise disturbance, overlooking and loss of security. *Derbyshire*  
 Boundary fencing would need to be improved to **prevent causal access** *S Oxon*

## 2.4 Influencers on Housing Developers

As part of the research we spoke to local housing developers. Their view was that the industry was changing and that top-end customers are now becoming more health aware and are looking for facilities such as a 'trim track' to be incorporated into larger developments.

They did admit, however, that on smaller developments the ratio between land that can be developed and public space becomes more difficult. An extreme example of this can be seen in the diagram below. This shows all the locations where a footpath could have been an asset and helped promote walking, especially to school. Instead around 8 extra units were built, adding a potential £8M to the developers return.



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***An Example of the kind of Housing Layout designed with the areas where a footpath/cycleway would have increased healthy transport replaced by extra housing plots (shown as dots). In this case security may have been used as an excuse for extra income, even though it is near to a school and the built-in activity will affect residents for years to come with the consequences carried by the health sector.***

Note that the consequences of layouts such as this could be building in bad health for every resident for entire generations.

In recognition of the balance between fear of crime and freedom of movement, the government did publish a companion guide to PPG3, guidance for residential development entitled "By Design: Better Places to Live". It refers specifically to Secured by Design and highlights the need for natural surveillance and the creation of active neighbourhoods through the design and layout of buildings, rather than the creation of dead end estates.

The selection of local officers interviewed (as listed in Appendix 3) recognised the problem and had no trouble identifying examples locally of bad practice where new housing has been built adjacent to cycle routes but separated from this by a fence. Other estates built with only one way out and one way in (for cars) with the most direct route for pedestrians blocked off by fences. It

can be argued that the precise details of how transport improves health may still need more research to add statistical accuracy but the examples of where transport actually reduces health in this way are so extreme and blatant as to justify immediate action.

#### 2.4.1 Health and Safety

Several interviewees mentioned that the biggest obstacle to health in the North East is mis-interpretation of Health and Safety guidance. This mirrors the comments in the Manual for Streets where concerns were expressed by some highway authorities when considering more innovative designs, or designs that are at variance with established practice, regarding whether they would incur a liability in the event of damage or injury.

This can lead to an over-cautious approach, where designers strictly comply with guidance regardless of its suitability, and to the detriment of innovation. This is not conducive to creating distinctive places that help to support thriving communities.

One respondent did admit that they have never spoken to a “proper lawyer” about this, and some advice on the counter view that street networks can encourage walking and cycling without risking being sued from central DoH legal advisors would be welcome.

## 2.5 Social Capital

There is increasing evidence that health can be influenced by ‘Social Capital’. This is best defined as the pattern and intensity of networks among people and the shared values which arise from those networks. Greater interaction between people generates a greater sense of community spirit. The main aspects of social capital include citizenship, ‘neighbourliness’, social networks and civic participation. The definition taken from the Office for Economic Co-operation and Development (OECD) is “networks together with shared norms, values and understandings that facilitate co-operation within or among groups”<sup>1</sup>.

Research has shown that higher levels of social capital are associated with better health, higher educational achievement, better employment outcomes, and lower crime rates. In other words, those with extensive networks are more likely to be “housed, healthy, hired and happy”<sup>2</sup>. All of these areas are of concern to both policy-makers and community members alike.

Although the majority of the interviewees were aware of the idea they thought the influence of social capital thinking in their directorates was limited. There is very little research currently linking social capital and transport.

#### 2.5.1 Community Involvement

There is a trend in government guidance to call for more involvement by local and community groups and charities - the ‘third sector’. The importance of proper communication at all stages of public policy is also being recognised. This offers opportunities for a broad range of interested parties to cooperate on projects associated with transport and health. Key players in this would be:

Living Streets (formerly the Pedestrians Association) with a long and distinguished history of upholding the rights of walkers and more recently campaigning for better spaces

Sustrans: An organisation that arose from the construction of a cycle path but which is now involved in a wide range of sustainable transport activities.

The North East also has a consortium of voluntary groups called NECTAR which offers an opportunity for these groups to have a collective voice.

All of these groups would welcome the chance to work in healthy travel schemes. Indeed Newcastle City Council already has a close working relationship with Living Streets. The project manager is enthusiastic about the arrangement saying that it has genuine benefits for the council in terms of using local community representatives to lead the interaction with local communities.

## 2.6 Smarter Choices

The package of measures aimed collectively at reducing dependence on single-occupant cars for short journeys is known as 'Smarter Choices'. This represents a menu of options capable of reducing single occupancy car use. Ten activities are described in the Smarter Choices guidance including:

- Workplace and school travel plans;
- Personalised travel planning, travel awareness campaigns, and public transport information and marketing;
- Car clubs and car sharing schemes; and
- Teleworking, teleconferencing and home shopping.

The latest guidance from DfT stresses the importance of this approach, and the good practice guide suggests a reduction in car use of up to 11% is possible in some areas. In practice there are lingering problems in that:

- the approach is menu-driven and authorities are invited to pick and choose;
- the guidance is not based on fundamental theories of behaviour change but suggests adding together measures that have been used before;
- They require predominantly revenue funding which is harder for local authorities to allocate to transport schemes; and
- Targets in LTP2 are either unrelated to smarter choices or are hard to relate directly to associated changes (the initial awareness raising that is an essential precursor to behaviour change will not immediately result in a reduction in car use as measured across screen-lines, for example).

As a result a review by the DfT in 2007 found that the actual uptake of these activities in local authorities was patchy at best and tokenistic in others.

The North East has a thriving association of smarter choices officers who are enthusiastic and dedicated. A small amount of revenue funding could be the necessary catalyst to create a highly beneficial action programme.

### 2.6.1 The Darlington "Local Motion" Smarter Choices Demonstration Town

The North East has one of only three towns in England where a concerted effort has been made to create an exemplar of what can be achieved through funding Smarter Choices at the maximum rate that would be realistic within Local Authority budgets (£3.25M over 3 years). The results have been impressive as shown in the box below:

**Darlington Achieved:**

- (a) 9% reduction in car trips (overall mode share of 41% down to 37%) averaged across the whole population of the town. (This is equivalent to 3.8 Million car trips per year)
- (b) 15% increase in walking trips (25% up to 29%)
- (c) 65% increase in cycling trips (1% up to 2%)
- (d) Decline in bus patronage (Data reported within commercial restrictions by bus operators) across the Borough, though a slight increase between 2005/6 and 2006/7.

Darlington was also successful in bidding for funding for a similar cycling demonstration town, in which a town-wide effort is made to increase cycling.

The results are being monitored carefully and suggest that for a relatively small amount of public funding (compared with the cost of road building or running the health service) all of the main towns in the North East of England could be healthy travel towns. Working together with the Darlington team to establish a programme for increasing healthy and active travel in every town in the North East would be a very valuable opportunity for the regional director of public health to cooperate with the transport sector

## 2.7 Policies Summary

- The UK does not have a happy record of joined-up thinking that links health to transport or land use planning. The transport sector still appears to be dominated by considerations of safety and avoiding risk;
- Local interviewees had plenty of examples where even the most basic common sense rules of connecting a housing estate to a cycle way have not been followed;
- There are improvements on the horizon in terms of community planning and the LAA system gives good opportunities to work together. Future CO2 priorities will help healthy travel if linkages are established.
- Be Active, Be Healthy offers an opportunity for physical activity coordinators to become involved in promoting healthy and active transport.
- Regionally the focus of attention is on major capital projects which support the economy. This is likely to dominate decision at least until the recession ends.
- The DfT is still not talking up health priorities and there is a need to lobby for LTP3 to place greater emphasis on health;
- At a local level guidance on 'Secured by Design' should place health considerations in the priority they deserve, with crime being designed for after that; and
- Regional groups of smarter choices officers exist and offer a ready-made opportunity for intervention.

## 3. Literature Review

The first stage of this project was to establish a 'long list' of options for policy change that had been shown to be important in improving the environment for cycling, walking and other forms of physical activity. We consulted with physical activity experts to establish the most recent and authoritative review documents that had investigated this topic in the last two years, and that had direct relevance to UK public policy. Although there has been an increasing number of reports and reviews looking at this area in the UK in recent years, there was strong consensus that the following three documents were the most relevant:

- National Institute for Health and Clinical Excellence (2008). Public health guidance: Promoting and creating built or natural environments that encourage and support physical activity. London, NICE.
- National Heart Forum (2007). Building Health: Creating and enhancing places for healthy, active lives. What needs to be done? London. National Heart Forum.
- Foresight (2007). Tackling Obesities: Future Choices. London. HMSO

We then reviewed the recommendations from each of these reports, and combined them to form the master list of options for policy change for further consideration.

The relevance of each document is outlined, along with the methods used to review the literature and reach their conclusions. The recommendations of the three reports are listed below in Table 3.1

### 3.1.1 NICE guidance on 'Promoting and creating built or natural environments that encourage and support physical activity'.

This is arguably one of the most important documents on physical activity to have been published in the UK in recent years. It has direct relevance to the current project as it focuses specifically on changes to policies on transport and the built and natural environment that might facilitate increased physical activity.

The guidance is written for NHS and other professionals who have a direct or indirect role in – and responsibility for – the built or natural environment. This includes those working in local authorities and the education, community, voluntary and private sectors. The guidance offers the first national, evidence-based recommendations on how to improve the physical environment to encourage physical activity. It demonstrates the importance of such improvements and the need to evaluate how they impact on the public's health.

The following databases were searched for interventions involving a change to the environment and which reported physical activity outcomes (from January 1990–July 2006): Cambridge Scientific Abstracts (CSA), Cambridge Scientific Abstracts Education Resources Information Centre (CSA ERIC), CINAHL, Cochrane Library, EMBASE, Global Health, ISI Science Citation Index and Social Science Citation Index, MEDLINE, Public Affairs Information Services (PAIS), Psychic, PsycINFO, SIGLE, SportDISCUS.

The review data was summarised by NICE in evidence tables. The findings from the studies were synthesised and used as the basis for a number of evidence statements relating to each key question. The evidence statements reflect the strength (quantity, type and quality) of evidence and its applicability to the populations and settings in the scope. (see Table 3.1)

### 3.1.2 Building Health

Building Health is the result of a partnership of three organisations.

- The **National Heart Forum**: the leading alliance of over 45 national organisations working to reduce the risk of coronary heart disease in the UK.
- **Living Streets**: the champion of streets and public spaces for people on foot, working on practical projects to create safe, vibrant and healthy streets for all.
- The **Commission for Architecture and the Built Environment**: the Government's advisor on architecture, urban design and public space.

The project set out to “increase awareness of the public health role of organisations concerned with urban design and improving the public realm, in particular in relation to population levels of physical activity, and to facilitate implementation of good health-promoting practice.”

The project aimed to produce policy recommendations for improving the environment for physical activity, based on expert consensus.

The authors produced a total of 75 policy recommendations, which were discussed and refined at an expert consensus meeting. This is reflected in our priority recommendations listed below.

### 3.1.3 Foresight: Tackling obesity

The Foresight report was one of the most influential reports in recent years to focus on the growing problem of obesity. It took a high-level strategic approach to the prevention of obesity. Rather than focusing on specific interventions, it recommended a paradigm shift in the way we think about obesity, with a need for a systemic society-wide response.

The project gathered scientific evidence from across a wide range of disciplines to inform a strategic view of this issue. While the report was informed by a great deal of scientific thinking (including a number of systematic reviews) it did not follow a strict process in the same way as the other two reports. Instead it focused on looking ‘upstream’ at the issue of obesity and focusing on how changes to the environment are a necessary part of any response to support behaviour change and appropriate behaviour patterns. They pointed out that while “solutions to address the obesogenic environment such as changes in transport infrastructure and urban design can be more difficult and costly than targeting intervention at the group, family or individual. However, they are more likely to affect multiple pathways within the obesity system in a sustainable way”. (Foresight, 2007, P.11)

## 3.2 Summary of the Literature review.

Transport has a wide range of impacts on health. Transport influences health in a positive way:

- helping people to improve their health through walking or cycling;
- enabling access to health, employment and other services; and
- building social capital through allowing people to get to friends and families and other social networks.

However, the transport system also has negative influences on health and the environment, notably through

- Inactivity due to car dependence;
- road traffic injuries;
- air pollution;
- traffic noise;
- impacts on climate change and

- psychological and social impacts (Cavill et al 2008).

Note that the evidence leads us to prioritise actions that aim to increase the proportion of journeys undertaken by walking and cycling. This is because such a modal shift from car travel would be associated with positive changes in all the above health impacts. While interventions focusing on improving road safety, improving air quality or fuel efficiency are also important, they do not have the same broad benefits to public health.

### 3.3 Mental Health

The evidence linking mental health to transport considerations is very scarce. A review for TfL found that the following may have some influence on mental health:

- Density and escape i.e. feeling dissatisfied with available green space and/or social facilities or feeling overcrowded;
- Design, such as not liking the look of the estate or roads;
- Physical incivilities, including vandalism, poor maintenance and lack of beatification;
- Housing quality, eg damp;
- Fear of crime, i.e. being unable to get out; and
- Neighbourhood noise

The overall understanding of what caused some people to suffer whilst people with the same environmental factors will not is still relatively weak, however. The lack of prioritisation of measures targeting mental health in all three of the key publications is not a reflection of its lack of importance but on the lack of understanding of this most complex of issues. If the North East has ambitions to become a centre of excellence in health policy then this is a subject area in great need of more research and the local research centres would be well-placed to do this.

### 3.4 Long List of Recommendations from the Key Evidence Reviews

As there are already the three principal research outputs listed above the first task for the project team was to map the findings of these, omit duplicates and condense them into a usable format. Every recommendation from each of the three reports was combined into the table below: (with the key themes identified by the study team being highlighted in *red italics* in the table)

**TABLE 3.1 SUMMARY OF RECOMMENDATIONS**

Issue	Foresight	NICE	Building Health
<b>Overall recommendation</b>	<ul style="list-style-type: none"> <li>• Paradigm shift</li> <li>• Societal response to obesity</li> <li>• Change the environment alongside focused interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Evidence-based recommendations for interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Specific policy recommendations to support physical activity</li> </ul>
<b>Strategic planning</b>	<p><i>Introduce health as a significant criterion in all planning procedures (including new build and upgrading of the current infrastructure)</i></p> <p>Designing opportunities for health and activity into architecture and urban</p>	<p>Involve all local communities and experts at all stages of any development to ensure the potential for physical activity is maximised.</p> <p><i>Ensure planning applications for new developments always prioritise the need for people.</i></p> <p><i>Ensure local facilities and services are easily accessible on foot, by bicycle and by other</i></p>	<p><i>Apply a ‘health check’ to every investment programme, focusing on the impact that the programme will have on levels of physical activity and other aspects of health.</i></p> <p><i>Ensure that health and physical activity (in partnership with sustainability) are key goals in the Community Strategy; Local Transport Plan, Regional Spatial</i></p>

<b>Transport</b>	<p>design.</p> <p>Making better use of existing planning regulations and design innovations (facilitated by better sharing of best practice)</p> <p>Considering the broader environment, including the distance to frequent destinations such as shops, workplaces and schools, along with the diversity of land uses in a neighbourhood (residential, commercial, industrial).</p>	<p><i>modes of transport involving physical activity. Ensure children can participate in physically active play.</i></p> <p>Assess in advance what impact (both intended and unintended) any proposals are likely to have on physical activity levels. Make the results publicly available and accessible.</p>	<p><i>Strategy, Local Development Framework, and Sustainability Appraisal.</i></p> <p>Publish a 'public realm strategy', which encourages the informal and unconstrained use of streets and public spaces.</p> <p><i>Take action to break down the conventional divide between traffic engineers and urban design. This should be done by introducing new organisational structures, new training arrangements, and fresh approaches to professional definitions. Procedures such as 'safety audits' and 'risk assessments' should be radically overhauled to take account of findings relating to risk compensation.</i></p>
	<p>Promoting 'active transport' (e.g. walking and cycling).</p> <p>Increasing connectivity, land-use mix and walkability of the environment.</p> <p><i>Increase the 'walkability' and 'cyclability' of the built environment (urban and rural)</i></p> <p>Reducing car use</p>	<p><i>Ensure pedestrians, cyclists and users of other modes of transport that involve physical activity are given the highest priority when developing or maintaining streets and roads. Use one or more of the following methods:</i></p> <ul style="list-style-type: none"> <li>• <i>re-allocate road space to support physically active modes of transport (as an example, this could be achieved by widening pavements and introducing cycle lanes)</i></li> <li>• <i>restrict motor vehicle access (for example, by closing or narrowing roads to reduce capacity)</i></li> <li>• <i>introduce road-user charging schemes</i></li> <li>• <i>introduce traffic-calming schemes to restrict vehicle speeds (using signage and changes to highway design)</i></li> <li>• <i>create safe routes to schools (for example, by using traffic-calming measures near schools and by creating or improving walking and cycle routes to schools).</i></li> </ul>	<p>Gain support from the local authority planning departments to key exemplar schemes that involve local participation in the management and maintenance of streets and public spaces, in order to build confidence among the public that a civilised public realm is a realistic possibility.</p> <p><i>Adopt the policy of prioritising pedestrians and cyclists in the transport policy statements. Produce an assessment of whether the authority has delivered that aspect of the policy as part of their annual plan (whether Local Transport Plan, Borough Spending Plan or local implementation plan).</i></p> <p><i>Set demanding targets for the share of trips made by walking and cycling, over a range of terms up to 25 years. Allocate transport budgets to walking and cycling proportionate to their target share, and performance-manage against these targets.</i></p> <p>Develop and implement approaches prioritising walking and cycling. This could include, for example: minimum cycle-parking and maximum car-parking standards for new developments; standards of connectivity to ensure successful mixed-use development; high densities; and <i>use of 20mph as a default speed limit.</i></p> <p><i>Scrap Travel Plans for all</i></p>

		<p>Plan and provide a comprehensive network of routes for walking, cycling and using other modes of transport involving physical activity. These routes should offer everyone convenient, safe and attractive access to workplaces, homes, schools and other public facilities. They should be built and maintained to a high standard.</p>	<p><i>significant trip-generating developments, and replace them with Transport Assessments, based on the achievement of a set proportion of journeys by each mode (e.g. walking, bike or car) to be agreed with planning authorities early in the planning process.</i></p> <p>Identify all subsidies to private motor traffic, such as workplace car-parking below market rate, car allowances above marginal mileage cost, and private use of company vehicles. Remove those subsidies, or should offer equivalent or higher value inducements to users of public transport, walking and cycling.</p> <p>Review operating policies, such as transport and travel guidance to staff, car and cycle allowances, working practices and dress codes.</p> <p><i>Improve enforcement of traffic law. Move towards adopting 'Vision Zero' road safety principles, as implemented in Sweden.</i></p> <p>Establish a programme of Community Street Audits, as piloted by Living Streets, and provide guidance on their use.</p> <p>Local authority planning departments should require promoters of residential developments above a certain threshold size to prepare a statement explaining how residents would be able to walk, within a specified time, to a specified range of local services and facilities – for example, to a food shop, primary school or health centre.</p>
<p><b>Public open spaces</b></p>	<p>Improving perceived and actual safety, greenery, aesthetics and upkeep of neighbourhoods.</p>	<p><i>Ensure public open spaces and public paths can be reached on foot, by bicycle and using other modes of transport involving physical activity. They should also be accessible by public transport.</i></p> <p><i>Ensure public open spaces and public paths are maintained to a high standard. They should be safe, attractive and welcoming to everyone.</i></p>	<p>Link local authority policy on open space to transport policy. Open space should be accessible for pedestrians, cyclists and public transport, and have adequate cycle parking, and promote active travel.</p> <p><i>Re-structure local authority departments to bring together into one unit all those responsible for the planning, design, management and maintenance of parks and urban green spaces. This should be seen as a green</i></p>

<p><b>Buildings</b></p>	<p>Improving the design and layout of buildings themselves can support physical activity with, for example, prominent and appealing staircases rather than escalators or lifts.</p>	<p>Those involved with campus sites, including hospitals and universities, should ensure different parts of the site are linked by appropriate walking and cycling routes. (Campuses comprise two or more related buildings set together in the grounds of a defined site.)</p>	<p><i>or natural 'public realm'.</i></p> <p>Develop partnerships with local, regional and national organisations to enable joint funding and ownership of programmes to improve parks and green spaces and to maximise their health benefits.</p> <p>Continue to seek developer contributions under Section 106 agreements of the Town and Country Planning Act 1990 for outdoor sport, play and open space facilities, whether on- or off-site.</p> <p>Move local authority planning departments from a reactive planning mechanism to holistic engagement from the start of the development process (the Enquiry by Design approach). This is in line with current statutory guidance on collaborative planning.</p>
	<p><i>Ensure new workplaces are linked to walking and cycling networks. Where possible, these links should improve the existing walking and cycling infrastructure by creating new, through routes (and not just links to the new facility).</i></p> <p><i>During building design or refurbishment, ensure staircases are designed and positioned to encourage people to use them.</i></p> <p><i>Ensure staircases are clearly signposted and are attractive to use. For example, they should be well-lit and well-decorated.</i></p>	<p><i>Consider Local Development Orders (LDOs) on larger developments, as these go further than a masterplan because it enables the form of development to be approved even if it is to be delivered through successive phases.</i></p>	
<p><b>Schools</b></p>	<p>Schools</p> <p><i>Ensure school playgrounds are designed to encourage varied, physically active play.</i></p> <p>Primary schools should create areas (for instance, by using different colours) to promote individual and group physical activities such as hopscotch and other games.</p>	<p><i>Recognise the importance of walking and cycling – on the way to and from school, within the school day, and in curriculum activity.</i></p> <p><i>Establish regional and school-level policies and programmes to promote walking and cycling and to discourage use of sedentary, motorised modes of transport.</i></p>	

A shortened summary of the overall findings of the research is shown below:

**Table 3.2: Examples of policy interventions and their potential health-related outcomes (Cavill et al, 2008).**

Policy intervention	Potential health-related outcomes						
	Promoting physical activity	Reducing crashes and road traffic injury	Reducing air pollution	Reducing noise pollution	Reducing greenhouse gas emissions	Increasing social inclusion	Improving access
Promotion of safe walking and cycling	+	+	+	+	+	+	+
Investment in infrastructure for safer walking and cycling	+	+	+	+	+	+	+
Travel planning and accessibility planning	+	+	+	+	+	+	+
Traffic-calming and speed reduction in residential areas	+	+	+	+	+	+	+
Enforcement of speed limits/ speed management	+	+	+	+	+	+	+
Reducing transport demand (e.g. promoting telecommunication)	+	+	+	+	+	+	+
Congestion charging (road pricing) and parking charges	+	+	+	+	+	+	+
Cleaner fuels and more efficient vehicles	○	○	+	○	+	+	○
Noise reduction	○	○	○	+	○	+	○
Safer cars (including safety for pedestrians)	+	+	○	○	○	+	○
Enforcement (e.g. seatbelts/child restraints)	+	+	○	○	○	+	○

+ Policy intervention likely to lead to positive health-related outcome  
 ○ Policy intervention not likely to lead to health-related outcome

### 3.5 Selection of Ideas

This report is firmly based on available evidence, but it should not be seen to be ‘scientific research’. Instead the objective at this stage was to work towards identifying practical evidence-based interventions related to transport and land use that could be used in the North East to improve health. From the long list of ideas we have created a top seven which are represented in the literature as being the most important opportunities for increasing health.

We then used three experts to rank them for potential impact on health. These experts had access to the results of scientific research where this exists and where it does not they were asked to use their professional judgement. Given that even the best possible measure will be ineffective if it is not implemented, we also used a selection of experts to rank the projects for their implementability in a North East setting.

### 3.6 A Conceptual Framework

The Smarter Choices agenda was described earlier as a menu list. The selection process above represents mainly lists. In order to bring an overall understanding and to help ensure an equitable coverage it is helpful to consider a framework of understanding.

A theory of behaviour change that has high levels of support among researchers is the Theory of Planned Behaviour (Ajzen 2004). This proposes that change is influenced by people's individual inclination, on their perceptions of the opportunities to change, and the extent to which they feel society has obligations on them to behave in a certain way.

This could be simplified into Needs (obligations), Networks (opportunities) and Niceties (Inclination).

### 3.7 Table of Recommendations

The recommendations in the main reports, grouped according to the conceptual framework, and then reviewed by an expert panel to establish the likely impact and the likelihood of implementation can them be summarised as follows with the scores from four experts in the field listed:

		<b>Change Needed</b>	<b>Potential impact on health</b> 1=low 5= high	<b>Action Needed</b>	How implemen table is this 1=not 5= easy
<b>NEED TO TRAVEL</b>	1	Health and physical activity with sustainability should be key goals in Regional Strategies	2,3,2,2	Apply a 'health check' to every regional programme,	3,4,3,3
		Health and physical activity with sustainability to be key goals in the internal local authority strategies	3,2,3,3	Apply a health check to all local strategies including LAA and LTP	3,3,3,2
	2	New development and change of use of existing development should promote a general reduction in travel especially by unsustainable modes	4,4,4,4	Accessibility planning to be required above a certain threshold among all agencies (inc Post Offices & NHS). Car parking to be used as a trip reduction measure.	3,2,3,2
		Planning applications for new developments to prioritise the opportunities for active travel	2,4,3,4	Apply a 'health check' to every development application above a certain threshold.	3,2,2,3
	3	Travel Plans for all significant trip-generating developments, including schools and hospitals integrated with Transport Assessments with targets for walking and cycling (including for leisure such as child play)	2,4,2,4	All planning authorities to adopt travel plans early in the planning process and demand targets and monitoring	3,3,2,3
	4	The full external costs of transport should be recognised, especially the cost to the health sector.	4,4,5,5	Transport schemes that recover full costs such as road-user charging schemes should be introduced.	1,1,1,2
<b>NETWOR KS</b>	5	Policy of prioritising pedestrians and cyclists with demanding	3,4,3,4	Performance-manage against these targets.	3,2,2,3

		targets over a range of up to 25 years. budgets proportionate to target share		Produce annual progress assessment	
		Road Planning : Active modes given highest priority for streets and roads	4,4,3,4	re-allocate road space (widening pavements and introducing cycle lanes) restrict motor vehicle access (closing or narrowing roads to reduce capacity)	2,1,4,3
		Traffic Management to place greater priority on health	2,3,3,3	traffic-calming schemes to restrict vehicle speeds safe routes to schools creating or improving walking and cycle routes (with protection against parking) Links to green spaces and links Use of 20mph as a default speed limit. Improve enforcement of traffic law	3,3,4,3
<b>NICETIES</b>	6	There should be more multidisciplinary working between traffic engineers, urban design and health professionals	2,2,3,2	New organisational structures, joint-working, training. Safety audits' and 'risk assessments' to become part of (and not superior to) health check.	3,3,2,2
	7	Change in public knowledge, belief and attitudes	2,3,3,4	Travel Awareness campaigns to highlight active travel	2,3,2,3

**Table of Recommendations with the scores from four health and transport specialists**

It was intended initially to derive an expert score following Delphic iteration (in which the scores of the others are fed back and the respondent is asked to reconsider their score in the light of the views of others). In the event, however, the variation was considered to be important information, providing both a score and an indication of the reliability of that score.

The barriers to implementing the best ideas come from many areas, the most significant being:

- Cost;
- Public acceptability;
- Need for cooperation with external parties; and
- Need for a commitment internally

Each of these varies by organisation but in order to begin the refinement process the transport experts were asked to estimate the overall likelihood that these could be implemented.

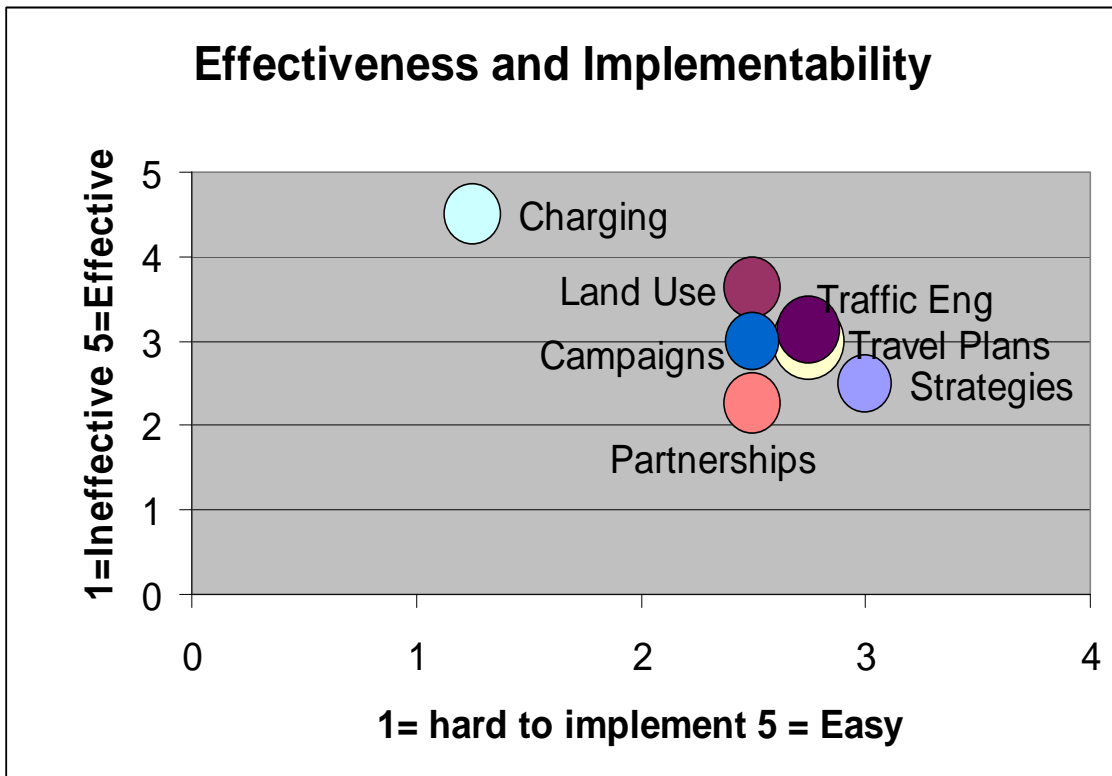
The relationship between Value and Implementability was then examined graphically

This diagram also gives an idea of that needs to happen in order to make ideas more effective, either by making them more effective or easier to implement.

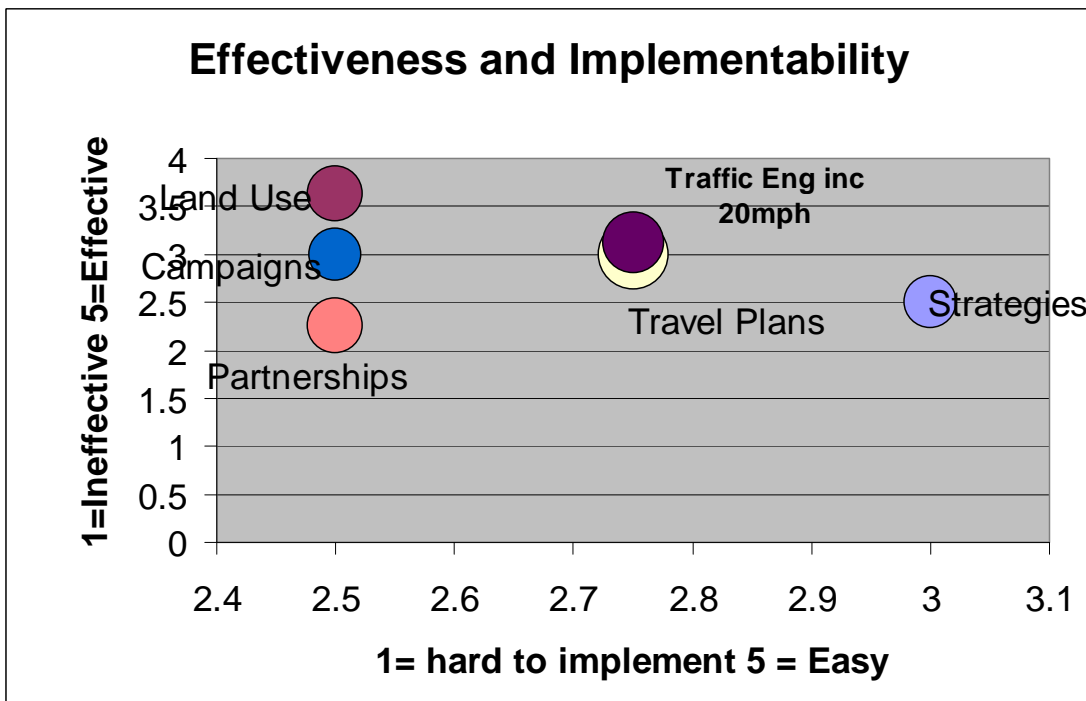
The full table of recommendations can be further summarised down to the seven main areas listed below:

NEED TO TRAVEL	1: National, Regional and Local transport <b>strategies</b> should consider health implications of transport
	2: <b>Land Use</b> of New developments should be planned so as to reduce car use and encourage healthy and active transport
	3: All large occupancy sites (including hospitals themselves) should have Sustainable <b>Travel Plans</b>
	4: The evaluation of transport projects should include consideration of the costs it imposes on health. Projects that capture these costs, such as <b>congestion charging</b> are good for health.
NETWORKS	5: <b>Traffic Engineering</b> and Urban design should promote active and healthy transport. 20mph should be the normal speed in urban areas.
NICETIES	6: Health should form an active part of all relevant local area <b>Partnerships</b>
	7: Social marketing <b>campaigns</b> should be targeted at the public and at internal stakeholders.

With seven factors it then becomes possible to look graphically at the relationships between effectiveness and implementability. This is shown below:



Because the congestion charging option dominates, it is easier to see at a scale where this option is deleted, leaving:



This demonstrates that there is good agreement that road user charging would be effective but that there is no doubt about the difficulty of implementing it. It also highlights that changes in land use planning represent a good mix of effectiveness and implementability. Though in reality all of the measures are clustered around the 'worth doing' position.

Although this should not be seen as a quantitative exercise it is interesting to see that the order of priority from a simple addition of factors would be

Rank	Initiative	Indicative (only) score
1	<b>Land Use</b> of New developments should be planned so as to reduce car use and encourage healthy and active transport	6.125
2	<b>Traffic Engineering</b> and Urban design should promote active and healthy transport. 20mph should be the normal speed in urban areas.	5.875
3	All large occupancy sites (including hospitals themselves) should have Sustainable <b>Travel Plans</b>	5.75
4	The evaluation of transport projects should include consideration of the costs it imposes on health. Projects that capture these costs, such as <b>congestion charging</b> are good for health.	5.75
5	National, Regional and Local transport <b>strategies</b> should consider health implications of transport	5.5
6	Social marketing <b>campaigns</b> should be targeted at the public and at internal stakeholders.	5.5
7	Health should form an active part of all relevant local area <b>Partnerships</b>	4.75

## 4. Practical Interventions

The intention of this project was to discover opportunities to increase health via transport in the North East of England. In order to do this it is necessary to consider the full range of transport interventions. This was based on consultation with regional practitioners but combined this with the literature review to ensure full coverage of all the issues.

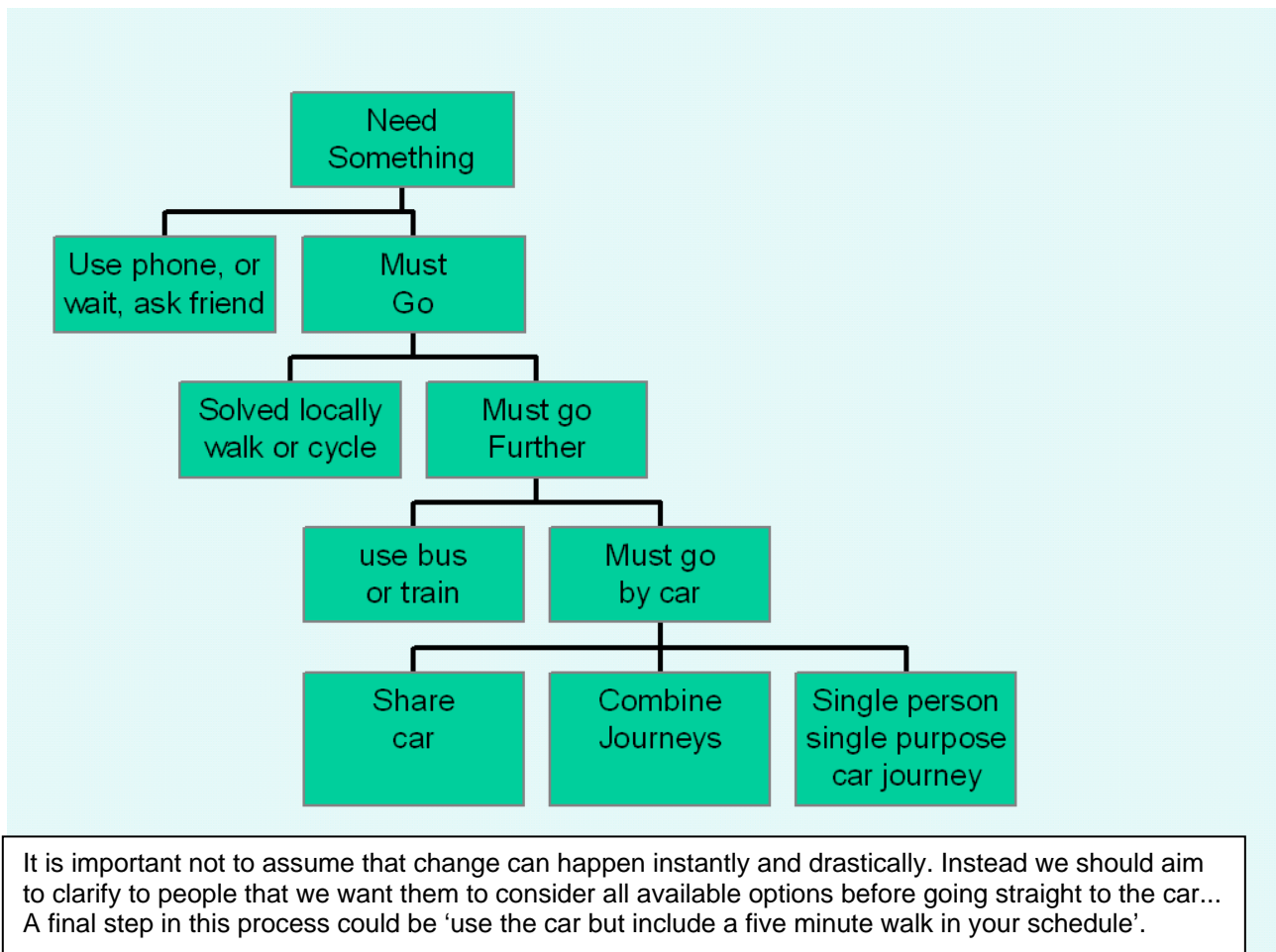
The project timescale did not permit a full scale consultation, but thanks to considerable cooperation from local professional staff (listed in Appendix 3), it was possible to get a good local viewpoint on the main themes identified in the evidence review. The findings from the evidence review and the diagram showing effectiveness and implementability were shared with respondents and proved to be a useful conversation guide.

### 4.1 The NEED to Travel

If we wait until someone has decided that a journey is essential then it becomes much harder to influence the choice of how they will make that journey. We have genuine needs and those which are imposed on us by our perception of what society expects (such as choosing the right school).

#### 4.1.1 Accessibility

Several respondents mentioned the importance of accessibility planning. This holistic study of access to goods and services has become an increasingly common way of planning transport improvements rather than the traditional approach of 'predict and provide'. Transport is a means to an end but the important thing is to satisfy people's needs. If this can be done without involving a journey then this is almost always beneficial. Hence, there should be a process of journey making that looks like the decision tree below:



A development of this could be to add in health options such as 'Park & Stride' and even after a car journey 'go for a compensatory walk around the block'.

Much use is made of Isochrones (lines joining equal time). A 30 minute bus travel zone around a hospital, for example, can identify whether health provision is available for all. This should be an essential component of the planning of new facilities. Innovations such as moving consultants to village halls rather than transporting patients to a central site have been tried elsewhere in the UK. As one interviewee said "you should not have to go to the big hospital on the hill to have your blood pressure checked" also adding that pharmacists have excellent spread of coverage in almost every community and represent a valuable asset that is "wasted selling shampoo".



justify free car parking for NHS premises in areas such as Glasgow (where it has just been introduced) where there are almost 45% of households with no access to a car.

Car park management is essential. Done properly this will ensure that essential visitors can always find a space, and the cost for essential visits such as treatments and appointments can be reimbursed via smart ticketing.

#### 4.1.3 Congestion Charging

Clearly this is a difficult area to even talk about. If one is a motorist then there is a natural aversion (as there would be to an increase in other charges for things considered essential such as water). When given a vote the people of Edinburgh and Manchester have said no, but when it was imposed the public support in London and Stockholm has been higher than expected.

Most respondents see the congestion charge as a fair way of managing demand, with most of the potential objections (such as taxing the poor) being overruled by the actual benefits (most of the really poor do not have cars and would benefit from bus improvements).

The main thing for the director of public health to acknowledge is that from a purely health point of view, congestion charging would be a good thing. All of the expected outcomes in terms of reduced pollution, increased activity and reduced accidents are positive for health.

It is not for a health director to introduce congestion charging in the North East. However, the evidence suggests that the health sector in general should have a favourable attitude towards it and should at least consider the evidence carefully, rather than taking a short-term stance against it.

It should be noted that the external costs imposed by transport on society are considerable and are not (despite claims by motoring lobby groups) covered by road taxes. A substantial proportion of the external costs, such as dealing with road accidents and inactivity-related illnesses fall on the health sector.

#### 4.1.4 Site Specific Travel Plans

Since the publication of Planning Policy Guidance 13 in 2000 developers have been required to provide a Workplace Travel Plan as part of application for large developments. A travel plan is the government's preferred mechanism for getting the occupier of a site to create their own proposals for reducing single occupancy car use. A range of measures associated with this have arisen including:

- Car park management
- Public transport promotion
- Walking facilities and promotions
- Cycling facilities and promotions
- Car sharing schemes
- New work practices such as teleworking

The North East has an active group of travel plan officers, and a presentation on this report was made to their meeting in Feb 2009. All of their members are keen to help both new developments and existing workplaces achieve the most healthy and sustainable transport mix. See section below about NHS travel plans.

## 4.2 Networks

We can also look at the opportunities to switch to alternatives to single car occupant journeys. In studies of behavioural change, the perception of how easy it would be to change has been shown to be one of the most important factors.

### 4.2.1 Local Traffic Management

The local management of traffic using signs, lines and traffic signals takes place at a local authority level. Decisions as to where improvements are made are guided by local interpretation of the Local Transport Plan advice from central government. This stresses that priorities should be given to congestion, air-quality, safety and accessibility. Health is hardly mentioned in the LTP guidance.

Many if not all local transport plans refer to a hierarchy of priorities in which, typically the stated emphasis is to support

- Walking;
- Cycling;
- Public Transport users;
- Freight and specialist use; and
- Cars

Several developers of Local Transport Plans did admit that, in practice, as can be seen wherever a road starts to narrow it is usually the cycle lane that goes first and then the footpath before car space disappears. The use of a hierarchy therefore, although potentially useful for supporting health is not always having influence when the going gets tough. There is an opportunity to build on this concept and to hold authorities to account over their outcomes.

There is recognition in guidance such as the Manual for Streets that streets that create good quality places achieve a number of positive outcomes, creating a virtuous circle:

- attractive and well-connected permeable street networks encourage more people to walk and cycle to local destinations, improving their health while reducing motor traffic, energy use and pollution;
- more people on the streets leads to improved personal security and road safety – research shows that the presence of pedestrians on streets causes drivers to travel more slowly;
- people meeting one another on a casual basis strengthens communities and encourages a sense of pride in local environments; and
- people who live in good-quality environments are more likely to have a sense of ownership and a stake in maintaining the quality of their local streets and public spaces.

Well-designed streets thus have a crucial part to play in the delivery of sustainable communities, defined as ‘places where people want to live and work, now and in the future’. Some authorities appear to pay more attention to streetscape and urban design than others.

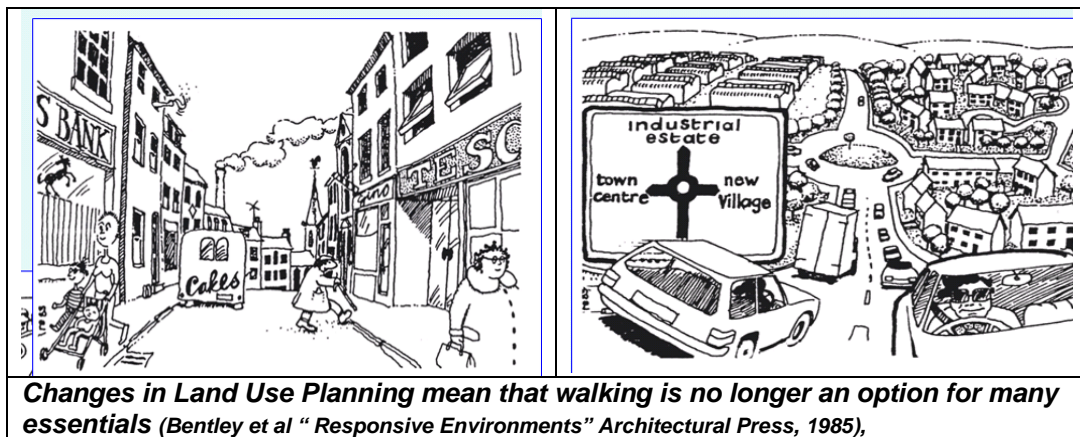
### 4.2.2 Walking

Walking is almost perfect as a human activity. It has too many health benefits to list here, and is especially available and accessible. Walking has a major role for journeys below one mile. Nationally 80% of journeys fall within this category.

A prominent group supporting more walking “Living Streets” has an office in the North East and is active in several communities. They were visited as part of the consultation process.

When considering alternatives to the car it is walking not buses or cycling that is the main alternative for the majority of car journeys. Car journeys can include “Park & Stride” – if a person makes (as many do) 1000 car journeys per year and was to add a five minute walk from the parking place every time it would amount to an annual walked distance of 450Km.

The main thing people need to encourage them to walk is a walkable distance. The Institution of Highways and Transportations suggest 600 metres as the distance people are willing to walk to a bus stop, for example, though they will walk up to two miles for some trips. People are not necessarily getting lazier but the places they go to are getting further away:



“Half of all car journeys are cycleable and one quarter are walkable.”

The key points from a health viewpoint are that walking can be incorporated into every journey. It needs no training, no equipment and is available to all but the most incapacitated.

Walking is influenced by public policies and actions. As an example of the kind of guidance available to transport planner, the New Zealand street design manual sets out some examples:

**Table 4.3 – Important elements of urban form for pedestrians**

Element	Definition	Typical benefits
Pedestrian permeability	The extent to which an accessible environment is provided for pedestrians, free of obstruction and severance.	<ul style="list-style-type: none"> <li>• There are reduced waiting times at traffic signals and crossings.</li> <li>• Pedestrians having priority at side road crossings.</li> <li>• Pedestrians can continue to use routes that are closed to other traffic.</li> <li>• Traffic-calming, low-speed zones and shared zones are implemented.</li> </ul>
Connections to destinations	The extent to which the walking network integrates with likely trip origins and destinations, including the public transport network.	<ul style="list-style-type: none"> <li>• The pedestrian network links to obvious trip ends, such as schools, shops, supermarkets, parks, public spaces and community services.</li> <li>• Particular attention is paid to the interface between trip ends and the pedestrian network, such as providing shelters, shaded seating and pedestrian signage.</li> <li>• The environment in the immediate vicinity of public transport nodes and interchanges is more intensively developed and pedestrian friendly.</li> </ul>
Strategic planning	The extent to which the local policies and strategies encourage walking as a mode of transport.	<ul style="list-style-type: none"> <li>• There is coordinated land-use and transport planning.</li> <li>• District plan development policies promote walking.</li> <li>• District plan development policies encourage increased housing density around transportation nodes and interchanges.</li> <li>• Traffic demand can be managed.</li> <li>• A regular programme of walkability audits can be implemented.</li> <li>• Local walking strategies reflect the complexity of encouraging walking, for example, linking infrastructure provision with active promotion of walking as a transport mode.</li> <li>• There is coordination between parks and roads for route planning, lighting and signage.</li> </ul>

**An example of the form of guidance used by transport planners to encourage walking**  
*(Design guide for Streets, New Zealand)*

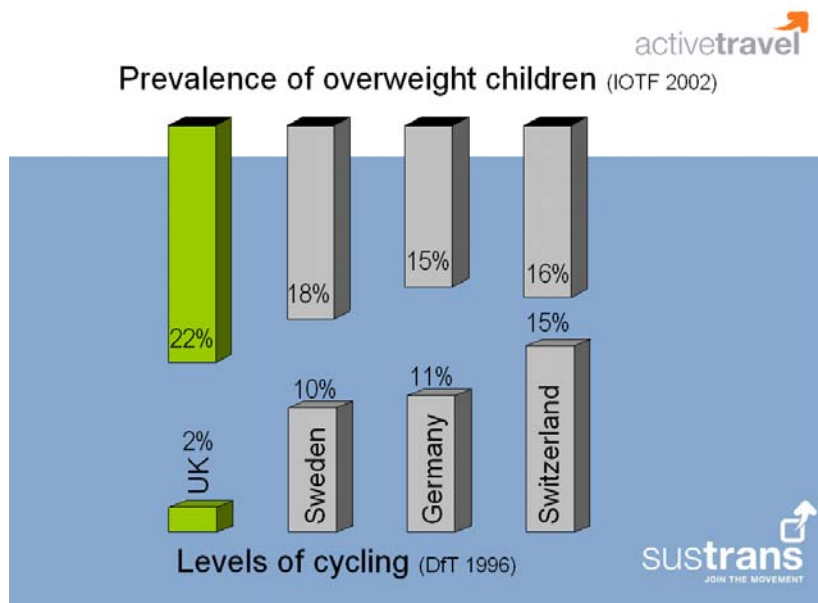
A shorthand for remembering the essentials for both cycling and walking is that they require networks that conform to the five Cs of;

- Connected
- Comfortable
- Convenient
- Convivial; and
- Conspicuous

### 4.2.3 Cycling

Cycling is one of the best possible forms of exercise in that it is non load-bearing, and involves aerobic exercise. Urban cycling even has the benefit of allowing frequent rest periods (for example at traffic lights). It does have a higher accident risk per journey than other modes but evidence suggests that this is more than compensated for by the health benefits.

The graph below demonstrates that cycling levels in Europe are considerably higher than in the UK (note that the graph does not prove any causal relationship with obesity but this is included as it is an interesting associative link. Cycling may also be symptomatic of a more general societal attitude towards health, sustainability and sociability).



Safety is a potential concern, though countries that have seen a modal shift in cycling have noted reductions in casualties as more people cycle. The increased safety for cyclists is explained by the effect of a ‘critical mass’.

Note that although provision for cyclists does make a difference, this should be in the form of “routes for cyclists” and not “cycle routes”. Studies by TRL found that cyclists much prefer a shortcut through a residential estate than a strip of green next to a main road (though there were differences between regular and occasional users).

The manual for streets suggests the approach to provision for cyclists and walkers should be as follows:

**Table 4.1 The hierarchies of provision for pedestrians and cyclists**

	<b>Pedestrians</b>	<b>Cyclists</b>
<p><b>Consider first</b></p> <p><b>Consider last</b></p>	Traffic volume reduction	Traffic volume reduction
	Traffic speed reduction	Traffic speed reduction
	Reallocation of road space to pedestrians	Junction treatment, hazard site treatment, traffic management
	Provision of direct at-grade crossings, improved pedestrian routes on existing desire lines	Cycle tracks away from roads
	New pedestrian alignment or grade separation	Conversion of footways/footpaths to adjacent- <sup>*</sup> or shared-use routes for pedestrians and cyclists

<sup>\*</sup> Adjacent-use routes are those where the cyclists are segregated from pedestrians.

The North East does have a cycling officer in several key highway authorities and a coordinator based at Gateshead Council (Neil Frier). When they were asked what could be done to increase cycling in the North East several said plainly “more funding”, whilst others mentioned “more political impetus”. Non-cyclists frequently mention ‘fear of traffic’ as a barrier though there has been no research on this important topic (and thus could be an opportunity to innovate and contribute for North East experts).

The lack of a cycling culture was mentioned. The reason why Hull has five times more cycling than comparable parts of Teesside is almost impossible to explain based on weather or kilometres of cycle lanes, but could have everything to do with an ingrained culture of cycle use in Hull such that cycling there is seen as 'normal' both by users and by those who provide for it.

It is therefore possible (though it is a complex subject and by no means certain) that promotion of cycling that used expertise in behavioural change could yield more cyclists than construction or traffic management. Such expertise should be able to be found in the health sector treating other addictive behaviours.

The links between leisure cycling and utility cycling would also benefit from more analysis. Research by TRL (Gardner, 1998) suggested that there is not a natural progression from mountain biking to cycle commuting (because people choose the best more for them for each purpose). The North East does have some fantastic leisure cycling resources, such as Keilder, Hamsterley and the C2C. These offer opportunities for promoting cycling for health, if not necessarily sustainable transport.

Consulting local cyclists on what they actually want would be a good starting point. The recently produced Guide to Social Marketing for Promoting Cycling by Cycle England describes how this can be done.

#### 4.2.4 Public Transport

The region has high usage of public transport, though this is declining fast. The metro in Tyne & Wear is a particular asset. A visit was made to Nexus who are keen to help support healthy travel. There will typically be 70% of all trips to metro stations made on foot, so the use of public transport can be part of a healthy journey. The benefits of social interaction on buses for health are less well understood but are likely to be beneficial to the majority.

The introduction of concessionary fares for older people introduces an interesting opportunity to promote social capital via bus use. The opportunity to explore new areas, have new experiences and make new friends offers health benefits (though would be an interesting example of health promotions being a drain on the transport sector).

Public transport use for the young is important as it can establish travel choice influences that will last. Children of two-car owning families can easily grow up never imagining that buses can be used for anything other than coach trips to school swimming lessons.

School travel planners in the region have helped to promote the use of public transport. An opportunity was identified for joint working that could be in the distribution of bus passes for 14 to 16 year olds. This currently is by application only but could possibly be made 'opt-out'. There will be some financial implications, but this would certainly appear to be worth a joint investigation by the school travel and healthy schools team. Nexus have a newly formed Smarter Choices team who could be a key input to sustainable transport promotions in general and public transport use in particular.

### 4.3 Behaviour Change Programmes – The 'Niceties' of managing Inclinations

Considering that behavioural change has been such as centrepiece of health campaigns such as smoking cessation, it is surprising that so little has been done to promote active transport. One or two campaigns have promoted sustainable transport and sometimes linked these to health but there has been no effective overall campaign of this sort: :

	<p>The best way to improve air quality. Sweaty feet.</p>
	<p>Examples of Marketing Campaigns: “if you’re not going far, forget the car” (left) developed by Robson Brown of Newcastle. Created in North Yorkshire but sold to 28 authorities across the UK.</p> <p>Are you doing your bit? Above. Popular among officers but not a success with the public.</p>

Note that one of the comments by Newcastle agency Robson Brown was that we have had fifty years of being told (by car manufacturers and even governments) that car ownership is a good thing. It is relatively recent that this has reversed and the message is that unrestricted car use is bad. Therefore the messages should now be clear and unambiguous. A poster showing walking boots to promote walking in York, for example, was mistaken for a shoe shop advert and thus discounted.

“A Mars a day helps you work rest and play” is a recognised slogan ‘a town on the move’ is not well understood (although “walk to school week” is). Hence the Robson Brown choice of “If you’re not going far, forget the car” which is simple, clear and achievable.

#### 4.3.1 Nationwide Initiatives

There have been some attempts to promote health and active transport. A trial campaign “everyday sport” emphasised how one of the key benefits of travel to work is that it offers a chance to incorporate some activity into every day – like owning a dog but unlike going to a gym which tends to be on fair weather days only. The everyday sport campaign was trialled and short lived but has now effectively been superseded by the Change 4 Life campaign.

Change 4 Life is a new initiative bringing together a coalition of health and education professionals, the third sector, community groups, industry and the media with the shared aims of improving children’s diets and levels of activity so reducing the threat to their future health. The goal is to create a sustainable, society-wide movement that is designed to help parents (initially) understand the health risks of their children being overweight and will point out the support that is available to them to help change behaviours around diet and activity. Change4Life will sit alongside and complement other healthy living initiatives, recognising the good work already being done.

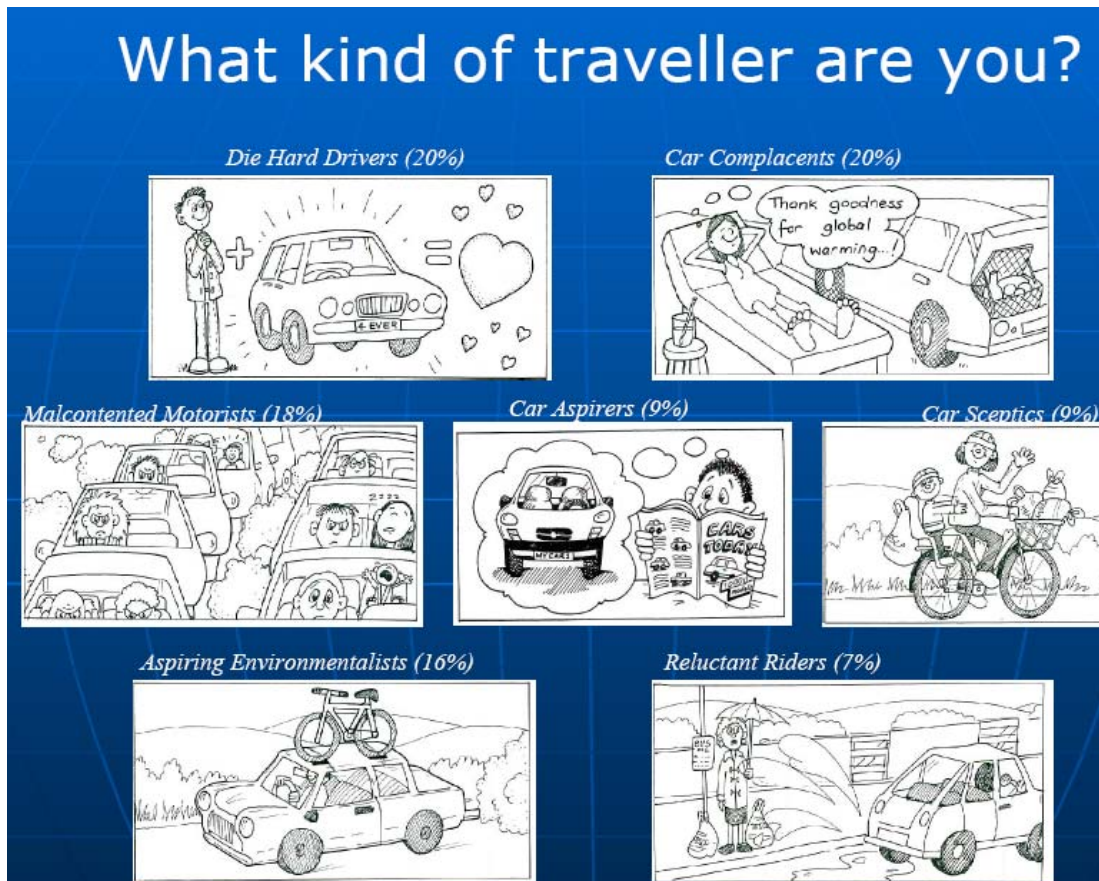
The current level of marketing of healthy transport is limited in the region but likely to grow fast. The Darlington Smarter Choices demonstration scheme is being watched carefully and Nexus has

recently set up a Smarter Choices team. Each of these teams have their own priorities which respondents admit depend to a large extent on the availability of budgets. Being such a large campaign it is important that any promotion of healthy transport should integrate carefully with C4L.

## 4.4 Targeting Interventions

The marketing of most commercial products will begin with segmenting and selectively targeting potential consumers. For social marketing to the general public this is normally still done, though there is an argument that for some basics such as reducing the impact of car use we are all potential targets because many non-drivers still influence potential car trips.

An important consideration in the North East is the number of people without access to a car. A respondent from North Tyneside stressed how important the consideration of equalities is in modern transport planning. As shown in the diagram below there are a group which can be described as ‘Reluctant Riders’ – people who currently use healthy and sustainable transport but who would dearly love to have a car. The up to one third of households who have no access to a car represent a sizeable group that should be considered from an equalities point of view.



**TABLE: A Possible Means of Segmenting the Travelling Public** (based on a PhD thesis by Jillian Anable)

A regional project to examine the potential for change in the North East based on these groupings would be a valuable exercise and could be combined with broader health considerations.

### 4.4.1 Healthy Schools and School Travel Plans

Every local authority has a school travel plan officer who helps schools create their own school travel plan. The North East has had a thriving regional school travel group with its own regional leader funded by the DfT/DCSF (based in Darlington).

The National Healthy Schools Programme: is a long-term initiative which aims to make significant difference to the health and achievement of children and young people. The impact of the programme is based on a whole-school approach to physical and emotional well-being focused on four core themes:

- Personal, Social & Health Education;
- Healthy Eating;
- Physical Activity; and
- Emotional Health & Wellbeing

The whole school approach involves working with children and young people, parents, school staff and the whole school community to provide a solid foundation from which developments and improvement are embedded in a systematic way. These processes contribute to the physical and emotional development of all members of the school community.

Transport is an integral component of the physical activity theme and schools must engage in healthy transport if they are to meet the qualification criteria.

Note however that school catchment policies can have a large influence on travel patterns, especially in the rural parts of the region. Although this is a central plank of government policies, the health sector should be aware of the extra car journeys and reduced walking of children using selected schools that are not the nearest. It is notable too that government guides to best practice will show examples of walking buses and other visible initiatives but will not mention invisible examples of best practice such as from Switzerland where each child simply goes to their nearest local school as a matter of course.

With schools being inundated with initiatives and their own priorities, a natural way of incorporating healthy and sustainable activity would be via the curriculum. The Yorkshire & Humberside region have created a post to develop curriculum materials to promote the similar but different Sustainable Schools initiative. Their teaching expert was consulted and said that it would be relatively easy to replicate in the North East with more of a health slant. There are currently school travel plan officers in areas such as Gateshead who were interviewed for this investigation. They have teaching experience and who are keen to develop suitable materials.

## 4.5 Road Safety

Every highway authority has legal duties associated with the reduction of road accidents. All local authorities in the region have a road safety officer and they are reported to work well individually and collectively. The government recently announced additional funding for road safety partnerships. This includes police and local authorities working together. In some cases members of the health sector are included, but do not always attend. This is clearly an area where local partnerships could be established, initially in road safety, but which could easily be expanded into more general policy partnerships.

As a society the UK has an unusual relationship with road accidents in that they are seen as an unavoidable part of our collective mobility. Examples exist from continental Europe, such as Vision Zero from Sweden where a person-centric approach has aimed to reduce accidents even if this causes inconvenience for motorists.

The wide scale implementation of a 20mph limit was identified in the literature search as being one of the best possible policy options. This would not just reduce road accidents but also promote healthy and active transport. It is encouraging, therefore, to see Newcastle City Council proposing just that. Other parties in the region, from transport and health, should monitor the Newcastle approach carefully.

One respondent from Gateshead said that they sometimes get complaints from the Ambulance service about response times. Although they accepted that this was reasonable they would welcome a broader health service response.

## 4.6 Pollution, Climate Change & CO2

Local air pollution has many potential negative impacts on health, many of which are caused or exacerbated by road transport. Significant improvements have been made to motor vehicles. However, the reduction in pollution from individual vehicles is being outpaced by the growth in numbers of motor vehicles on our roads. (See the appendix for more details)

It has been estimated that there were 8,100 premature deaths in the UK every year as a result of exposure to particulate matter (PM10)d, and 3,500 due to sulphur dioxide. This compares with 2,946 road accident fatalities.

It is important to note that the most significant health impacts of air pollution are related to cardiovascular and respiratory effects. This means that whilst some gains in health may be made by technical changes to improve the cleanliness of vehicle emissions, seeking to achieve modal shifts in transport use that increase the use of non-motorised transport modes are likely both to reduce air pollution and its direct impacts on health and, by improving cardiovascular fitness, also increase the resilience of the population to the ill effects of pollution.

The local authorities interviewed did mention LAQMs (local air quality management areas) but felt that the new emphasis on CO2 was making this an area in transition and they were waiting to see if LAQMs were to be superseded by 'yet another initiative'.

## 5. Consultation Summary

The intention of the consultation was to highlight areas of opportunity and need. Most of the comments are therefore included in the section above on practical interventions.

It is possible to see some general trends in the consultation response. One of the key findings being a frustration among transport practitioners that do want to work with the health sector that they find it difficult to get the right connections. “who are we going to call?” being a very common response.

There was a sentiment (no doubt shared by many within the health sector) that ‘every time we phone the health side they are re-organising and we never seem to fit their specific targets’.

### **Comments on Managing the Need to Travel**

A comparable problem with health targets is identified by those writing transport policies ‘unless we have a target it is getting harder to justify any action. So we may think health is a priority but if our targets are based on congestion then that’s the way we will go’

Among both the accessibility planners and the workplace travel planners the main sentiment was of being keen to form partnerships though as one put it “it would have to have a purpose and not just be a talking shop”

### **Changing the Networks for Healthy and Active Travel**

The pressures of work on local planners and development control officers (in late 2008) was such that they felt powerless to add any kind of quality to the mechanical task of getting applications turned around in the target period. One said, referring to the kind of dead-end housing estate shown in the earlier diagram ‘I see such rubbish passing over my desk which I know is rubbish and I am sure they know too, but what can I do’.

It is encouraging to hear the traffic management engineers being more positive. There was clearly pride in how, for example, a new development in Gateshead that used ‘Home Zone’ principles and had the fashion pioneer Wayne Hemmingway as design consultant had been made to work - ‘as engineers we are good at problem solving – just give us the right problem to solve’.

### **Changing Inclination and the Niceties of Behavioural Change**

In terms of changing attitudes there were no specific statements but a general feel that the time is right. The field of travel awareness started around 1999 and the last big public campaign “Are you doing your bit?” ended in 2001 (and was not well received in transport circles). With a new sustainable transport team in Nexus, Durham County placing increasing emphasis on travel planning and with the Darlington Demonstration Town now well established the feeling is that “we are ready to go” with a joint health and transport campaign.

## 6. NHS Premises

The main focus of this report is on public health, but it is relevant to consider the health sector itself which is a very large generator of traffic. Staff, patients and visitors to the NHS travel over 25 billion km a year and over 80% of these are by car

The NHS corporate activities have an annual budget of £90 billion; it employs more than 1.3 million people and spends over £17 billion a year on goods and services. This contributes up to 10% of regional GDP in the North East. The Newcastle hospitals alone generate 1.6 million

outpatients each of whom will usually have at least one chaperone. The three main hospitals in Newcastle have 12,500 staff.

## 6.1 Planning of Transport to Healthcare

If we consider the volume of travel and the wider implications of the location of health services, especially for disadvantaged groups, and the potential efficiency savings of optimising the travel for expensive consultants and equipment, then it becomes clear that a large NHS provider needs to examine carefully their transport efficiency.

One barrier to improving transport within the NHS as identified by Atkins' in Birmingham is that the financial accounting systems can sometimes be based on historic accident rather than on themes that would permit analysis and transport efficiency savings.

The issue of non blue-light transport is a complex one that some hospitals regionally do better than others. It is likely that savings and increased efficiency could arise from a collective review and sharing of best practice. The South Tyneside volunteer bureau and a team from Newcastle University were mentioned as being exemplars of flexible vehicle routing and scheduling

Several respondents mentioned that the interaction between the NHS and the planning authority was 'patchy' with travel planning in several areas being the responsibility of general facilities management and therefore not tied in to either sustainability or health objectives.

## 6.2 Hospital Travel Plans

The most active travel plan coordinator in a NE health setting is based at the Newcastle Hospitals Trust at the RVI. David Malone is responsible for a travel plan that includes:

- Car Park Management (including for example recently introducing pay by the hour parking at the Freeman to deter non-essential parking including from neighbouring businesses);
- Car Parking permits allocated on a needs basis. Distance, shift patterns and carer needs are all used to calculate an eligibility score;
- Subsidising public transport for staff;
- Car Sharing;
- Improved Cycling Facilities;
- Bike Doctor and Tax-free bike scheme; and
- Improving links to public transport such as Metro Stations;

The advantages of the travel planning process for the NHS are extensive and include:

- 27% reduction in single use car use by car;
- Reduction in the number of 'Did Not Attend' (DNA) which can be a significant cost and disruption to the service.

The public transport ticket discounts available to large users such as hospitals vary because several companies operate buses in the region. Some such as Arriva offer a good corporate discount rate; others (including Nexus themselves) offer a lower bulk purchase discount.

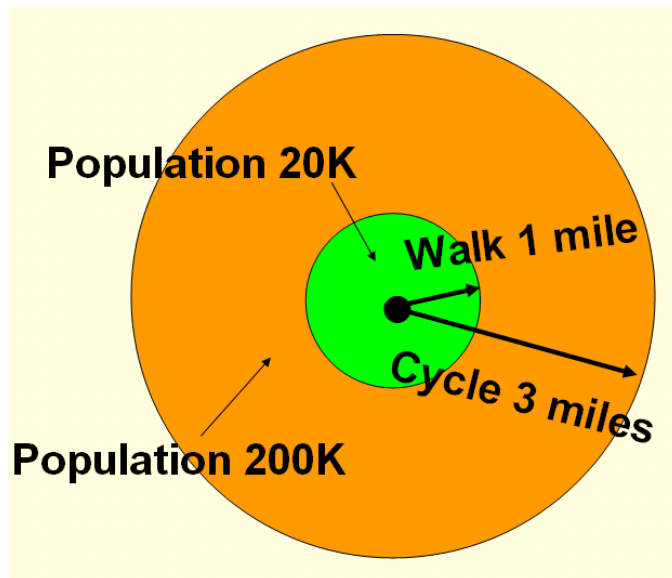
Where a discount is possible the negotiation and management can become self-financing. If 10% of the 12,500 staff purchase a £500 pass and the travel plan coordinator can gain a 3% mark-up then the post becomes virtually self-sufficient on this very narrow basis alone.

### 6.2.1 Cycling to Hospitals

It is worth a special mention about cycling to hospitals. An averagely healthy person can cover about one mile in fifteen minutes on foot. On a bicycle this is extended to almost three miles. For

an employer, or service provider this has the benefit of increasing the catchment area dramatically (thanks to  $\text{PI} \times \text{R squared}$ ).

With typical North East population density levels this means that the number of people who can walk from within a 15 minute catchment area is around 20 thousand, whereas the theoretical number of cyclists reached is a full 200 thousand. The bicycle therefore has a key role to play in serving large premises such as hospitals. (see diag)



It is a (sad) fact that nobody knows for sure what will make people cycle. Some potential cyclists will be encouraged by more cycle parking, some by financial incentives such as tax-free bikes. Segregated cycle paths undoubtedly do help, though they should be part of a package of measures including marketing.

The North East has an active group of cycle planning officers. This is an asset for the region and their full involvement would be essential to ensure any additional provision for cycling to hospitals integrates into wider plans.

As an example of how the Director for Public Health North East could help, this could start by facilitating the following steps initially at the largest facilities before regional roll-out:

- Gather together a group of staff volunteers drawn together by internal advertising to form a Bicycle User Group (BUG);
- Using BUG volunteers create the 15 minute cycling zone as a lunchtime event;
- Obtain a basemap from the local authority;
- Plot, either manually or with a GPS logging device purchased for the occasion (around £50) the locations where spot improvements or missing links are needed by users; and
- Meet with the local authority cycling officer to compare notes on the areas needing improvement.

The local authority can then be a central point for investigating the funding for improvements, either from the LTP, development contributions or special funding. A set amount (say 1 to 3% of the capital funds available) should be set aside for marketing in the full sense of the term, not just advertising. Specialists from the health sector could work with travel planners to make this effective.

## 6.2.2 Good Corporate Citizens

The NHS does have an initiative to improve its overall sustainability. In addition to the CO2 strategy it also created a framework to enable NHS trusts and PCTs to become 'Good Corporate Citizens'. <http://www.corporatecitizen.nhs.uk/>

Good Corporate Citizenship describes how NHS organisations can embrace sustainable development and tackle health inequalities through their day-to-day activities. This means using NHS organisations' corporate powers and resources in ways that benefit rather than damage the social, economic and environmental conditions in which we live. How the NHS behaves - as an employer, a purchaser of goods and services, a manager of transport, energy, waste and water, as a landholder and commissioner of building work and as an influential neighbour in many communities - can make a big difference to people's health and to the well being of society, the economy and the environment. By operating as good corporate citizens NHS organisations can benefit from a healthier local population, improved staff morale and faster patient recovery rates. They may also make big financial savings.

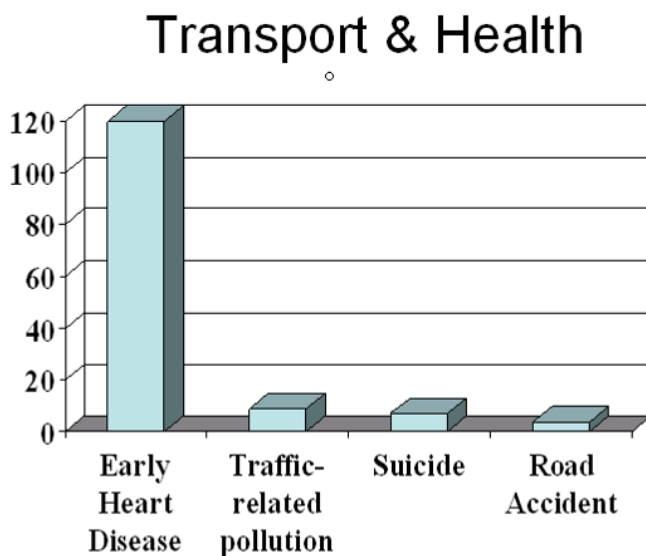
Choosing Health: making healthy choices easier identifies good corporate citizenship as one of the five new priorities for the next ten years. This offers a potential model for a cohesive and effective approach across the region. A subgroup for transport should be established.

## 7. Monitoring

One of the key questions that will need further debate is the topline indicator. Health can be measured in many different ways. At one extreme is simply the total number of deaths in the region, which is crude but easily measured. Alternatively the total numbers of days lost due to injury can be used to represent the economic burden on the region. The North East Public Health Observatory (NEPHO) are responsible for analysis and advice on health information. Increasing links between them and the transport sector would be valuable.

### 7.1 Mortality Rates

The mortality rate from circulatory disease in the North East was 109 deaths per 100,000 people (England average 90 per 100,000) in 2003- 5), The rate from cancer was 136 deaths per 100,000 people (England average 119 per 100,000), down by 18 per cent since 1996-8. The suicide rate in the region in 2003-5 was 10.3 deaths per 100,000 People. Road accident deaths for the NE are not available as a number per 100,000 but for England the average is 5.8 which allows the following graph. So the relative importance of various forms of health problem can be illustrated in a diagram such as this:



- NB This represents national figures for premature death in 2004 and would benefit from a regional version using agreed metrics (eg mortality or working days lost)

### 7.2 Travel to School

The DfT/DCSF have a target for every school in England to have a school travel plan. This describes how the school intends to reduce car use, especially for short journeys. Across the North East there are currently around 77% with a travel plan. Linked to this is the new requirement to collect information on pupils' mode choice. This allows the assessment of the percentage of children in each authority who travel to school by a healthy and active mode.

With a simple piece of geographic calculation based on postcodes, an estimate of the crowfly distance could be made. This might give more representative information on activity levels, since in some inner-city areas high percentage walking may simply reflect closely spaced schools and therefore distance walked will be low. Distance walked could be made available on a ward by

ward basis and has obvious relevance to comparison with figures on, for example, childhood obesity.

### 7.3 Modal Split

The counting of cyclists is still technically difficult, being subject to weather impact on short counts and electronic difficulties for permanent counters. Methods are improving, however, and most local authorities do have some figures on cycling that they report through their LTP. It should be possible to draw these together and use them as monitoring of overall trends and patterns.

The national travel survey asks a sample of households about travel habits. This is then reported by the National Statistics Office although the sample size at regional level is not always reliable and combining rural Northumberland with Newcastle City figures would be misleading. Given the social benefits of bus use and the activity at both ends of the journey, the percentage of trips by all modes except car would be a suitable health indicator.

### 7.4 Planning and Policy Monitoring

In the London guide to health and planning it states that all boroughs should notify how many development plans approved support active travel. In practice this would be an additional burden on planning staff and is unlikely to happen easily. Only with an allocation of additional time given to someone familiar with examining planning applications could a summation, and hence cross comparison, be made.

The use of output targets rather than outcomes may be suitable at this early stage of health transport activity. As an example the school travel teams were initially given targets related to the number of school travel plans created. These served well as a means of setting up teams and establishing the processes and only now, after four years, are they ready for outcome targets of reduced car use.

#### 7.4.1 Avoiding 'Greenwash'

It would be helpful if expertise from bodies such as NEPHO could be used to advise on actual impact measurement. One characteristic of sustainable transport is that a small but newsworthy project (such as a walking bus) can be presented as if it were making a contribution to CO2 reduction. In practice with 12 children on the bus, of whom 8 previously walked anyway, this risks being a distraction from more influential but less attractive projects.

Exercise referral schemes and health walks are examples that will need careful measurement. They are worthy and desirable projects, but their newsworthiness should not over-emphasise their actual impact on overall health.

## 8. The Way Forward

There are options for taking this forward, and for convenience these can be summarised using the cross-cutting approaches to change at a regional level which were outlined in the consultation to the regional strategy Better Health, Fairer Health.

The Action table in the Appendix suggests a range of practical achievable actions that could be taken in the region should the decision be taken to proceed. The numbers below are the links to the action table.

### 8.1 GOVERNANCE, SERVICE REDESIGN AND PERFORMANCE MANAGEMENT

The evidence review and consultation suggest that:

- the health sector is traditionally under-represented at all levels in relation to transport;
- Transport, like everything else, is just about to become scrutinised for impact upon CO2;
- Within transport there are sustainable transport officers who have a close interest in health but who are failing to connect with the health providers;
- The Local Area Agreement is designed specifically to create a partnership approach;
- The only indicators available are coarse or would require additional officer time to gather the necessary information; and
- The NHS is itself a large generator of transport and needs to consider how to increase healthy transport
- There is a new strategy “Be Active, Be Healthy” and a new regional Physical Activity Plan

This suggests that the Regional Director of Health could therefore (numbers refer to the action table items in Appendix 1):

- As part of the adaptation to priorities based on overall sustainability ensure that consideration of transport is incorporated into the wider environmental debate (1);
- Ensure that the health sector has representation in the setting of regional strategies such as the Integrated Regional Strategy and all of the Sustainable Community Strategies for the region (2);
- Develop a mechanism for maintaining regular contact with the sustainable transport community (4);
- Increase influence on all land-use planning developments that significantly affect movement (definitions to evolve starting with very large developments only) (13,14);
- Incentivise and insist on all NHS and PCTs becoming a Good Corporate Citizens and completing and updating their travel plans (5);
- Incorporate transport indicators into routine monitoring (6,24); and
- Encourage regional LAA health leads to develop a shared understanding of how health and transport can work together (7).
- Ensure the Physical Activity Plan includes reference to the influence of transport on health. (16)

## 8.2 POLICIES & PLANNING, LOBBYING

The evidence review and consultation suggest that

- Overall the treatment of health is not appropriate to its level of importance;
- It is clear that despite the requirement that new developments “should” promote sustainable and healthy transport this does not always happen; and
- Health Impact Assessments have happened but are sporadic and depend on individual enthusiasm
- The Darlington demonstration town offers an example of good practice that could be followed

The Regional Director of Health could therefore:

- Stress the need for health to be taken more seriously when drafting national policies (8,11,12);
- Take a stance on important issues such as congestion charging and 20mph speed limits (9,10);
- Have influence on important regional and local decision making points (13)
- Make health impact assessments more appropriate and more widespread (15)
- Build a relationship with local planning authorities (17,18)

### 8.2.1 Training

It is clear that there are areas in the health sector that the transport profession needs to know more about. Similarly there are aspects of transport that the health sector should understand.

As one respondent put it “Transport needs Health-Proofing but Health needs Transport-Proofing”

Transport professionals already have a reasonably good understanding that walking and cycling is good for health. They also have a longstanding commitment to reducing road accidents. Any attempt to tell them what they already know might risk rejection. However, the discussions locally and nationally suggest that the themes in the box below do need further dissemination

The Regional Director of Health could, therefore facilitate training using the following themes (19,20):

#### **Health Basics for Transport Professionals**

- The relationship between health and safety is as seen in the graph above (which shows CHD killing ten times more than road accidents);
- Inactivity can be thought of as being as bad for you as smoking but three times more common;
- Suicide kills two times more people than accidents. There may be a contributory factor caused by the isolation of car-dependent life. We do not know (but this shouldn't mean we don't care);
- (as shown in the Sustrans diagram above) Ignoring the Netherlands, we have five times less (not just five percent less) cycling than hilly Switzerland, cold Sweden, rich Denmark and car dominated Germany. Locally, Middlesbrough has around five times less cycling than Hull;
- For those transport planners who have never heard of it there should be an introduction to Social Capital which describes the pattern and intensity of networks among people and the

shared values which arise from those networks. This is important for good health and wellbeing and is influenced by road layouts; and

- Permeability encourages walking & cycling (which is good). This in most cases will mean that a footpath is better for society than a fence.

Similarly there is a need for those promoting public health to appreciate what transport can contribute.

### **Transport Basics for Health Promoters**

- Transport is not just about moving from A to B but is a reflection of how we live our lives;
- The Sustrans diagram (above) of obesity levels against cycling compared across Europe suggests we have built a fundamentally flawed society - and the health side will have to pick up the pieces;
- Because work commuting happens mostly every day whether we like it or not, it offers an excellent opportunity to incorporate some element of daily activity;
- Cycling is a particularly good form of non load-bearing aerobic activity. This counteracts any safety disadvantages;
- “The car is like TV; the less you have of it the better it is for you”;
- There are people working in transport who are keen to work with you. Ask for the sustainable transport team;
- At the moment, health is given less attention when deciding how we live our lives than the police architectural liaison officer; and
- There are accessibility and road safety partnerships out there waiting to talk to you

## **8.3 ADVERTISING AND SOCIAL MARKETING**

Several of the policy areas identified here could be influenced by a full-service marketing strategy (ie including lobbying and PR). At this stage of relative ignorance the need for getting buy-in among all appropriate stakeholders is arguably more important than an outward facing campaign

The Change 4 Life campaign has started and this offers an opportunity for synergy

The Director for Public Health could therefore:

- Use internal marketing to raise awareness among all stakeholders (including road maintenance engineers and hospital estates managers) (21);
- Link to any regional campaigns associated with C4L whilst this is at the front of peoples’ awareness (22); and
- Link up with local transport partners to investigate the extent to which ad-hoc promotions could be done outwith C4L without diluting impact (23).

## **8.4 RESEARCH AND DEVELOPMENT, ANALYSIS**

The report has identified some areas where, despite extensive literature identified and scrutinised, there is still need for further exploration. This includes:

- Exact statistical totals for the region (24);

- Exact estimates of how many lives could be saved if the recommendations of this report are implemented (25);
- Policy research is needed on exactly how activities such as HIA could be integrated into emerging strategies such as LAA and carbon impact assessments (26);
- Areas of “blue sky” thinking that nobody in the world has covered satisfactorily include developing a model of behaviour change, linking transport to mental health, and investigating the influence of fear of traffic on cycling (26); and

Such is the dynamic nature of this document that the practical suggestions listed above are intended for constant review. At a workshop in Newcastle on the 28 Jan, for example, the list above was discussed and refined in order to make it more specific. It is the intention that this will also have roles and responsibilities assigned as part of the evolution of this theme. The latest version of the action table is therefore included as Appendix 1 and the numbers against each suggested action listed above link to this action table.

## 9. Conclusion

The North East does have special needs in health promotion. This project has generated some big ideas.

Transport has a complicated influence on our lives. It is not just about getting from A to B but is intrinsically linked to how we use land and the space between buildings. It also encompasses our relationships with work, leisure, education and even with each other.

The research reviewed here has shown that

- The Regional Director of Public Health is right to be concerned about the relationships between health and transport;
- Current practice does not include an inherent commitment to promoting health among those with influence on the built environment;
- There are opportunities for the Regional Director to take action, but this will need to include long term strategic approaches, alongside immediate actions;
- There are some overlapping priorities for the health sector and the transport sector and they would benefit from increased contact;
- The region has a nationally important example, in the Darlington Sustainable Demonstration Town, of how healthy modes of walking and cycling can be promoted
- Practical measures such as 20mph speed limits offer an opportunity to work together with the transport sector to achieve joint aims;
- The strategic framework presented here offers a means of increasing understanding and focussing attention in a consistent manner.

Having developed a framework of understanding based on the obligation to travel, the opportunities for healthy options and the inclination to change, we can group the overall conclusions into the list below. The opportunities for rigorous statistical analysis of options are still limited and therefore prioritisation of this list has had to be done using best judgement from a range of professionals and by incorporating the recommendations of those consulted regionally. This enables the following estimates of the likely benefits and priorities for action

	<b>Recommendation (and links to the action table)</b>	<b>Likely Impact</b>	<b>Suggested Priority level for Action</b>
<b>NEED TO TRAVEL</b>	1: National, Regional and Local transport strategies should consider health implications of transport (1,2,6,8,11,12,16,24)	Medium	Medium
	2: New developments should be planned so as to reduce car use and encourage healthy and active transport (13,14,17,18,19)	High	Very high
	3: All large occupancy sites (including hospitals themselves) should have Sustainable Travel Plans (5)	Medium	High
	4: The evaluation of transport projects should include consideration of the costs it imposes on health. Projects that capture these costs, such as congestion charging are good for health. (7,10,15,25)	Very High	High
<b>NETWORKS</b>	5: Traffic Engineering and Urban design should promote active and healthy transport. 20mph should be the normal speed in urban areas. (9,19)	High	Very High
<b>NICETIES</b>	6: Health should form an active part of all relevant local area Partnerships (4,23)	Medium	Medium
	7: Social marketing campaigns should be targeted at the public and at internal stakeholders. (20,21,22,26)	High	High

**The Main Recommendations and Suggested Level of Priority (with numbered links to action table in appendix)**

Once this report has been circulated for consultation, amended and published, the key findings should be disseminated to the health and transport sectors. A version of the training recommendations of this report is available as two “Pecha Kucha” presentations (meaning they have 20 PowerPoint slides displayed for precisely 20 seconds per slide).

Finally on the reasonable assumption that nothing will happen unless the resources come forward to make it happen, the Regional Director of Public Health should give consideration as to how to create the resources required in order to maximise health input into transport policy and planning.

# Appendix 1

This action plan is intended to evolve as it is reviewed by relevant experts in each topic. It would also lend itself to being put on a website so that all interested parties can see it and update it.

The Regional Director of Public Health should, therefore,

RECOMMENDATION	By Whom and by When
1. Note the contents of the transport and health report and ask the relevant RAG groups how these can be incorporated into other relevant strategies, such as those associated with emerging global and local priorities, including CO2 and fuel poverty	
2. Call a meeting with the heads of transport at the Government Office, Assembly and One North East to determine how the health sector can best be represented in the setting of regional strategies, such as the Integrated Regional Strategy and each Sustainable Community Strategy for the region.	
3. In order to get a short term resource to learn more about links between transport and health, ask relevant team leaders about “free” NHS capacity such as SPR trainees as part of their research or NHS region placements.	
4. Ask the RAG to develop a mechanism for maintaining regular contact with the sustainable transport community (currently chaired by Ian Henry at Durham CC), road safety (via Gateshead BC) and accessibility (via Tees Valley Joint Strategy Unit)	
5. Ask for a report from all NHS and PCTs on their progress towards becoming a Good Corporate Citizen in general and in transport in particular. Ask for a copy of each travel plan and ask the regional travel plan network for help in assessing them (contact Steve Bland at North Tyneside BC)	
6. Ask NEPHO to incorporate selected transport indicators into routine monitoring	
7. Invite the transport and health leads on the LAA in every part of the region to come together to develop a shared understanding of how health and transport can work together.	
8. Use national bodies such as the Public Health Association and the Faculty of Public Health to relay the need for health to be taken more seriously when drafting national policies	
9. Ask the regional Chiefs of Police to support the introduction of 20mph speed limits	
10. Agree a position (based on evidence) and make a public statement on the external costs of transport and how these should not be allowed to become a burden on the health sector (even if this means introducing a congestion charge)	
11. Ask the Chief Medical Officer to ask the Secretaries of State for Health and Transport (with a copy to Nick Brown) for a statement on how the health impacts of transport are to be monitored and improved.	
12. Ask the Chief Medical Officer to include a section on the health impacts of transport in the CMO annual report	

13. Get the local Directors of Public Health in each authority to have representation at important local transport decision making points such as local transport plan meetings and local planning committees	
14. Get the local Director of Public Health in each authority to become a consultee on planning applications. Initially only include those that will have a large impact on health, with the threshold size kept under review.	
15. Ask Newcastle University to continue its work to devise a HIA methodology specifically appropriate to the local setting. Work with experts such as NEPHO and the NHS Sustainable Development Unit to establish how HIA can adapt to changing circumstances, including CO2 reviews.	
16. Ask the leader of the physical activity plan to include links to transport and health in the plan.	
17. Ask ANEC and the local RTPI to collaborate on a resource for local planning authority members, informing them about transport and health. Take local officers' advice on how to build relationships and cooperation by elected members (for example by providing 'banquets').	
18. Commission from ANEC or RTPI (or others) a model Supplementary Planning Document that details how transport and land use planning should contribute to better health. Send this to the chair of every local planning authority with a request that it should be incorporated into the LDF	
19. Facilitate training in Health Basics for Transport Professionals, Development Control Officers and Planners. (for example via CURDS at Newcastle University)	
20. Facilitate training for those promoting public health to appreciate the extent to which transport improvements can contribute to their aims	
21. Ask the social marketing team to devise a strategy for marketing that begins with internal marketing to all stakeholders (including non transport specialists such as housing developers and hospital estates managers)	
22. Ask the local head of the Change 4 Life campaign about potential healthy transport links to regional campaigns associated with C4L whilst this is at the front of peoples' awareness	
23. Talk to the National TravelWise regional chair at Durham CC about how to link up with local transport partners to produce ad-hoc social marketing campaigns (whilst avoiding diluting impact of C4L).	
24. Ask NEPHO to research exact statistical totals for the region including exact estimates of how many lives could be saved if the recommendations of this report are implemented. This should be a function of the NERIC (North Eastern Regions Information Centre) and should follow a mapping exercise of relevant and existing data sets. Use local skills of SUSTRANS monitoring team as part of this work (Dr Andy Cope)	
25. Ask the head of the LAA team at the government office for a report on exactly how health improvement and health assessment could be integrated into emerging strategies such as LAAs, city regions and carbon impact assessments	
26. Invite local researchers to submit proposals for "blue sky" research such as developing a model of transport behaviour change, linking transport to mental	

<p>health, and investigating the influence of fear of traffic on cycling.</p>	
<p>27. Write a job description for a regional healthy transport advisor to include the following specifications: To coordinate activities, to act as advocate on regional and local policies and their implementation. To act as a transport advisor to the public health and NHS, and as a health advisor to transport and planning. Estimates of the time needed range from a team of three down to a 0.7 post with the option of the same person contributing 0.3 to fuel poverty. The post should be created for an initial period of 3 years during which one task would be to calculate the cost-effectiveness of the post.</p>	

## Appendix 2: The Planning System and Health

The planning system in England and Wales follows a plan-led system. This involves preparing plans that set out what can be built and where. The plan-led system was updated by an Act of Parliament (the Planning and Compulsory Purchase Act) in December 2004. The most recent change to planning legislation was on 1<sup>st</sup> October 2008 which introduced changes to the Permitted Development legislation.

### The Plan-led System

There are two main levels of plan:

- **Regional Spatial Strategies** - each Regional Planning Body (such as the north-east of England) is preparing a Regional Spatial Strategy. The RSS such as how many homes are needed to meet the future needs of the region, or whether the region needs a new major shopping centre or an airport.
- **Local Development Frameworks** - Each local planning authority is preparing a Local Development Framework. This is a folder of documents that sets out how an area may change over the coming years.

Minerals and Waste plans are separate and prepared by County Councils.

- **Development control**

Development control is the process of dealing with individual development proposals to ensure that they meet local, regional and national planning policies and guidelines. Each proposal is assessed on its own merits, taking into account policy, need, local circumstances and public opinion.

A minor application, which may be able to be considered by the Planning Officer under delegated powers, rather than having to be considered by the Planning Committee, should be considered within 8 weeks. Major applications should be considered within 13 weeks but can take considerably longer depending on the complexity of the issues and the amount of agreement which has been reached during pre-application discussions with the Local Authority.

Local Authorities are under considerable pressure to achieve key targets for consideration of planning applications within the agreed statutory period (8 or 13 weeks). This can be seen to encourage Local Authorities to ensure they make a decision within the time period, to the detriment of the true and timely consideration of all issues concerned.

### Local Development Frameworks

Local Development Frameworks lie at the heart of how planning is controlled on a local level. They form a key part of the government's plan-led system. Some of the most important elements of the Local Development Framework are included in the 'folder of documents' which includes:

- **Local development documents**  
These make up the development plan for an area and outline the type of development which will take place, how it will be managed and when it will take place.
- **Local development scheme**  
A 'project plan' for the Local Development Framework (LDF), which sets how the local authority will produce the LDF. The LDS will act as a roadmap for Local Development Framework documents coming into force.
- **Statement of Community Involvement**  
This explains how the local authority will engage the community in the development of the Local Development Framework.

### Policy Documents which cover health related planning issues

Planning Policy Guidance Notes (PPGs) and their replacements Planning Policy Statements (PPSs) are prepared by the government after public consultation to explain statutory provisions and provide guidance to local authorities and others on planning policy and the operation of the planning system. They also explain the relationship between planning policies and other policies which have a bearing on issues of development and land use.

- **PPS 3 : Housing**

Planning Policy Statement 3 (PPS3) underpins the delivery of the Government's strategic housing policy objectives and the goal to ensure that everyone has the opportunity to live in a decent home, which they can afford in a community where they want to live. This replaces Planning Policy Guidance 3: Housing (PPG3) published in March 2000.

The Government's key housing policy goal is to ensure that everyone has the opportunity of living in a decent home, which they can afford, in a community where they want to live. The Government is seeking to achieve this through the following objectives:

- To achieve a wide choice of high quality homes, both affordable and market housing,
- To address the requirements of the community.
- To widen opportunities for home ownership and ensure high quality housing for those who cannot afford market housing, in particular those who are vulnerable or in need.
- To improve affordability across the housing market, including by increasing the supply of housing; and
- To create sustainable, inclusive, mixed communities in all areas, both urban and rural.

The above objectives are based around accessibility and availability issues; however there is no reference within PPS 3 to health-related issues and objectives. It would be encouraging to see health issues included in objectives for consideration within the Government's housing policies.

- **Planning Policy Guidance 13: Transport**

Planning Policy Guidance 13 (PPG13) sets out the objectives to integrate planning and transport at the national, regional, strategic and local level and to promote more sustainable transport choices both for carrying people and for moving freight.

The objectives of PPG 13 are to integrate planning and transport at the national, regional, strategic and local level to:

- Promote more sustainable transport choices for both people and for moving freight;
- Promote accessibility to jobs, shopping, leisure facilities and services by public
- Transport, walking and cycling, and
- Reduce the need to travel, especially by car.

There are references to health throughout PPG 13; however the references are largely related to land-use issues, about provision of access to health facilities. PPG 13 does not include objectives on encouraging walking as a direct link to walking being a healthy activity. The objectives are more related to increasing accessibility and developing walking and cycling as sustainable modes of travel.

PPG 13 contains references to design relating to mobility issues and crime issues, but it does not contain references to design to encourage walking and cycling to promote health. Education and Health are referenced together as 'land uses'.

Walking is referred to in paragraph 75 and cycling in paragraph 78, however health issues are not covered specifically.

### **Local Area Agreements and Local Strategic Partnerships**

A local area agreement (LAA) is a three-year agreement between a local area and central government. The LAA describes how local priorities will be met by delivering local solutions.

A local strategic partnership (LSP) is a non-statutory body that brings together the different parts of the public, private, voluntary and community sectors working at a local level. The lead player in the LSP is the local authority and other players will include the police and the primary care trust. The LSP ensures the different organisations work together to deliver services more effectively.

The LSP operates at a strategic level but remains close enough to local people to allow them to be involved in decisions that affect local communities.

### **Sustainable community strategy**

The LSP creates a long-term vision for the area to tackle local needs. The vision is set out in the sustainable community strategy (SCS). The local area agreement (LAA) is the mechanism for making the vision a reality. All the outcomes and targets are designed to deliver the vision set out in the SCS.

## APPENDIX 3: Acknowledgments

Thanks to the officers representing transport planning and sustainable travel from the following organisations who were extremely helpful in putting together this report:  
(The views expressed in this report do not necessarily represent the official views of any of these authorities):

Northumberland County Council  
Newcastle City Council  
North Tyneside  
Gateshead  
Sunderland  
Durham CC  
Middlesbrough BC  
Darlington BC

Nexus  
ANEC  
Tees Valley JSU  
One North East  
Government Office for the North East  
ACT TravelWise

Living Streets  
Sustrans

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## Appendix 4: Literature Review

This project was not intended to be an academic review of the full literature set. However, the main sources of information were reviewed by the team and the reasoning behind the recommendations in the report can be seen from the output of the literature search below:

### Physical Activity

One of the most important positive impacts that transport has on health is providing the opportunity to be physically active as part of daily life through walking and cycling. Physical activity has major beneficial effects on most chronic diseases (Table 1). In addition to preventing or limiting the progression of disease, physical activity also improves physical fitness, muscular strength and mental wellbeing. This is particularly important for older people, as regular physical activity can increase the potential for independent living<sup>46</sup>.

*Summary of the health effects associated with physical activity. Source: Cavill et al, 2007<sup>46</sup>.*

Condition	Effect
Heart disease	Reduced risk
Stroke	Reduced risk
Overweight and obesity	Reduced risk
Type 2 diabetes	Reduced risk
Colon cancer	Reduced risk
Breast cancer	Reduced risk
Musculoskeletal health	Improvement
Falls in older people	Reduced risk
Psychological well-being	Improvement
Depression	Reduced risk

Physical activity is particularly important for preventing obesity, which has tripled in adults in the last 25 years and has been described by the Chief Medical Officer as a ‘health time bomb’<sup>47</sup>. There is evidence that rising car ownership has been accompanied by changing land use to accommodate car use. This has further encouraged reliance on car use and itself had an impact on human energy expenditure. US research has reported that each kilometre walked per day is associated with a 4.8% reduction in the likelihood of obesity, whereas each additional hour spent in a car per day was associated with a 6% increase in the likelihood of obesity<sup>48</sup>. Similar associations have been reported elsewhere<sup>49</sup>.

In England, around six out of ten men and seven out of ten women are not active enough to benefit their health. Although trend data on overall physical activity are unclear<sup>50</sup>, data from the NTS show that levels of walking and cycling have declined in recent years. It appears likely that the substitution of routine walking by car use has contributed significantly to population weight gain.<sup>51</sup>

The Chief Medical Officer has said that “for most people, the easiest and most acceptable forms of physical activity are those that can be incorporated into everyday life. Examples include walking or cycling instead of driving”<sup>47</sup>. Walking is particularly appropriate for most people as it requires no specialist equipment or training and can be done anywhere. Also, unlike other forms of physical activity, walking shows very little, if any decline in middle age<sup>52</sup>.

### Road traffic injuries

Across the European Region, road traffic injuries are the leading cause of death in children and young people<sup>11</sup>. In 2006 there were 3,172 deaths, 28,673 people seriously injured, and 226,559 people injured on roads in Great Britain. These numbers have declined in recent years: the total killed or injured on the roads in 2006 is 19% lower than the average for 1994–98, (the four-year period used as the baseline for the government’s road safety strategy).

Children are particularly vulnerable because their ability to cope with traffic is limited. They are more at risk in conditions with heavy or fast traffic, limited visibility, or when drivers’ attention is focused elsewhere<sup>13</sup>. In 2006, 3,294 children aged 0–15 were killed or seriously injured in England, 10% of the total for all ages.

Males of all ages, but especially children, are at higher risk of being killed or injured on the roads than females; of the 3,294 children (aged 0–15) killed or seriously injured on British roads in 2006, 64% were male<sup>14</sup>.

Cyclists and pedestrians account for a disproportionately high share of road traffic injuries. Pedestrian casualties account for 12% of all road casualties and 21% of all road deaths. Total pedestrian casualties fell to 33% below the 1994–98 baseline average in 2006, with serious casualties 40% below the baseline. The rate of reported cycle casualties has also decreased, especially taking into account that pedal cycle traffic has increased by 4% since 2005; the casualty rate has decreased by 6% since 2005, and is 42% below the 1994–98 baseline.

Speed is a major risk factor for road traffic collisions, increasing the likelihood of death or severe injury for all road users. The seriousness of collisions is related to speed. Speed is a risk factor for drivers of all ages but is much more likely to be a factor in fatal collisions involving young drivers<sup>17</sup>. Speeding is still common however: the Department for Transport found that 50% of cars exceeded the speed limit on 30 mph roads in 2006, and 27% exceeded the limit on 40 mph roads<sup>9</sup>.

Department for Transport casualty statistics in Great Britain show that excessive speed is a contributory factor in 12% of all injury collisions, 18% where there is a serious injury and 28% of all collisions which result in a fatality<sup>18</sup>. However, it is important to note that it is difficult to be precise about the contribution that speed makes to the incidence and severity of collisions, as data rely on a number of factors, including the judgement of the police officer at the scene, and weather or road conditions.

The burden of road traffic injuries is unevenly distributed across society: research shows that child pedestrians from households in the lowest socio-economic group are up to twenty times more likely to be killed compared to those from households in the highest socio-economic group<sup>19</sup>. There are also important differences in the distribution of injuries by age (see Figures 20 & 21).

There have been some reductions in road traffic injuries among children since the publication of the government's road safety strategy<sup>12</sup>. In 2006, the number of children aged up to 15 years who were seriously injured or killed on British roads was 52% below the 1994–98 average, (the baseline for the road safety strategy). However, this was a slight increase on the record low in 2005, and overall less progress has been made for older children than for younger children<sup>20</sup>. Some of the reduction in road traffic injuries may be due to decreased exposure as levels of walking and cycling have declined, rather than through improvements in road safety, although the relative contribution of each factor is unclear.

## **Air pollution**

Local air pollution has many potential negative impacts on health, many of which are caused or exacerbated by road transport.

Great improvements in air quality have been made in the UK since the days of the nineteenth and early twentieth centuries when many cities experienced widespread smogs. Emissions of pollutants from industry and domestic properties have been greatly reduced and significant improvements have been made to motor vehicles. However, the reduction in pollution from individual vehicles is being outpaced by the growth in numbers of motor vehicles on our roads.

Transport-related air pollution increases the risk of mortality, particularly from cardio-pulmonary causes. It also affects health in a number of other ways, including; non-allergic respiratory disease; allergic illness and symptoms (such as asthma); cardiovascular morbidity; cancer; pregnancy; birth outcomes; and male fertility<sup>26</sup>.

All age groups are affected. Some occupational groups (outdoor workers, people who travel further for work) and people on a low income (who tend to live closer to busy roads and often already suffer from poor health) are at increased risk of ill-health and death from traffic-related air pollution<sup>27</sup>. A child's risk of dying is slightly increased in areas with high air pollution<sup>28</sup>. It has been estimated that, across Europe, the morbidity attributable to air pollution is comparable to that from traffic collisions<sup>26</sup>. In 2001, the Committee on the Medical Effects of Air Pollutants (COMEAP) estimated that there were 8,100 premature deaths in the UK every year as a result of exposure to particulate matter (PM<sub>10</sub>)<sup>d</sup>, and 3,500 due to sulphur dioxide<sup>29</sup>. In 2007, the latest Air Quality Strategy for England, Wales, Scotland and Northern Ireland estimated that air pollution reduced the life expectancy of every person in the UK by an average of 7–8 months, with estimated equivalent health costs of up to £20 billion each year<sup>30</sup>.

It is important to note that the most significant health impacts of air pollution are related to cardiovascular and respiratory effects. This means that whilst some gains in health may be made by technical changes to improve the cleanliness of vehicle emissions, seeking to achieve modal shifts in transport use that increase the use of non-motorised transport modes are likely both to reduce air pollution and its direct impacts on health and, by improving cardiovascular fitness, also increase the resilience of the population to the ill effects of pollution<sup>31</sup>.

## Noise

Transport is a major source of noise in the community. Noise can disrupt communication, impair hearing, and reduce sleep quality. Continuous noise can make it difficult for people to fall asleep; can reduce deep resting sleep; increase awakening during sleep; increase fatigue and decrease cognitive performance. Prolonged or excessive exposure to noise can cause chronic medical conditions, such as hypertension and ischaemic heart disease<sup>38</sup>.

High noise levels affect children's concentration, cognitive development and school performance<sup>39</sup>. Noise can interfere with learning, memorising, solving analytical problems and acquiring reading skills. Reducing classroom noise levels has been shown to improve children's long-term memory and reading ability.

Noise from road, rail, and air transport is an important public health issue because many people are chronically exposed to high levels: it is estimated that approximately 30% of the European Union's population (EU-15) is exposed to levels of road traffic noise of more than 55 dB(A)<sup>14g</sup>, above which people can be expected to suffer significant annoyance<sup>40</sup>. The highest numbers of complaints of sleep disturbance and annoyance come from people living around airports<sup>41</sup>. The external costs of noise exposure (in terms of decreased performance, hypertension and sleep disturbance) for Zurich airport has been estimated at 17.7 million Euros per year (1998 prices).

## Greenhouse gas emissions

Emissions of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases contribute to global warming, which will have significant impacts on public health.

Emissions of CO<sub>2</sub> from transport sources in the UK (excluding international aviation and shipping) increased from 85 to 117 million tonnes between 1980 and 1990. Despite significant growth in traffic since 1990, levels of CO<sub>2</sub> emissions from road transport, the major contributor, have been growing at a much slower rate. This is mainly due to technological improvements. Overall, CO<sub>2</sub> emissions from transport sources increased by 11% between 1990 and 2006<sup>32</sup>.

In 2007 the UK Expert Group on Climate Change<sup>53</sup> updated its original investigation of the likely effects of climate change on health in the UK. They concluded that:

- there is a 1 in 40 chance that by 2012 south-eastern England will have experienced a severe heatwave that will cause over 9,000 heat-related deaths;
- winter deaths will continue to decline as the climate warms;
- cases of food poisoning are likely to increase: a 1°C increase in temperature might result in about a 4.5% increase in food poisoning;
- vector-borne diseases may present local problems (these are diseases transmitted to humans or other animals by an insect or other arthropod);
- water-borne diseases may increase;
- the risk of major disasters caused by severe winter gales and coastal flooding is likely to increase;
- the effects of air pollutants on health are likely to decline but the effects of ozone during the summer are likely to increase: up to about 1,500 extra deaths and hospital admissions per annum might be expected for conditions including asthma;
- cases of skin cancer and cataracts are likely to increase due to increased exposure to ultra-violet light;
- measures taken to reduce the rate of climate change by reducing greenhouse gas emissions could produce secondary beneficial effects on health.
- Extreme weather and climate events are forecast to become more frequent and intense, associated with increases in hospital admissions during hot periods<sup>54</sup>. In 2000, the (WHO) Burden of Disease assessment estimated more than 160,000 deaths worldwide due to climate change. The heat wave

in 2003 caused about 25,000 extra deaths in the aging population in Europe<sup>28</sup>. There are also likely to be significant health impacts as a result of changes in patterns of international migration.

### Social and psychological effects

Social and psychological impacts of transport are often ignored or underestimated despite the fact that they can affect health and influence people's travel behaviour. For instance, fear of traffic is important in encouraging an increasing number of parents to drive their children to school<sup>15</sup>.

There is good evidence that health is positively influenced by strong social networks<sup>59</sup>. Busy roads may disrupt such networks, and high levels of car use (or excessive time spent commuting) lead to fewer people interacting on the streets in the ways that pedestrians and cyclists do. This may be particularly important for children, as high levels of traffic may hinder the development of independence and social interaction<sup>62</sup>.

People travel in order to gain access to goods, services, employment, friends and family, leisure pursuits, and health care. However, as car use and distances travelled have increased dramatically in the last 50 years, this has tended to marginalise members of households without a car. While only 9% of those in the highest income quintile have no access to a car, 51% of those in the lowest income quintile are without such access<sup>4</sup>. The very young, the poor and the elderly are thus disproportionately excluded from many employment, shopping and leisure opportunities as a result; they may also find it difficult to obtain health services.

The Social Exclusion Unit's report on transport and social exclusion<sup>63</sup> emphasised the importance of accessibility in helping people from disadvantaged groups or areas access jobs and essential services, including food shops

### Land Blight

Land blight from transport occurs when roads and other aspects of transport infrastructure take up land space and have a negative impact on the environment. In urban areas, 25–35% of the land is used for transportation; the share can be even higher in suburban areas. This causes problems as it prevents land from being used for other functions including recreation, housing and employment. Transport infrastructure can contribute to social isolation by dividing communities and cutting people off from essential services<sup>61</sup>.

Every km of motorway uses about 2.5 hectares of land for the actual road, but a total of 8 hectares to accommodate for noise protection, embankments, junctions, and service areas. In addition, road and rail transport has an impact zone on both sides of the alignment due to noise, pollution, or required compensation. Some major roads affect 50–80m along both sides of the alignment, using up to 20 ha/km<sup>42</sup>.

People's enjoyment of their environment can be negatively influenced by noise, air and visual pollution. People are more likely to exercise actively, and children are more likely to play, in traffic-free areas. A key government target is to "achieve a better balance between housing availability and the demand for housing, including improving affordability, in all English regions while protecting valuable countryside around our towns, cities and in the green belt and the sustainability of towns and cities"<sup>67</sup>.

Overall, the social and psychological impacts of transport appear to be somewhat neglected compared to the physical impacts. Action to make transport more equitable, and to make walking and cycling more viable transport options, are likely to have positive social and psychological outcomes

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