Integrating Health into City Plan 3

Report of a Health Stakeholder Workshop
May 2010

Table of Contents

1. Purpose of Report

This is a report of the findings of a health stakeholder event with the City Plan Team which provided a retrospective analysis of how health was integrated in City Plan 2 and identified potential health impacts of City Plan 3. The workshop was held in The Mitchell Library on 1 March 2010. Findings in this report are based on the knowledge and experience of those present at the workshop, thus is not a definitive statement or assessment; however appendices are attached that summarise relevant research findings. This report describes the process, the discussions at the tables and the results of the prioritisation exercise. It will contribute to the consultation for City Plan 3.

2. Background

The 2006 Planning Act in Scotland requires all local planning authorities to prepare a local development plan scheme to guide new development and regeneration. There are significant changes under the new development plan system, including the production of a main issues report rather than a consultative draft plan and improving public consultation and engagement.

The Main Issues report for City Plan 3 will set out preferred and alternative options for land use, development, growth and planning policy for Glasgow. It will also identify changes to have taken place since City Plan 2, ideas for future development and set out the council's proposals for where development should and shouldn't occur.

In order to produce the Main Issues report, Glasgow City Council have undertaken a series of consultation workshops with statutory stakeholders. One of these workshops focused on health, in order to ensure that the next plan deals with health in the most appropriate way and to ensure that those with an interest in improving the health of Glaswegians have a say. The purpose of the workshop was two-fold: 1) to provide a retrospective analysis of how effectively health was integrated in City Plan 2 (see http://www.glasgow.gov.uk/en/Business/CityPlan/) and 2) to discuss ideas on how the development plan can make an effective contribution to the partnership to promote population health.

How can the City Plan affect health?

There are many different factors that can potentially affect health and wellbeing that have some basis in land use. Air and water quality, for example, are, in part, determined by the pollution emitted by transport or through contaminated land. Accessibility to shops, workplaces, services, cultural and sporting facilities and local recreation and greenspace can help to facilitate more active lifestyles. Transport and the design and physical condition of local neighbourhoods can also contribute to good and poor health.

This report is therefore part of the work to ensure that the next plan considers health issues in an appropriate fashion.

3. Methods

The approach taken to this workshop was based on the principles of health impact assessment, which considers the evidence collected from research and stakeholder involvement and identifies how a policy might alter the determinants of health. It assesses the likely impacts, both positive and negative, on the health and wellbeing of different groups in a population.

The workshop was conducted over one afternoon by a group of people with a range of skills and backgrounds (see Appendix 1 for a list of participants). The workshop began with two presentations. One provided a context to healthy urban planning and described the previous work undertaken in Glasgow. The second provided an overview of the local development plan and how health had been considered in the previous version.

Participants were divided into four groups of nine and assessed the four themes present in the previous plan:

1) People – predominately addressing population dynamics and housing.
2) Jobs – predominately addressing business investment.
3) Infrastructure – such as transport, drainage, retail.
4) Environment – such as conservation, built heritage, greenspace.

While everyone was allowed to speak about any and all themes, each table began with a separate theme in order to ensure all potential issues were discussed. There was a facilitator at each table with a health background. There was also a member of the City Plan Team at each table to take notes and answer any questions about the local development plan that arose.

Participants were asked to identify which parts of the plan have an impact on health and what the potential health impacts are. There were also asked to consider which groups would be most likely to be affected, and to identify at least two priorities for further consideration. Participants were provided with a range of resources prior to the day including a web-link to City Plan 2, briefing papers containing research evidence and written previously for the Health Commission on planning and health (Appendix 2) and transport and health (Appendix 3). They were also provided with a paper on City Plan 2 and health (Appendix 4) and a short document on the workshop themes and the topics considered within these themes in City Plan 2 (Appendix 5).

Time was allowed for feedback by each of the groups on the overall discussion of potential health impacts (both positive and negative), who was likely to be most affected and what they considered the future priorities for further consideration to be. After all groups had finished their presentations, all participants were given the opportunity to add additional priorities, then everyone voted on the thematic priorities through the use of sticky dots. Participants were also asked to identify geographic priorities on maps through sticky stars.

4. Findings

4.1 General comments on City Plan

Participants were generally appreciative of the effort the City Plan Team had made to integrate health into City Plan 2. There was some confusion on the day as to the purpose of the City Plan and the limitations placed on it by legislation. Therefore, some clarification about its remit and role was required before discussion could progress at tables.

The suggestion was made that City Plan 3 should adopt a holistic approach which looks at the City and the various communities within it as a whole, rather than dividing the document up into 4 themes. (Note: there are definite linkages in the themed discussions, so if the themes are kept, perhaps they can be better linked). It was felt there is a need to better integrate both the City Plan and the planning system with other strategic documents, such as the Economic Strategy, Housing Strategy, but particularly health strategies, such as the Director of Public Health's Report.

The City Plan lacks a stated strategic vision and needed to be more explicit in terms of what is expected to be achieved in the next 5, 10, 15 or 20 years. For example, the Strategic Development Plan states what Glasgow is expected to be like in the future and its role in the conurbation. On a city level for example, what is the role of the north of the city? Will it become a series of villages? How does it fit into the bigger picture?

It was also suggested that it would be useful to introduce a neighbourhood context into Development Management. Planning applications currently have boundaries with no context. A question about how the planned development has considered health implications may help to accomplish this. Brighton and Hove have implemented such a question in the application process.

It was felt that more effective partnerships and cross-sector working needed to be developed in order to maximise on future economic opportunities and develop better mechanisms of engagement.

4.2 Themed discussion

4.2a People

<u>Optimise Residential Amenity</u>

It was thought that the application of policy in the development management process needed to be consistent to ensure that amenity is not compromised by over density of development and uses are not supported which would have an unacceptable impact on residential environments. If applied consistently, it was believed that this would have a positive health impact on communities and have the potential to reduce inequalities.

Policies currently in place in City Plan 2 should be retained for City Plan 3. However, emphasis needs to be place on the consistent application of policy, which currently varies depending on the context.

Create Accessible Environments

Accessible environments can be improved by incorporating access routes into all appropriate levels of development and encouraging mixed use schemes where access is made easier to a range of services. It was also thought that developers should be required to consider public transport provision to provide for access to employment, services and recreation. Improving the accessibility of environments could have a positive health impact on communities and potentially reduce inequalities, and would be particularly beneficial to those who currently have poor access amenities or are without access to a car.

While policies in City Plan 2 provide some of the tools to achieve accessible environments, the scale of development (e.g. size of areas to be developed/ redeveloped) will influence the outcomes. In larger redevelopment areas, such as the East End, larger sites provide the scope for starting again and getting the design/integration, etc right in the design process, after consultation with communities. Consideration needs to be given to how smaller scale developments could achieve better accessibility.

Create Health Promoting Environment

The establishment of high quality and safe walking and cycling networks linked to the green network need to be encouraged in City Plan 3. This would potentially have a positive impact on health and reduce inequalities by providing opportunities for active travel to be incorporated into residents lives across the city.

There are currently tools to achieve this in City Plan 2; however, the policies need review for City Plan 3. More of an obvious focus needed in design principles on embedding healthy urban planning in all development would be useful.

Create Opportunities for Social Cohesion

Discussion was focused on how to provide opportunities for communities to engage in discussions about the future development/design of areas. Having a sense of control over what's happening in the local neighbourhood could positively impact health, particularly for those who currently feel powerless.

One suggestion was to utilise the community networks the have been established through the Community Planning and Community Health Partnerships which could provide a useful way to engage with local communities, over and above the statutory method through community councils. It was felt that awareness raising about the City Plan was very important.

Design

The City Plan needs to ensure that all opportunities are taken to create places which provide a sense of community spirit and ownership and are well designed. The incorporation of safe and secure environments in the design stage of developments is very important. This could lead to increased use of the public realm and have a positive impact on health.

While there is a policy toolbox in place in City Plan 2 to assist the delivery of well designed places, there also needs to be an exploration of how planners can effectively influence politicians to seek quality development and encourage willingness on the part of developers.

4.2b Jobs

Mixed Use Developments – providing jobs locally

City Plan 2 promotes business districts. Whilst this is important at a City-wide level, it is not so important to Glasgow residents. In local areas, local people are more concerned about there being an accessible mixture of job opportunities. City Plan 3 should look at promoting sustainable mixed developments (the Urban Village Concept) rather than separating different land uses in different areas of the City. In this way, employment opportunities and other essential community facilities could be located in the heart of new residential developments. Proximity to jobs will become increasingly important as oil prices go up and transportation/travel becomes more and more expensive. People will want to live closer to their place of employment. This could potentially have a positive impact on residents' health. It also has the potential to reduce health inequalities as they are linked to other inequalities such as access to jobs.

It was suggested that new land use and business floorspace policies could be created and used in City Plan 3 to control the impact of new business on surrounding areas, as the advent of new technologies and modern clean businesses mean that business/industry does not need to be geographically isolated from residential areas in the way that it was in the past.

Sustainability of economic investment

City Plan 3 needs to play its part in encouraging sustainable economic investment. It was felt that economic investment that comes into the city quickly will also be likely to leave the city quickly, particularly regarding multinational companies. Sustainable quality jobs can have a positive impact on residents' health.

City Plan 3 needs to create economic policies that will encourage long term sustainable jobs, more suited to the type of training and skills that people in the City already have. This will require a different approach to land-use zoning and economic growth. The Plan needs to acknowledge that not all economic investment and growth is good and that the City needs to hold out for the type of economic growth and investment that will benefit the City and its residents in the longer term.

Making Best Use of Existing Assets

Economic policy in the Plan should be about more than manufacturing, business and office development. City Plan 3 should consider the role of local shops as key employers. Glasgow also has a wealth of leisure facilities, for example, tourist attractions, city parks, etc. Additionally open space and green space is a key public health resource that planning can influence.

City Plan 3 needs to explore how it could make use of existing assets. For instance, could it develop and concentrate on clusters of local shops as key local economic drivers? Could City Plan 3 do more to cluster other types of facilities that already exist? For example, in the south side, the Burrell, Tramway, Queens Park and Pollokshaws shops all operate independently. Together they would be a much more potent force on the south side of the City if they were marketed jointly rather than competing for trade and custom individually. City Plan 3 could also create policy that encourages the growing of things on green spaces in the City. This could have an economic impact in terms of local job creation but also a potentially positive health impact in terms of growing local produce for sale, for use in school meals etc. It was also suggested that City Plan 3 consider promoting the use of school buildings for more than school use i.e. for general community use.

Access (transport)

Historically, Glasgow doesn't seem to have integrated transport planning well and there is room for vast improvement in order to tackle common problems such as traffic congestion and bus routes and timetabling issues etc. A key aim should be in getting Glaswegians to their jobs. Improving transport integration could have a positive impact on health by reducing stress levels travelling to and from work.

It was suggested that City Plan 3 should focus on taking smaller steps towards a big idea (of a better integrated transport system) rather than focussing on major proposals and a single big mission.

Targeting Groups

Some thought that certain groups within the population needed to be targeted for inward investment, such as young people and the long-term unemployed. An example provided was the New South Hospitals Development, where part of the building and construction works will be carried out by those living locally as a result of a community benefit clause in the contract. This has the potential to have a positive impact on health and to reduce inequalities. It was suggested that this (community benefit clauses) could be encouraged in City Plan 3.

4.2c Environment

Sustainable Glasgow

City Plan 3 should look to provided additional opportunities for walking and cycling in the City. The existing built form means that infrastructure will continue to be focussed mainly on green corridors (former rail lines, canals, rivers, etc) but new development can still be designed to include new routes and links to existing routes which will potentially have a positive impact on health. Policies in City Plan 2 regarding the provision of new routes through development schemes should remain. However, what is currently missing in the City Plan is an identified strategic route network of walking and cycling routes which the Council is committed to developing and which new development can link into.

City Plan 3 could also address the design of residential developments by promoting more sustainable forms of design with respect to: mix of uses; greenspace; permeability; access to public transport, etc. This would mean a move away from mono-use residential environments such as developed in the 1980s and 1990s in, e.g., Robroyston. There is a need for stronger policies in relation to the design of new developments, particularly in relation to the mix of uses, street layout and public transport provision.

City Plan 3 should also protect existing local shops, provide new local shopping facilities; and discourage the development of new supermarkets. The current emphasis on directing new retail development to existing town centres should remain, but a means of protecting local shops and discouraging new supermarkets is missing.

Making Use of and improving access to Glasgow's Greenspaces

City Plan 3 should consider ways of better using brownfield land so that it is not the case that development is automatically the preferred option. Consideration should be given to ways of both temporarily 'greening' vacant and derelict land and also of securing greenspace on such sites on a more permanent basis. This could help improve mental health and general well-being. There needs to be a reconsideration of the presumption in favour of the encouragement of development of brownfield land. A policy to encourage the greening of some brownfield land, either temporarily or permanently, would be beneficial.

Something also needs to be done to address the issue of greenspace maintenance, in particular the 'ownership' of greenspace by local communities. This would ensure greater use throughout the day and possibly less littering, vandalism and anti-social behaviour. This would also have the potential to have a positive health impact. There needs to be an increased emphasis on engaging and involving local communities in the development of greenspaces, local areas in general, and the future management of both.

4.2d Infrastructure

Accessibility to Key Services and Facilities

There is a need to restrict hot food shops, betting shops and off licenses in certain areas. In parts of the City, residents have requested this as they feel that they are too accessible. It was suggested that (for hot food shops) the percentages for what is currently considered acceptable in a street frontage in the City Plan be reduced. Restrictions on off licenses and betting shops could also be introduced. There was also a suggestion to include a policy in the City Plan to create an exclusion zone for hot food shops of 400 metres around schools. The linkage between walking and cycling to shops needs to be emphasised in the City Plan.

Sustainability in Retail and Other Town Centre Uses

A discussion arose around the disparities between local shopping centres. Concerns were raised regarding the range of services, infrastructure and appearance of various shopping areas across City. Some of the centres as they currently exist have negative

health impacts. Safety issues are an issue that need to be addressed in a consistent manner across local centres. The suggestion was made to provide a unifying approach to Town Centre Action Plans within the City Plan. There is also a need to encourage shopping centre development that doesn't rely on the use of a car.

Develop a Strategic Drainage Network

It was thought the strategic drainage network was important for a variety of reasons, thus City Plan 3 should promote networks with SUDS and green space and promote green space as Infrastructure as a way of giving a strong message to builders.

Waste Recycling

There is a need to improve access to recycling facilities needs to be addressed and people thought that current recycling provision at a household level is too restricting. The suggestion was made to provide a map showing City recycling facilities in City Plan 3.

Educational and Hospital Provision

It was thought that as 90% of health care is provided locally, there needs to be a reference to primary care within City Plan 3.

5. Priorities

The top four priorities that emerged in the prioritisation exercise for consideration in City Plan 3 were:

- Healthy Urban Planning principles should be intrinsic and the top level message of City Plan 3. A holistic approach should be taken where the likely health outcomes are considered as a matter of course.

- Improved linkages between the existing city plan themes and underlying policies, e.g. housing and employability and benefit reform.

- A more holistic approach to design, e.g. less car dependent "80s" design in growth areas. View less as housing areas, but as living areas.

- Connectivity and access to jobs – ie clustering of land use activities.

The full results of the prioritisation exercise can be seen in Table 1.

6. Conclusions

The workshop highlighted the need for collaboration between the City Plan Team and health professionals. There is considerable confusion and lack of awareness among health professionals of the purpose of the City Plan and their role in helping to shape it. At the same time, further engagement will help planners see how they can best influence health outcomes through policy and practice.

There was consensus that health and planning should be better linked and that Healthy Urban Planning principles should be intrinsic to planning policy and practice.

Report by: Russell Jones, Glasgow Centre for Population Health

Table 1. Priorities from Health Stakeholder workshop for City Plan 3

Priorities from discussion	Votes	Other priorities placed on post-its
Group 1 – People		
Emphasis on early engagement with open dialogue. An iterative process with a clear system of involvement and creating opportunities for engagement.	14	
Healthy Urban Planning principles as intrinsic, top level message of City Plan 3. A holistic approach, but the likely health outcomes are considered as a matter of course.	36	
Explicit statements regarding the discrimination link to the inequalities framework developed by Pauline Craig at GCPH. Specific actions identified for most deprived communities.	14	
Group 2 – Jobs Overarching priority – How can City Plan 3 bring together agencies/people to develop a shared vision?	3	*Should the aim of the City Plan not be to maximise health rather than to maximise growth?*
Sustainability of job types – ie big industries not coming/going, need jobs suitable for Glaswegians	15	
Connectivity and access to jobs – ie clustering of land use activities	27	
Partnership – ie key agencies working together better and perhaps others taking a bigger role in establishing development plan aims/objectives ie consultation/engagement with people/communities	23	
Group 3 – Environment		*Need to address management issues, eg litter control and street cleanliness*
Incorporate strategic networks of walking and cycling infrastructure	24	*Limit City Centre development to replacement of facilities*
More holistic approach to design, e.g. less car dependent "80s" design in growth areas. View less as housing areas, but as living areas	29	*Invest and enhance local town centres like Parkhead and Shawlands*
Deal better with brownfield sites, ie encourage temporary solutions and a holistic view rather than site by site development.	16	*Reduce emission generating transport*
		Need underlying policies for protecting environment, eg air quality, noise, contaminated land
Group 4 – Infrastructure		
Improve linkages between the existing city plan themes and underlying policies, e.g. housing and employability and benefit reform	33	
Use of greenspace as infrastructure, eg linking SUDS, active travel and greenspace to improve connectivity	22	
Improve communication around infrastructure developments, eg involve local community in private sector developments	12	

Appendix 1. List of Participants

Duncan	Booker	Principal Officer	GCC
Calum	McCallum		Transform Scotland
Nigel	Kerr	Group Manager – Public Health	GCC
James	Crawshaw	Assistant Manager Public Health	GCC
Alex	Mackenzie	DIRECTOR NORTH CHCP	NHS GG&C- NORTH CHCP
Sue	Laughlin	HEAD OF INEQUALITIES & HEALTH IMPROVEMENT	NHS Greater Glasgow & Clyde
Hamish	Battye	HEAD OF PLANNING & HEALTH IMPROVEMENT	SOUTH EAST CHCP
Sue	Hilder	Outdoor Access Officer	Glasgow City Council
Gary	Dover	Planning Manager	East Glasgow CHCP
James	Egan	Health Improvement & Inequalities Manager	East Glasgow CHCP
Tom	Scott	Health Improvement Lead	East CHCP
Susie	Palmer	Corporate Policy Officer	GCC
Bill	Brown	Principal Officer	GCC
Etive	Currie	Project Manager – Equally Well: Glasgow City Test Site	GCC
Heather	Claridge	Planning Officer	GCC
John	Daly	Planner	GCC
David	Thomson	Deputy Lead, Community Pharmacy Development	NHS GGC
Steve	Turnbull	Principal Development Officer	GCC
Alan	Duff	Senior Planning Officer	GCC
Susan	Rutherford	Senior Planning Officer	GCC
Eileen	Dudziak	Senior Planning Officer	GCC
Irene	Hastie	Student placement	GCPH
Russell	Jones	Public Health Programme Manager	GCPH
Catherine	Benton	non-exec	Board NHSGGC
Tim	Mitchell	Principal Planner	GCC
Janet	Muir	Director	CHEX
Louise	Rennick	Environment & Health Project Manager	Health Scotland
Julia	Radcliffe	Programme Manager	Urban Lab
Martin	Higgins	Scottish HIA Network Co-ordinator	NHS Lothian

Appendix 2. Healthy Urban Planning Briefing Paper for Health Commission

Introduction

The World Health Organisation (WHO) created the Healthy City Approach as a process through which Health For All and Local Agenda 21 principles and objectives (e.g. sustainable development) could be realised in the urban context.[1] Over the last two decades the WHO's Centre for Urban Health, Healthy Cities and Urban Governance Programme has been exploring the links between urban planning and health in an attempt to assist urban planners in designing healthier and safer cities.

The Healthy Urban Planning (HUP) approach seeks to enhance the physical, mental, social and environmental well being of people who live and work in cities, by focusing on the improvement of urban planning. HUP reflects WHO's broad definition of health: "Health is a state of complete physical, mental and social well-being, not simply the absence of illness and disease".[2]

Since health is a core element of sustainable development, HUP calls for the positioning of health considerations in the centre of economic, regeneration and urban development efforts. The approach recognizes the need to find a balance between social, environmental and economic pressures, thus is similar to planning for sustainable development. HUP aims not only to improve the quality of the built and natural environment, but also the quality of life of those living in cities. The principles of HUP can lead to the development of a healthy economy, environment and society.[3] In particular, urban planning can provide the infrastructure and design to facilitate optimum health and has the opportunity to do so by addressing the redesign of older towns and poorer environments with deteriorating fabric, as well as applying healthy urban planning principles to new developments.

The involvement of the WHO European Healthy Cities Network in the European Sustainable Cities & Towns Campaign (launched in 1997) marked the beginning of the healthy urban planning initiative as part of a move to integrate the agendas for health and sustainable development. Collaboration between healthy cities practitioners, urban planners and academic advisers resulted in the 2000 publication *Healthy Urban Planning – a WHO guide to planning for people* which provides twelve health objectives for planners. The objectives, expressed as questions are: do planning policies and proposals encourage and promote:

1. Healthy exercise?
2. Social cohesion?
3. Housing quality?
4. Access to employment opportunities?
5. Accessibility to social and market facilities?
6. Local low-impact food production and distribution?
7. Community and road safety?
8. Equity and the reduction of poverty?
9. Good air quality and protection from excessive noise?
10. Good water and sanitation quality?
11. Conservation and decontamination of land?
12. Climate stability?[4]

The next step was to establish a City Action Group on HUP, which brought together health practitioners and urban planners from a number of WHO Healthy Cities to work on practical ways to implement the principles advocated. The focus has been on two key areas: incorporating health principles and objectives into strategic documents and policies, and; developing specific projects that incorporate HUP principles such as intersectoral action and community participation or that aim to advance understanding in relation to specific themes. HUP became a core theme in Phase IV of the WHO Healthy Cities Network in Europe (2003-2008). The goal is to integrate health considerations into city urban planning processes, programmes and projects and to establish the necessary capacity and political and institutional commitment to achieve this. It has three related objectives:

1. To raise awareness and create a common understanding of the concept of healthy urban planning and all that it implies as key to changing practice in cities

2. To gain local practical experience from the application of healthy urban planning principles and approaches
3. To work towards mainstreaming healthy urban planning in cities and propose institutional solutions for making healthy urban practices mainstream in cities.

Evidence

It is increasingly recognised that place and space have an impact on human health and wellbeing and that individual actions to improve lifestyle or health status are likely to be constrained by the environmental and socio-economic contexts in which they take place. The links between health and urban planning have been explored by the WHO Healthy Cities movement and are described in the documentation that supports healthy urban planning practice.[5] Key to this learning is that links need to be established between public health and urban planning to improve the conditions that support healthier and safer living. This involves consideration beyond the physical and social determinants of health and includes broader considerations such as pollution, housing, crime and community safety, ecology and community fragmentation.

There has been growing interest in investigating the influence of the built and social environment on health status and on health related behaviours, thus authors from multiple disciplines have recently published books and reviews that describe the evidence concerning the health impacts of aspects of the physical environment on health. It is beyond the scope of this paper to provide a comprehensive review of the evidence, but will instead provide a brief summary.

Direct Impacts

There are both direct and indirect health impacts of the built environment. Direct impacts include those traditionally associated with planning and environmental health, e.g. air quality (indoor and outdoor), climate, water quantity and quality, noise and traffic-related injuries.[6,7,8,9,10] Much of the evidence concerning direct impacts is quantifiable and causal effects can be attributed.

Air quality

In a review of the evidence on housing and health for the Fourth Ministerial Conference on Environment and Health, the WHO identified five main indoor air substances that have harmful effects: radon, environmental tobacco smoke, cooking pollutants, volatile organic compounds and asbestos, all of which have been linked to respiratory diseases.[11] Outdoor air quality in the UK is mainly affected by traffic, although in some areas industrial emissions play a part.[12] The WHO has linked numerous health impacts to transport-related air pollution, including mortality, asthma, rhinitis, cardiovascular disease, cancer, adverse pregnancy and birth outcomes and decrease male fertility.[13]

Climate

The UK's CO_2 emissions in 2006 were 560.7 million tones (excluding international aviation and shipping),[14] which contribute to global climate change. The potential health impacts in the UK are an increase in heat-related mortality, food poisoning, increased exposure to UV radiation and an increase in injuries and deaths due to extreme weather events.[15]

Water

Both urban development and climate change contribute to the increased risk of flooding. Urban development plays a part in several ways, including further development on floodplains and the increased use of impervious materials that increase runoff.[16,17] As runoff increases, not only does the risk of flooding increase, but so does the risk of water contamination from both microbial and chemical agents.[18] Health impacts from flooding include immediate impacts such as drowning and stress and exposure to contaminated floodwater increases the risk of respiratory illness, gastrointestinal illness,

high blood pressure and many of the chemical contaminants found in flood water are carcinogenic.[19,20]

Noise

Noise related complaints have increased in England and Wales over the past two decades.[21] Noise may cause sleep disturbance and annoyance, but health impacts may also be more severe. Persistent environmental noise can contribute to heart disease, hearing impairment and poor mental health.[22]

Traffic-related injuries

In 2006, 3,172 people were killed, 28,673 were seriously injured and 226,559 were slightly injured in road-traffic accidents.[23] More information is available in the briefing paper on transport and health.

Indirect Impacts

Indirect impacts include how the design of the built environment influences determinants of health, in particular perceptions of the local area, social connections and physical activity, which in turn are associated with physical and mental health and well-being. These indirect impacts have received increasing attention by researchers in recent years.[24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43] The majority of studies exploring the indirect impacts are not designed to attribute causality, in part due to the complex nature of the questions and finding appropriate comparisons.[44,45,46,47] Nevertheless, studies are underway that should help to provide answers to some of these questions in the future. One study in the USA examined the impacts the built environment could have on residents' health when there are increased opportunities for active transportation (walking or biking). A 5 percent increase in neighbourhood walkability was associated with 32.1 percent more minutes per week of physically active travel, approximately a one-quarter point lower BMI, 6.5 percent fewer vehicle miles travelled per capita and lower vehicle emissions (5.6 fewer grams of NOX and 5.5 percent fewer grams of volatile organic compounds per capita.[48]

Neighbourhood environments, general health, and mental health

Studies have consistently found evidence of a relationship between neighbourhood environment (both perceptions and more objective measures) and self-reported health.[49,50,51,52,53] For example, people who perceive their neighbourhoods to be hostile, dirty, poorly maintained, and lacking in safe places to play, are more likely to experience anxiety, depression, and poor health.[54] Evidence also shows that the negative impact of poor physical neighbourhood environments is greater for women, older people, and people who are unemployed.[55,56,57]

Social Connections

Fewer and weaker social networks have been associated with a number of health outcomes including cardiovascular disease, mental health problems and increased mortality.[58,59,60] Neighbourhood designs likely to promote social networks are those that are mixed use and pedestrian oriented, with public spaces, such as parks, that can act as places for socializing.[61,62,63,64]

Physical activity

Physical activity can promote positive mental health and reduce the risk of obesity, coronary heart disease, type II diabetes, as well as certain cancers.[65,66,67,68] Characteristics of local areas can encourage physical activity. Residents in more “walkable” neighbourhoods characterised by high population density, different types of land use, high connectivity (e.g. easy routes between destinations), good pedestrian and cycling facilities (well maintained pavements, cycle routes, traffic calming measures), and good accessibility (e.g. variety of easily reached destinations or facilities, such as shops, greenspaces, and transport links) undertake more physical activity.[69,70,71,72,73,74,75] The absence of facilities, barriers to facilities (such as steep hills, busy roads to cross) or the

perception that facilities are inadequate have negative associations with physical activity.[76] In addition urban greenspace does more than offer opportunities for physical activity, it offers opportunities for engagement with and observation of nature, as well as opportunities for social interaction, thus enhancing individuals' sense of well-being.[77] Greenspace is most valuable as a resource when used by high volumes of people; therefore,
spaces need to be accessible, of sufficient size, and connected to residential areas.[78] Studies have also shown that many people, particularly women and older people, are concerned about safety in their neighbourhood, usually related to issues such as street crime and fear of injury from traffic. Parents' perceptions of neighbourhood safety also impact of levels of physical activity in children. Thus it seems likely that a range of measures that enhance people's perceptions of safety are likely to encourage greater levels of walking and cycling.[79,80,81]

HUP in Glasgow

Initial efforts of the HUP approach in Glasgow focused on the integration of health into strategic planning documents. As a result, The 2005 Glasgow & Clyde Valley Structure Plan Alteration[82] identifies the key role that urban planning can play in delivering the health agenda for Scotland. There is a close relationship between most of the areas of greatest health deprivation and established planning policies for improving employment, environment and regeneration. At the same time, these are key determinants of peoples' health, well-being and quality of life. The 2005 Alteration has identified some of the communities where there is the greatest need and potential for creating a healthier environment by identifying action to improve the housing and physical conditions of these areas.

The GCV Joint Committee in collaboration with the local Health Boards and GCPH have developed a Common Health Action Programme which complements both the Structure Plan and health policy documents by demonstrating the consistency of sustainable land use planning and health policy and by providing a general context for continuing collaboration and monitoring of progress. It sets out to achieve this by establishing an Integrated Programme and Key Action for addressing challenges in the each of following areas: economic regeneration, social inclusion, sustainability and the environment.

Glasgow City Plan 2 provides detailed guidance on the shape, form and direction of development in the City.[83] For the first time, health and health improvement has appeared in the Plan and it is integrated throughout the document identifying where planning can influence health and well-being. Examples include links to housing, transport, greenspace, and access to jobs and services. In addition, the Strategic Environmental Assessment for this Plan considers the implications of the City Plan on health.

Further work included sponsoring training on health impact assessment as a tool for integrating health into spatial planning. As a result of the training, HIA was piloted on the East End Local Development Strategy (EELDS), which at the time was in a very early draft stage. A two day participatory stakeholder event was held involving representatives from health, planning, community planning, Scottish Enterprise, housing, and local community members. Stakeholders were provided with 1) baseline information of the health of residents in the local area, 2) a list of social determinants of health relevant to the EELDS, 3) examples of how health was considered in other regeneration projects, 4) a presentation to inform participants about the EELDS and 5) a site visit to the area of concern. Suggestions in the report[84] were based on evidence and over 100 of the suggestions were adopted into future drafts of the EELDS.[85]
The HIA was not only effective in influencing the document, the process of conducting the HIA was as important in providing a common language for communication. The HIA has led to further innovative techniques of community engagement within the planning system. As a result of the success of the HIA of the EELDS, Glasgow City Council has embraced HIA as an effective tool to integrate health into strategies, proposals, plans and projects, many of which are traditionally non-health related. HIA has been used to explore the lunchtime experience of secondary school pupils and plans are in place to conduct an HIA on the New Economic Strategy Action Plan for Glasgow and the 2014 Commonwealth Games. Planners at GCC are working with GCPH and the Scottish HIA Network to develop a new model to assess health, sustainability and equality impacts of planning proposals and

strategies. A scoring system will be developed and implemented in the assessment of proposals for the 2014 Commonwealth Games Village.

Another development resulting in part from the HIA of the EELDS is the concept of integrated infrastructure, Growth is often hindered by outdated sewerage systems that are combined with surface runoff systems. In order to build, Sustainable Urban Drainage Systems (SUDS) must be in place to ensure that surface runoff does not infiltrate the sewers. SUDS have traditionally taken the form of holding ponds surrounded by a fence, but integrated infrastructure introduces a canal network integrated with a green network and an activity network. Thus, SUDS not only serve the purpose of dealing with runoff, but also connect greenspace and provide an opportunity for residents to incorporate physical activity in a pleasant environment within their daily routines.

HUP Elsewhere

HUP principles to design healthy communities have gained increasing attention throughout the world, although it may be known by a different name. A few examples are provided below.

Brighton & Hove

A series of Master Classes focusing on HUP and sustainable communities was undertaken with planning, transport, major development projects and sustainability officers and public health specialists. A small team of city planners has been trained to undertake HIAs on proposed future planning developments. A HIA supports the Strategic Environmental Assessment of the new Local Transport Plan and an HIA is being conducted on the Local Development Framework.

Health criteria are being built into planning development briefs and technical assessment processes. A health representative has joined the Technical Assessment Officers Group to assist the assessment of developers' expressions of interest. HIAs will be undertaken on proposals by preferred developer/s and subsequent planning applications, through collaboration between planners, public health specialists and developers.

The first implementation of this newly agreed process will focus on the redevelopment of an old army barracks, which will be redesigned for residential housing and commercial use. The implementation of the healthy urban planning process will in this instance make health considerations more explicit in steering the development of the site.

USA

The Center for Disease Control has embraced the links between planning and health and has provided national leadership in the move to design healthy communities by providing a web resource.[86] HIA for planning proposals is increasing in the USA. Another resource for healthy and sustainable community design is the Smart Growth Network website.[87] In addition, Project for Public Spaces[88] have been working with communities to develop quality public spaces that are well used and Greenspace Scotland have commissioned them to run training sessions in Scotland.

Vauban – Freiburg, Germany

The Vauban neighbourhood in Freiburg is an example of a mixed-use residential development with a compact urban building structure (without detached homes or buildings exceeding four stories) and a distinct market place and district centre (with shops, a primary school, kindergartens and public greenspaces). Vauban is designed so that schools, markets, businesses, food coop and recreation areas are within walking and cycling distance of residents. All houses are built to a low-energy standard, and solar panels and photovoltaic cells are commonplace. The principles of 'car-free' and 'parking-free' living have been applied, with community parking lots located at the periphery with spaces available for a fee. There is good public transport provision and a car-sharing organisation in place. Residents joining the car-share scheme have access to shared cars and receive a one-year free pass for public transportation. Streets, public greenspace and the neighbourhood centre were all

developed during meetings and workshops with residents. Social interaction is a key characteristic of the neighbourhood.

Conclusions

HUP has the potential to create healthy sustainable communities. While work integrating health into the spatial planning system in Glasgow is well underway, it has not been easy and there is still much to be done. Involvement in international networks that share experience, tools and good practice have been vital to the success of HUP in Glasgow, and involvement in these networks should be continued. Successes need to be built upon to mainstream HUP throughout Glasgow. Further work needs to be done to have health criteria built into planning development briefs and assessment processes. Planners need to be supported in meaningful engagement with the community in the development process. While the work in Glasgow has gained the attention of the Scottish Government, further discussion is required, as national leadership would greatly assist in taking HUP forward.

As a final thought, the paper concludes with the words of Jane Jacobs, who led the way in advocating for a place-based, community-centered approach to urban planning, decades before such approaches were considered sensible.

> …Vital cities are not helpless to combat even the most difficult of problems. They are not passive victims of chains of circumstances, any more than they are the malignant opposite of nature.
>
> But look what we have built … low-income projects that become worse centers of delinquency, vandalism and general social hopelessness than the slums they were supposed to replace … Cultural centers that are unable to support a good bookstore. Civic centers that are avoided by everyone but bums … Promenades that go from no place to nowhere and have no promenaders. Expressways that eviscerate great cities. This is not the rebuilding of cities. This is the sacking of cities.
>
> Jane Jacobs, *The Death and Life of Great American Cities*, 1961[89]

Recommendations

- There is an opportunity for the health commission to champion the HUP approach to help mainstream HUP throughout Glasgow. While many Glasgow planners understand the links between planning and health, this is by no means universal and the lack of understanding can create barriers. There also needs to be greater buy-in from partners, including the NHS Board, CHCPs and Community Planning Partners. The health commission could seek to encourage partners to embrace the principles of HUP and hold seminars, disseminate papers, etc. to ensure there is an understanding throughout Glasgow of how this can lead to a healthier, more sustainable city. It might also consider what further might be done by the Scottish Government to provide national leadership on HUP.

- Glasgow's bid for the 2014 Commonwealth Games included admirable aspirations regarding the Games' contribution to health improvement. However, there are serious challenges in delivering a legacy of health improvement. While the Commonwealth Games has the potential to be a catalyst to help address many of the determinants of health, lessons from previous international sporting events indicate that the event is not, in and of itself, sufficient to ensure improved health. In order to assist in developing a legacy of health improvement, a HIA of the Games will be conducted. It is recommended that the health commission encourage partners to take on board suggestions from the HIA and to develop and adapt plans in light of these suggestions.

- It is recommended that the health commission consider how it can help to ensure that health criteria are built into planning development briefs and assessment processes.

- The health commission might also consider how it could encourage the meaningful use of HIA for future policies, plans, and developments in Glasgow, including both large public sector developments and private developments.

- The meaningful involvement of communities in decisions about their local areas needs to be enabled.

- Greenspace and other public spaces contribute to the vibrancy of local neighbourhoods. They provide an opportunity for social interaction, particularly if designed and maintained in ways to meet community needs. It is recommended that the health commission considers how planning can be used to protect public spaces, develop new ones and involve local community members in their development.

- It is recommended that the health commission endorses the city's continued involvement in national and international networks for the purpose of sharing learning and experience, good practice and developing collaborative work.

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Appendix: Glasgow test site on health and planning

1. There has been a significant development in Glasgow's approach to health and planning since this paper was first tabled at the 22 August meeting of the Health Commission. In response to a Scottish Government call for bids to establish 'test sites' on tackling health inequalities, Glasgow City Council submitted proposals for work to integrate health and planning. This bid has recently been endorsed by the Scottish Government and is one of 8 test sites on a range of health issues which will be developed across Scotland.

2. The test site bid stated that the city wished to:

- Develop good practice in incorporating health within the planning process
- Incorporate lessons learned from existing work in the sector, particularly by using experience and materials generated through the East End LDS work described above
- Provide new and innovative means for planners, public health, other sectors, and local communities to engage with each other
- Offer new ways of shaping the health impact of private sector investment in buildings and land
- Assess the impact of such changes on the health and wellbeing of local populations, with a key focus on inequalities.

3. There are two key outcomes proposed for this test site, which are aimed at the high level outcome of reducing health inequalities. They are to improve mental health and tackle obesity for residents in the more deprived neighbourhoods. However, the initial timescale set by the Scottish Government is for test sites to inform a review of progress at the end of 2010. The outcomes of work to link planning and health are likely to be seen in the longer term as healthy approaches to neighbourhood design begin to support improved health and reduced inequalities for residents. Intermediate measures of success will therefore be adopted to assess progress towards this goal. They will include:

- Evidence of health considerations incorporated in planning strategies and decisions
- Evidence in particular of action to tackle the obesogenic environment and to encourage active living through planning mechanisms
- Reductions in the gap in environmental quality between different parts of the city
- Improvements in the perception of local residents about their own neighbourhood and quality of life.

4. There has already been debate at Health Commission meetings on the potential for better engagement with local residents on issues of neighbourhood design and development. There has also been discussion about the distribution of environmental amenities across the city and how that relates to Glasgow's better and worse off communities. This test site aims to make progress towards addressing such issues. Initial opportunities to take a new approach are being sought. Given the approach of the test site to tackling health inequalities, these will focus on Glasgow's more deprived neighbourhoods. Some forthcoming developments which commend themselves are:

- Masterplanning of Community Growth Areas in Glasgow around Maryhill, Easterhouse and Baillieston
- The Commonwealth Games Village
- Implementation of the East End Local Development Strategy
- Southern General Hospital Site.

5. There is no doubt that this test site represents an ambitious and challenging proposal. It will potentially require shifts in the kind of decision-making that takes place in the city around investment priorities in land, greenspace, and design. Any comments which Health Commission members may wish to contribute to the development of this test site are welcomed.

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Appendix 3. Transport and Health Evidence Briefing for the Health Commission

Introduction

In the introduction to his chapter discussing transport and health in 'The Social Determinants of Health', Mark McCarthy states:

"Transport is a crucial contributor to health and disease in contemporary European countries and major changes are needed in public policy to reverse existing trends."[1]

At the end of his chapter, McCarthy concludes:

"….the policies and priorities for transport of most Western governments do not match the needs for health. The solid facts are that walking and cycling benefit health while motor vehicles damage health. Thus, walking and cycling need to be prioritised in transport planning; compact cities that minimise vehicle journeys need to be prioritised in economic and land-use planning; public transport must be significantly improved, while car travel is reduced; and leadership is needed from politicians, industry and 'civil society.'"

Unfortunately, there is limited evidence that current UK and Scottish policies and priorities around transport have changed rapidly enough over the last 10 years to reflect McCarthy's call to action despite the approaching spectre of irreversible and catastrophic climate change as well as exhaustion of non-renewable energy sources such as oil and gas.[2] Urban vehicular congestion continues to clog UK and Scottish roads, compromising air quality; levels of walking and cycling continue to fall in comparison to use of motorised transport [3]; public transport quality, frequency and cost compares poorly with European neighbours; further road building and airport expansion is underway. Meanwhile obesity rates in Scotland, contributed to by sedentary lifestyles, are second only to the US.[4] Public health commentators are wondering when we will reach a 'tipping point' that triggers a sea-change in transport policies and programmes in order to radically reduce our travel related carbon footprint, generate more active lifestyles and create a more sustainable future.[5]

In April of this year, the UK's leading public health, transport and planning bodies called on electoral candidates across the country if elected, to invest 10% of transport budgets in cycling and walking initiatives to help fight the UK's obesity crisis.[6] In the associated press release, Dr Tim Crayford, President of the Association of Directors of Public Health said:

"If we really want to see levels of obesity declining in the UK, we have to move on from the rhetoric. We need to see a visible investment in infrastructure that makes cycling and walking the travel modes of choice for people across the country. What's more, every transport and land use decision should be checked to ensure it meets public health criteria. The government's drive for a wave of new Eco-towns is a start, but we need to address transport decisions within existing redevelopment projects if we want to see an all encompassing cultural shift."

The impacts of transport on individual and public health are irrefutable. The GCPH briefing paper, 'How can transport contribute to public health?' provides a synopsis of evidence regarding the role and potential of transport and transport strategy in improving health, reducing health inequalities and improving sustainability.[7] The purpose of this short, additional briefing is to: present further evidence on impacts of transport on health; highlight selected useful and relevant examples of action underway to promote sustainable transport and active travel; and to suggest what additional actions might be considered by Glasgow.

1. Further evidence: transport/travel and safety

'Equally Well,' the report of the ministerial task force on inequalities in Scotland, recommends that:

"Delivering the Government's National Transport Strategy should include specific action likely to improve health and reduce health inequalities. For example, rolling out effective local projects that improve active travel within deprived communities."[8]

Safety is an important factor to be taken into account when promoting walking and cycling. Recent Scottish road injury data (see Table 1) show that child pedestrians are disproportionately represented in road injury statistics.[9] Child road injury rates are also 54% higher in Scotland for those children who are killed or seriously injured and 20% higher for all severities than in England and Wales. Research published in 2006, found that since 1985, the average distance children travelled as a car occupant had increased by 70%; the average distance walked had declined by 19%; and the average distance cycled had declined by 58%.[10] Taking into account distance travelled, there were about 50 times more child cyclist deaths and nearly 30 times more child pedestrian deaths than deaths to child car occupants. In 2003, children from families without access to a vehicle walked twice the distance walked by children in families with access to two or more vehicles, illustrating the social gradient in exposure to risk.

Table 1: Scottish Road Injury Statistics (Children) 2006 [8]

Type of Child Casualty	**Number**	**Killed or Seriously Injured**	**Percentage of Total Casualties of That Type**
Pedestrian	992	247 (9 died)	35% (total for all ages 2851)
Pedal cycle	209	40 (5 died)	27% (total for all ages 781)
Car	657	70 (10 died)	6% (total for all ages 10704)

Other Scottish Government action plans also aim to promote opportunities for walking and cycling as part of a drive to increase population levels of physical activity and combat obesity.[11] Unfortunately, the environment for walking in certain areas, and for cycling, in Glasgow, remains hostile and dangerous. A recent newspaper article by a female journalist captures the experience of being a cyclist in Glasgow today:[12]

"I've been spat on, sworn at and forced off the road - and that's just by pedestrians. Cars, buses and taxis have driven at me, cut me up, swerved into my path and knocked me to the ground. During five years of daily cycling in Glasgow I have become accustomed to "almost dying" on a regular basis."

There are significant barriers to walking around Glasgow. Data from 'Let Glasgow Flourish' shows that, at a city level, perception of safety is an issue for Glasgow residents: in 2003/2004, Glasgow City Council residents were more likely to say that they did not feel safe walking in their neighbourhood alone after dark than residents from other West of Scotland council areas. The crime rate in Glasgow as a whole was over a third higher than that for Scotland in 2003.[13]

However, despite these barriers, there are increasing examples of action on the ground and more emphasis on active travel in policies and strategies. In addition, rising fuel costs appear to be having an impact on travel behaviour.[14] The question remains as to whether these actions, policies and strategies are sufficient to have the required impact.

'Streets ahead. Safe and liveable streets for children,' a report produced by Institute for Public Policy Research in 2002, recommended that a maximum 20mph speed limit combined with traffic calming should become the norm in residential and built up areas and that priority should be given to traffic-calmed 20mph zones in deprived areas with high casualty rates.[15]

Hull City Council began implementation of an extensive programme of 20mph zones in 1994 which it has sustained and expanded until the present day. Establishment of these 20mph zones involved careful design and consultation with local residents and the emergency services.[16] The results of this programme have been assessed as impressive, particularly in the 13 zones installed in 1996/97. The total number of crashes within these zones fell by 56%, while the number of people killed and seriously injured fell by 90%. Hull has achieved national recognition for this programme as one of only a few cities to undertake widespread implementation of this type of traffic calming.[17]

2. Action underway

London
The London Health Commission considered transport to be such a crucial health issue that, in 2000, it conducted a health impact assessment to assess and evaluate the impacts of transport on health to inform the development of London's transport strategy.[18] A direct result of the health impact assessment was a greater emphasis on the infrastructure necessary to promote walking and cycling. Earlier this year, London announced plans for a set of dedicated radial cycle routes at an estimated cost of £400 million. Its vision is to stimulate a 400% increase in the number of people cycling in the capital by 2025.[19]

London congestion charging
Within two months of the introduction of the Congestion Charge, significant reductions in traffic entering the central zone were seen as, by April 2003, there was a 20 per cent reduction in traffic when compared with pre-charge levels[20]. This reduction in traffic has been maintained and, five years later, "traffic in central London remains 21 per cent lower than pre-charge levels"[21]. Transport for London's Sixth Annual Impacts Monitoring Report reveals that, as a result of the Congestion Charge, 70,000 fewer cars now enter the central zone and 30,000 fewer enter the new western extension[21] (introduced in February 2007). Although the Mayor of London, Boris Johnson, has stopped a proposed charge increase to £25 for heavily polluting vehicles[22], he said that the congestion charge "has proved successful in cutting traffic coming into London"[21].

This reduction in car use within central London suggests that these journeys now take place using different modes of transport. This is borne out by figures which show that following the introduction of the charge in 2003, there was a 14 per cent increase in people choosing public transport in the morning peak hour when compared with the previous year[20]. In particular, there is evidence of a 29,000 person increase in bus passengers entering the central zone during this peak time[23]. There is sufficient capacity within the public transport network as the revenues from the Congestion Charge are invested in further improvements to transport in London; in the year 2007/08 the Congestion Charge "generated provisional net revenues of £137 million"[21]. In addition, passengers may now be more likely to choose to use the capital's buses as the reduction in traffic levels has increased bus speeds by 15 per cent[20] and improved their reliability. Figures released by Transport for London on the fifth anniversary of the Congestion Charge show that not only has public transport use grown but cycling within the zone has increased by 43 per cent[24]. The same report shows that overall "there has been a five per cent shift from private car usage to public transport, cycling and walking"[24].

Due to the success in London, a congestion charging scheme is currently being considered for Greater Manchester. Its introduction in 2013 is dependant on a public referendum, likely to be held in December of this year[25]. It has been estimated that the benefits of such a charge in Manchester could be a 13 per cent reduction in traffic and £32.5 million raised for public transport investment within the first year[20]. Any revenue from the charge would be further supplemented by £2.8bn of public transport investment from the Government but this funding is conditional upon the implementation of the scheme in 2013.

By reducing car numbers, congestion charging "tackles road danger at its source"[26] and will, hopefully, reduce the numbers of pedestrian and cyclist casualties on these roads. A 2003 Mori Poll found that 67 per cent of Londoners believe that the Congestion Charge "has been successful in reducing traffic congestion"[20] and this may reduce the hazards of walking and bicycle use. In so doing, it would bring an end to the "vicious cycle of more car use leading to increased road danger leading to more car use"[26]. In the words of Ian Roberts in the British Medical Journal, "if [congestion charging] reduces deaths and injuries of pedestrians and cyclists, encourages walking, and reduces car use, then it will be a major public health reform"[26].

Glasgow
Here in Glasgow, Glasgow City Council's (GCC's) Local Transport Strategy (2007 – 2009) vision states: [27]

'Glasgow's transport vision is to provide a world class transport system which is safe, reliable, integrated and accessible to all citizens and visitors: A transport system that continues to support the physical, social, economic, cultural, environmental and economic regeneration of the City while contributing to the overall well-being, health and fitness of present and future generations: A system

where transport serves all sections of the community equally and there are no transport barriers in terms of accessing jobs, health care, education and leisure.'

GCC has successfully reached the second stage of a selection process in the Scottish Government's (SG) 'Smarter Choices Smarter Places' initiative.[28] The SG is providing funding to selected local authorities in order to:

"….achieve more sustainable communities in Scotland through increased sustainable travel choices, significant reductions in transport related CO2 emissions and air quality pollutants, reduced levels of congestion, increased levels of physical activity, increased awareness of healthy ways of living, and community pride in their neighbourhood."

Glasgow's proposal aims to improve East End accessibility through:

a) Improving the walking and cycling infrastructure along corridors connecting the Dalmarnock / Parkhead Cross area and Commonwealth Games venues with the City Centre;
b) A Smarter Choices intensive marketing campaign targeted at walking and cycling to encourage residents to use active travel modes to meet their everyday transport needs and address cultural stereotypes.

Second stage bids will be assessed in September and successful local authorities will be duly informed. Successful local authorities will commence baseline data collection in autumn 2008 prior to implementation of measures in early 2009.

Sustrans Connect 2 project – the 'bridge to nowhere,' Glasgow
In 2007, the Big Lottery Fund awarded £50 million to Sustrans, the sustainable transport charity, for it to work with partner organisations and groups across the UK to create new walking and cycling routes where they were most needed.[29] Seventy nine different schemes are now underway through this initiative, including one in Glasgow – the 'Bridge to Nowhere.' This scheme will connect the current half-finished bridge over the M8 with a second over the Clydeside Expressway to form the hub of routes aiming to transform possibilities for walking and cycling in central Glasgow. There will be a garden link from Kelvingrove Park via Elderslie Street and Argyle Street, Waterloo Street will be re-designed to allow two-way cycling to reach Glasgow Central Station. Sustrans consider that this project will go a long way to overcoming the barrier formed by the M8 which cuts through Glasgow and will not only provide a link to the riverside, but also a link between the riverside walkway and Kelvingrove Park.

Edinburgh City Council launched a Sustainable Travel Plan in 2000. The plan aimed to reduce the environmental impact of all aspects of Council travel including commuting, travel for work and from fleet vehicles. This approach resulted in a 12% reduction in commuting by single occupancy vehicle over 3 years.[30] Edinburgh City Council has recently announced funding of £2.8 million for a free cycle hire scheme, similar to that operating in Paris and other European cities. [31]

Odense, Denmark is a city which has taken an imaginative and holistic approach towards the promotion of active sustainable travel, since the 1970s. An increase of over 20% in cycling has taken place over the last 20-30 years and the city was recognised by a UK House of Commons Health Select Committee, as the best European city for work to improve the quality of life for city dwellers.[32] In 2006, it was claimed that that car ownership had increased at a slower pace in Odense than in the rest of Denmark, there had been a decrease in the number of employee sick days and there was a lower death rate than elsewhere in Denmark.[33]

In *Copenhagen*, radical changes have been made to the city centre in favour of pedestrians and cyclists. One third of all journeys in the city are now by bike; there has been no growth in car use in the last 40 years; CO2 emissions fell by 23% between 1990 and 2000. [34]

Sheffield free travel
A free city centre bus service for Sheffield, the FreeBee, was launched in October 2007 by the South Yorkshire Passenger Transport Authority (SYPTA). With the aid of funding from the South Yorkshire Passenger Transport Executive (SYPTE), the SYPTA was able to provide three low-level buses which will, according to the SYPTE "give a wide range of people the chance to travel easily and for free

around the city centre"[35]. The buses allow 'hop on, hop off' travel between a number of popular locations in Sheffield city centre, including the railway stations, shopping centres and Sheffield Hallam University[36].

The service has proved very popular and by March this year it had carried over 100,000 passengers[37]. Due to this popularity, and weekly passenger numbers of almost 10,000, the SYPTA announced in July that larger buses would be added to the route to increase capacity[38].

Curitiba

The Brazilian city of Curitiba has been recognised internationally as "a successful example of urban management" [39] where a major development plan, with an emphasis on public transportation rather than the private car and a prescriptive land use policy, was implemented in the 1960s. Cities such as Curitiba, with populations of greater than one million people, often develop an underground transit system in order to provide an efficient transport method that can withstand the inevitable daily use of such a population. As the cost of such a system was seen as highly prohibitive, the Curitiba Master Plan instead developed an entirely bus-based public transport system and designed the city's major roads around it.

Each of the five "structural axes"[40], along which the development of the city has been concentrated, consists of three parallel roads with lanes dedicated to certain forms of traffic. In the centre is the largest road, which contains lanes for slow automobile traffic travelling in opposite directions, either side of segregated express bus lanes. There is a one block gap between the central road and the two flanking, smaller roads dedicated to one-way high-speed traffic. The multiple dedicated bus lanes allow for faster travel into and out of the centre of the city. Journey times are also decreased by using a small number of specially designed stops with structures known as 'tube stations'. These elevated and enclosed 'stations' allow all passengers to purchase tickets before boarding a bus and places them at the same height as the bus floor, reducing the time required for disabled passengers to mount and dismount the vehicle. As a result, boarding times for these buses is two passengers per second, as compared to one every four seconds for traditional buses[40].

In addition to the speed of the public transport system, it is made desirable to use by the ticketing policy: for the price of one ticket a passenger is able to travel as far and make as many transfers between different lines as they require. As a result, according to 2003 figures, there were 1.9 million journeys using public transport on weekdays[40] and surveys have shown that 79 per cent of the population now use the bus to travel, a greater proportion than in other Brazilian cities[41]. As up to 75 per cent of commuters in Curitiba use the bus system to travel to work, the public transport system "has one of the highest patronage rates worldwide"[39].

There are also examples of good practice in green travel solutions created by *health services*. Sustained and incremental green travel planning in *Addenbrooks Hospital* has changed staff and visitors travel patterns.[42] Single occupancy car journeys have dropped from 50% in 2000 to 35% in 2004. The success of the travel plan has been attributed to:

- Commitment from the Board
- Strong leadership in introducing unpopular car park management measures and charges
- Ring-fenced income from car parks
- Car park income sufficient to fund new infrastructure
- Car park income sufficient to increase range of travel choices
- Union support

Nottingham University Hospitals NHS Trust has put a number of measures in place to encourage cycling and to reduce car journeys to its 2 main campuses.[43] On both campuses, there are secure, covered, cycle storage compounds, changing and showering facilities, a cycle allowance for work use, a map of cycle facilities on site available, a cycle purchase scheme and pool bikes. The Trust has also established a free bus service between its 2 campuses, funded jointly by the Trust and Nottingham City Council. This bus service accommodates over 12,000 passenger movements per month.

NHS Greater Glasgow and Clyde is a member of 'Cyclescheme,' a national cycle scheme which allows employees to purchase a new bike from collaborating cycle shops via deductions from their monthly salary, with associated tax relief. [44] This scheme provides the opportunity for employees to buy a bike at a lower price, paying for it over a period of months.

3. Conclusions/recommendations

There is a plethora of initiatives and programmes underway aiming to promote more active, sustainable modes of travel. Policy and strategy increasingly refers to the importance of greener, active travel as pivotal to a healthier, more sustainable society. The litmus test for success, in terms of achieving a sea-change in population travel patterns will be influenced by the interface and level of consistency between relevant policies and strategies as well as the extent to which revealed priorities reflect the aspirations of vision statements. The following suggestions, if acted upon, will necessitate major realignment of priorities to favour walking and cycling over road building and car use as well as reallocation of budgets.

- 20mph zones with associated traffic calming measures should be extended further in Glasgow. 20mph zones are already mandatory in residential areas in other European cities, where home zones and neighbourhoods designed around the needs of pedestrians are much more the norm. The manifesto for active travel, previously mentioned, also endorses the implementation of 20mph zones as the norm in residential areas. [6]

- Pedestrian routes and spaces, off-road cycle paths, and on-road cycle lanes should be designed and maintained to a standard equivalent to that which applies to the trunk road network. At present, pedestrians and cyclists are marginalised and endangered by the design of spaces and routes for them. Could GCC implement a policy that means each time a road is resurfaced or repaired, road space is redistributed to pedestrians, cyclists and public transport such that a "Dutch-style" urban environment is created? Could greater investment be made in the creation of walking/cycling routes that allow better linkages between areas of the city? At present, much of the activity in this arena is focussed around the Clydeside and the East End, as previously described. There is a need for the development of high quality, safe, direct and attractive routes in other areas of the city, such as the South Side which could improve connectivity between health care services such as the Southern General Hospital and the Victoria Infirmary and residential areas.

- Local Transport Plans, including Glasgow's, should include pedestrian casualty reduction targets, preferably expressed as casualties per mile walked so that they cannot simply be achieved by a reduction in walking as is commonly the case.

- Pilot home zones should be considered in Glasgow, as recommended in the housing and health evidence briefing. These developments have been shown to facilitate walking and cycling in a safe, attractive environment.

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City Plan 2: Addressing the Health Agenda

The improvement in the health of the environment in general, and the health of the City's residents, is a central cross cutting theme of City Plan 2. Environmental and human health factors were included as environmental objectives to assess the Plan's development strategy and proposals and development and design policies and recorded in the Plan's strategic environmental assessment (SEA) environmental report. The SEA included the objective to *"Create the conditions to improve human health"* (objective 20).

The Centre of Population Health commented at different stages in the Plan preparation process and supported the various health related components of the Plan. City Plan 2 was not subject to a formal Health Impact Assessment.

The following notes list the implicit or explicit references to health in City Plan 2. The Plan does not include a specific section on health, per se.

Part 1: Development Strategy: Overview

The Plan's Development Strategy is based on a vision for the City which is underpinned by three guiding principles, one of which is *Improving the Health of the City and its Residents*. The principles are embedded into the Plan's Development Strategy. The introduction to each section of the Plan (People, Jobs, Environment and Infrastructure, Key Regeneration Areas and Rest of the City) outlines, generally, how the guiding principles can be delivered, including for the improvement of health.

Plan reference: page 6 of final Plan - *Improving the Health of the City and its Residents* states:-

"Whilst the health of Glaswegians is improving, this improvement is not keeping pace with that of Scotland or the UK, generally. Glaswegian males, for example, are twice as likely to die before the age of 65 than males in England and Wales, and significantly more likely than those in the rest of Scotland. The root causes of poor health are numerous and interlinked. Many determinants of health, however, have some basis in land use. Air and water quality, for example, are, in part, determined by the pollution emitted by transport or through contaminated land. Accessibility to health services, cultural and sporting facilities and local recreation and greenspace, and facilitating more active lifestyles, are some of the other issues which can improve both physical and mental health.

The City Plan will help address such issues by, amongst other things, promoting new development in locations easily accessible by healthy modes of transport, piloting the Health Impact Assessment process (see CLYDE GATEWAY) and creating attractive and sustainable places in which to live and work.

The Guiding Principles form the central, cross-cutting themes which run through, and inform, the different sections of the Plan. They provide a common, strategic link with the aims and policies of partner organisations, such as the Community Planning Partnership and Structure Plan Joint Committee, and with other strategies produced by the Council. Implicit in this approach is a recognition that the Guiding Principles are interrelated and cannot be addressed in isolation".

Part 2: Development Strategy: Priorities and Proposals

The Plan's development strategy is supported by a broad range of development and design policies and more detailed development guides, designed to help deliver the strategy on the ground. The adoption of this policy toolkit in the development management process should impact positively upon the City's environmental and/or human health. The overarching policies which apply, in this respect, are listed immediately below and apply to all forms of development. However, the Plan contains a range of policies which can improve health conditions across the board. Some of these are referred to under the following topic headings.

- STRAT 1: Design and Sustainable Development
- DES 1: Development Design Principles
- DES 2: Sustainable Design and Construction

These aim to create sustainable, well-designed, energy efficient, safe, accessible and inclusive places.

People:

The Strategy seeks to:
Improve residents' **health** by providing for local access to facilities including greenspace, cultural and sporting facilities, helping to cut traffic-related pollution and providing for increased walking and cycling.

Plan references: page 13, paragraph 3.3 (v) and page 23/24, paragraphs 3.55 and 3.56.

Other Relevant Policies: RES 1: Residential Density
RES 2: Residential Layouts

Jobs:

The Strategy seeks to:
Improve residents' **health** by delivering new jobs, and retaining existing ones, thereby helping to improve life circumstances, reduce poverty and foster self-esteem.

Plan references: page 29, paragraphs 4.20 and 4.24 (retaining land for industrial/business development and promoting economic development within the City's Core Economic Development Areas, page 31, paragraph 4.33 (promoting the Strategic Business and Industrial Sites Programme) and page 32, paragraphs 4.37 (promoting Office and Business Development).

Other Relevant Policies: IB policies

Environment:

This section of the development strategy deals with a number of Environment topics.

Heritage and the Built Environment

The Strategy seeks to:
Enhance and maintain residents' **health** by providing attractive living and working environments which help foster mental wellbeing.

Plan references: pages 34/35/37/38, paragraphs 5.6 and 5.7 (promoting good quality Urban Design and Sustainable Design and Construction), 5.9 (protecting and enhancing Conservation Areas), 5.19 (protecting and enhancing the city's Landscapes and Townscapes), 5.26 (enhancing Public Realm and appearance of the city).

Other Relevant Policies: DES 3: Protecting and Enhancing the City's Historic Environment

Biodiversity and Greenspace

The Strategy seeks to:
Improve residents' **health** through the positive impact which local greenspace and enhanced biodiversity can have on mental health and by providing for local access to the green space network.

Plan references: pages 39/41/45, paragraphs 5.31, 5.37, 5.54 and 5.57 (promoting the protection, enhancement and extension of the city's green space network and access to it for, e.g. leisure opportunities, opportunities to improve health and sustainable transport through walking and cycling, and protection of allotments and promotion of gardening).

Various health related comments are made, including in the Developing the Green space Network which recognises that the green space network needs to be better integrated into major regeneration areas with improvements to public parks and the public realm. Paragraph 5.43 notes "The City Council will strengthen the connectivity of the green network to benefit both biodiversity and landscape and will incorporate its elements into local development strategies, masterplans, design briefs, the developing core path network and appropriate planning consents, to give pedestrians, cyclists and the disabled people safe and easy access to Glasgow's services and facilities."

Other Relevant Policies: ENV 1: Open Space Protection
ENV 2: Civic and Open Space
ENV 6: Biodiversity
ENV 10: Access Routes and Core Path Network

Vacant and Derelict Land

The Strategy seeks to:
Improve resident's **health** by addressing sites which, because of dereliction and/or contamination, may present health or accident risks to nearby residents and by improving local environments which can positively impact on mental wellbeing, including landscape and water environments and enhanced biodiversity.

Plan reference: page 46, paragraph 5.61 (promoting the re-use of vacant and derelict for productive new uses which will benefit the city and its environment).

Other Relevant Policy: ENV 12: Development of Brownfield Land and Contaminated Sites

Energy

The Strategy seeks to:
Improve and maintain residents' **health** by promoting the development of energy efficient, warmer homes.

Plan reference: page 48, paragraph 5.72 (improving energy efficiency with positive effects on, e.g, fuel poverty affecting human health and climate change).

Other Relevant Policy: ENV 15: Energy

Infrastructure:

This section of the development strategy deals with a number of Infrastructure topics.

Transport

The Strategy seeks to:
Improve resident's **health** by minimising air and water pollution at source and by improving road safety through reducing traffic and traffic speeds, in appropriate locations.

Plan reference: various pages including page 51, paragraph 6.5 (promoting improved conditions for economic development, public transport, walking and cycling routes and improved access from homes to employment and services, improved traffic management and addressing air pollution).

Other Relevant Policies: TRANS 1: Transport Route Reservations
TRANS 2: Development Locational Requirements
TRANS 5: Providing for Pedestrians and Cycling in New Developments
TRANS 9: Air Quality

Retail and Other Town Centre Uses

The Strategy seeks to:
Improve residents' **health** by facilitating access by walking, cycling or public transport to retail and other town centre uses.

Plan references: pages 66, paragraph 6.67 (maintaining and improving the quality of town centres and access to them by walking, cycling and public transport)

Other Relevant Policies: SC 6: Retention of Retail and Commercial Leisure Floorspace within Tier 1-3 Town Centres
SC 7: Protection and Promotion of Local Retail Parades and Local Shops

Water Supply

The Strategy seeks to:
Promote health by supporting proposals which improve drinking water quality/supply.

Plan reference: page 76, paragraph 6.121 (ensuring that Glaswegians benefit from a clean, abundant and healthy water supply).

Drainage and Sewerage

The Strategy seeks to:
Protect and improve residents' **health** by minimising the threat of flooding and the related risk of pollution and disease.

Plan reference: page 79/80, paragraphs 6.146 and 6.147 (ensuring development and regeneration programmes achieve environmental, economic and social renewal and reduce flood risk through the delivery of appropriate drainage and sewerage schemes.

Other Relevant Policies: ENV 4: Sustainable Drainage Systems
ENV 5: Flood Prevention and Land Drainage

Education

The Strategy seeks to:
Promote **sustainability** and **health** by facilitating access by walking, cycling or public transport to educational facilities through their location and the implementation of travel plans.

Plan reference: page 84, paragraph 6.176 (improve the quality, range and accessibility of education facilities).

Paragraph 6.188 notes "The City Council will seek to maximise the potential regeneration benefits offered by the Pre-12 Strategy Project and, in doing so, deliver safe walking and cycling routes to connect the schools to their catchment areas."

Hospital Provision

The Strategy seeks to:
Maintain residents' **health** by encouraging the development of modern hospital facilities in Glasgow.

Plan reference: page 44, paragraphs 6.189-6.200 (improve the quality of hospitals and healthcare provision, accessible by sustainable modes of transport).

Culture and Sport

The Strategy seeks to:
Help improve resident's **health** by providing for access to sporting and cultural facilities that can sustain and improve both physical health and mental well-being.

Plan reference: page 88-90, paragraphs 6.201-6.215 (improving the quality, range and accessibility of cultural and sporting facilities).

Key Regeneration Areas

The Strategy seeks to:
Improve residents' **health** by removing dereliction and contamination, promoting attractive living and working environments which provide for access to local facilities by foot or bike and by facilitating the delivery of new jobs and retention of existing ones, thereby helping to improve life circumstances, reduce poverty and foster self-esteem.

Various references to development and regeneration schemes and initiatives which will impact positively on health promotion within the sections dealing with the six Key Regeneration Areas and the Rest of the City in sections 7 and 8 of the Development Strategy. These relate back to the broader topic sections of the strategy and to other guidance produced for specific areas of the city, for example, the east End Local Development Strategy (which was subject to a Health Impact Assessment).

Strategic Environmental Assessment (SEA) of City Plan 2

The SEA is based on environmental data relating to a number of key environmental objectives. The majority of these cover aspects concerned with the health of the city's environment and people. The majority of the objectives are recommended to be included in SEAs by the Scottish Government. Taking account of other factors considered to be essential to assessing the impact of the Plan, additional objectives were added by the City Council. These related to transport, travel, climate change and human health.

SEA Objectives

1	Protect landform, natural processes and systems
2	Protect and increase the use of soils in a sustainable way
3	Protect and enhance the water environment, including river systems (ENV 4, 5 and 17)
4	Protect, enhance and , where necessary, restore (specified) species and habitats (ENV 6)
5	Protect, enhance and, where necessary, restore landscape character, local distinctiveness and scenic value (DES 4, ENV 7 and 8)
6	Protect, enhance and create green spaces important for recreation and biodiversity (DEV 11 and ENV 1)
7	Regenerate derelict, contaminated or otherwise degraded environments (ENV 12)
8	Respect and enhance the quality of urban form, settlement pattern and identity (DES 1)
9	Protect, enhance and, where necessary, restore building character and townscape (DES 3)
10	Protect, enhance and, where appropriate, restore the historic environment (DES 3)
11	Improve design quality in new development (DES 1 and 2)
12	Reduce energy consumption (ENV 15)
13	Facilitate renewable energy (ENV 15)
14	Reduce the need to travel and journey length (TRANS 2)
15	Encourage a greater proportion of journeys to be taken by walking, cycling and use of public transport (TRANS 2)
16	Reduce waste (ENV 11)
17	Protect the environment from pollution (TRANS 9)
18	Promote environmental capacity and the precautionary principle
19	Reduce the impacts of climate change (TRANS 2 and 9, ENV 4 and 5)
20	Create the conditions to improve human health (DES 1 and 2, TRANS 3, 5 and 9, ENV 1, 2, 4-12 and 15)

Development and design policies are included in City Plan 2 dealing with the majority of the environmental objectives, as indicated in brackets above.

The environmental audit indicators for the human health objective are:

- Life expectancy rates in Glasgow
- Current key health problems in Glasgow and causes of death
- Amount of greenspace in Glasgow
- Number of accessible parks and recreational/cultural facilities in the city
- Public transport (rail, bus and subway network), path and cycling network in Glasgow – number of stations, establishment of new railway lines/stations and path and cycling networks
- Air quality levels in the city and number of air quality management areas

The environmental assessment was carried out on the Plan's development strategy, proposals, and all the development and design policies. The assessments are noted in the tables/matrices in the SEA Environmental Report. On the whole, the implementation of the Plan in terms of new development will have a positive or neutral impact on the environmental objectives. In terms of impact on human health, the Plan would impact positively on the health of the city - naturally, the opportunities for improvement will depend on the pace of new developments coming forward. The assessment identified a number of unknown impacts on human health relating to policies IB 8: Telecommunications, IB 9: Low Amenity Industrial Operations and IB 10: Minerals, Land Fill and Land Raise. There were also a number of unknown impacts relating to some of the Plan's proposals, principally arising from planned road schemes.

Workshop Themes: (including topic prompts)

- **People**
  - ***Optimise Residential Amenity***
  - ***Create Accessible Environments***
  - ***Create Health Promoting Environment***
  - ***Create Opportunities for Social Cohesion***
  - ***Design***

- **Jobs**
  - ***Optimise Industrial Amenity***
  - ***Improve Accessibility***
  - ***Encourage and promote inward investment***
  - ***Promote Health***

- **Environment**
  - ***Sustainable Glasgow***
  - ***Protecting the Environment***
  - ***Making Use of and improving access to Glasgow's Greenspaces***

- **Infrastructure**
  - ***Accessibility to key services and facilities***
  - ***Sustainability in retail and other town centre uses***
  - ***Develop a strategic drainage network***
  - ***Waste Recycling***
  - ***Educational and Hospital Provision***