

Sustainable Local Economies for Health Project (SLEHP)

The *Sustainable Local Economies for Health* Project (SLEHP) aims to help policy-makers and practitioners, particularly those working in regeneration, to develop local economies which are both sustainable and health-promoting. SLEHP is unique in bringing together in one place the research evidence pertaining to both the public health and the sustainability impacts of local employment and economic development. The evidence and relationships between these different impacts have been captured in a matrix framework (using Microsoft Excel) which can be used as a strategic planning tool in a variety of settings.

An accompanying document, *Introduction and Guidance for Users*, provides further detail on the policy background to and principles underlying SLEHP, suggestions for how to use the matrix developing or appraising policies and projects, and some examples of where and how the approach has been tested. It includes a step by step guide to navigating the matrix.

SLEHP was developed by the London Health Commission in collaboration with sustainability consultancy Brook Lyndhurst.

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London Works for Better Health Sustainable Local Economies for Health Project (SLEHP)

Introduction

The London Works for Better Health programme as a whole has two main aims, which are to:

1. improve health and reduce health inequalities through employment and enterprise;
2. promote and support healthy and sustainable employment practices.

Additionally, the programme aims to promote and support partnership-working in planning and delivery of health and employment related initiatives and to help raise the profile of the London Health Commission.

One of a number of projects developed during the first phase of the London Works programme, the 'Sustainable Local Economies for Health' project (SLEHP) addresses health and employment issues at a community level. As such, it complements but, to some extent, also encompasses the scope of the other projects which focus on organisations and individuals.

Further information about the programme and the scoping phase which led to the establishment of these projects can be downloaded from the London Health Commission website www.londonshealth.org.uk.

Aim

In the context of the programme aims outlined above, SLEHP aims to

1. build and refine understanding across sectors of what constitutes a local economy which promotes health and is sustainable;
2. influence regional policy and practice in addressing health through employment and economic development;
3. promote the business case for public sector employment-related 'corporate citizenship for health' in London.

Framework

SLEHP took the form of two separate stages in order to model and test what constitutes a healthy, sustainable, local economy in terms of employment:

1. Identifying the key determinants of a healthy and sustainable local economy
2. Identification of potential case studies and/or testing areas for testing our conclusions from the previous stages and future work

This PDF file relates to Stage 1: Identification of the key determinants of a healthy and sustainable economy

At the basic level, it seeks to address the gap which currently exists when considering the factors in a healthy and sustainable local economy. These factors are widely considered to be interconnected but so far, have not been assembled in a fashion which enables policy and decision makers in the public, private and voluntary sectors to use them in a practical manner.

London Works for Better Health
Sustainable Local Economies for Health Project

Methodology/Assumptions

In developing our matrix of factors which shape healthy and sustainable local economies, we have developed our frame of reference as follows:

1. Health factors relating to employment were assimilated from desk-based research (referenced in bibliography) and independently verified by key people working in public health (London Works Steering Group, Dr Jane Ferrie, Dr Bob Grove and Mr Carl McLean)
2. Sustainable factors of a local economy were identified from the UK and London's Sustainable Development Commission Indicators and verified by desk-based research (referenced in bibliography)
3. Health factors were identified as those affecting *individuals* in relation to employment, whilst sustainable factors were identified as those affecting the *place* in which decision-makers operate
4. Brook Lyndhurst & London Works identified the intersection points in the matrix, where there were "in principle" connections between health and sustainable development factors. The links had to be causal in either direction
5. The "in principle" connections were then researched to validate arguments
6. Many "in principle" connections appear in multiple places, but have only been included in the matrix in the instance where they *first* occur, e.g. the issue of bullying in the workplace is covered under intersection two, where it first appears, which discusses the relationship between psychosocial and social. It is also relevant for intersection five, which discusses the relationship between work practices (recruitment and retention policies) and social, but has not been included as it has previously been discussed.
7. The research is not exhaustive, due to the time constraints of the project, but provides an overview of many of the pertinent issues relating to healthy sustainable local employment

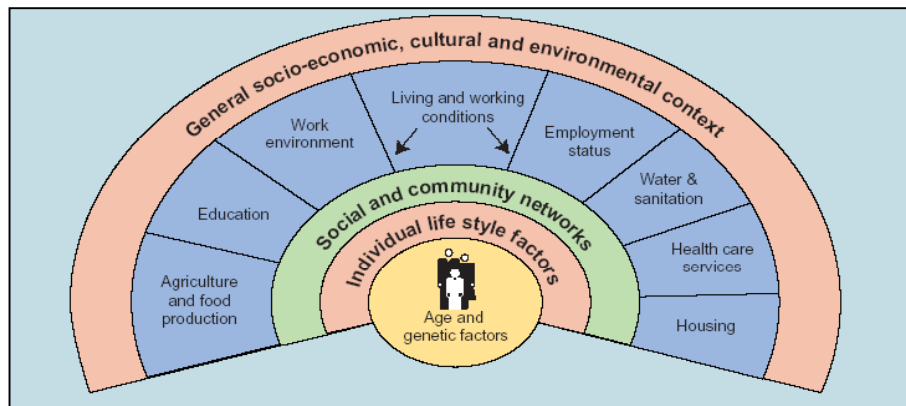
The results are a matrix of "in principle" connections between health and sustainability in relation to employment and the local economy.

Employment as a Determinant of Health

The health of a population can be defined in a number of ways, but is widely taken to mean less the "medical model of health" with the primary focus on disease (ill-health) and more the 1946 WHO definition of, "the state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (Russell and Killoran, 1999). Under this approach, the causes of ill-health are a combination of pre-determined factors, such as age and genetics, impacted upon by individual lifestyle and social issues and by the socio-economic, cultural and environmental context in which an individual lives (Dahlgren and Whitehead, 1991), although the extent to which these influence each other in their outcomes is still debated.

Over the past fifty years, the British population at large has experienced a dramatic increase in its health, resulting from a variety of factors, including improved nutrition, increases in female autonomy and medical treatment, and a result of the social security policies since World War Two (Lynch et al, 2004). However, the dimension of social inequality must be applied - the incidence of ill-health is not uniform across the UK population and the gap between socioeconomic groups has widened. In the UK, an average man and woman in the highest social class I, has a life expectancy of 5.2 and 3.4 years longer than those in social class V, while the infant mortality rates in the UK are nearly twice as high in social class V than social class I (Harding and Taylor, 2002).

Dahlgren and Whitehead's "Model of Health"



Employment is an important health determinant (HDA, 2003), whilst inversely, unemployment has a major negative health impact (Acheson, 1998). Men who experience unemployment are more likely to have serious mental health or substance abuse problems than those in employment. Additionally, unemployed women have higher rates of diagnosed disorders than employed women and are far more likely to be impacted upon by their spouse's unemployment. Moser et al (1987) found from analysis of the UK 1971 and 1981 census reports that "mortality for men who were unemployed and seeking work was 47% higher than for men who were employed. The main causes of excess mortality were accidents, poisoning and violence - especially suicide - among younger men and lung cancer and ischaemic heart disease for older men" (p4, cited in HDA, 2003).

Conversely, not all employment is good employment. The HSE has estimated that over 2 million people in the UK suffer from illness caused or made worse by their work (HSA, 2003). An individual's experience of employment, in terms of their occupational status, the industry they work in or the flexibility of their employers work practices, for example, will all have a profound impact upon their health.

As health inequalities persist, so too do ones of employment. An individual's employment, or lack of it, will be affected by a variety of factors, noted by the HDA (2003) as: "location (unemployment rate ranges from 3.3 % in the South East to 7.4% in the North East); educational attainment and qualifications; age (young people are more likely to be unemployed); sex (men are more likely to be unemployed than women); ethnicity (people from minority ethnic groups are more likely to be unemployed than the population in general); disability (nearly half of people with disabilities are jobless)" (p2). Factors of socio-economic status, and issues which shape employee health, are very much inter-related, e.g. work stress is more prevalent among lower socio-economic status groups (Siegrist, 2002) and must therefore be considered in a planning and policy context for employment health and the overall health of the general population. It is true to say, therefore, that social inequalities will shape and be shaped by the "working experience" of an individual.

The ability of individuals to find & be provided with *healthy* work is, therefore, at the crux of this health divide. For decision-makers in the world of employment, it is vital that these issues are respected, for the health of the local economy and also for the nation at large.

Sustainable Local Economies

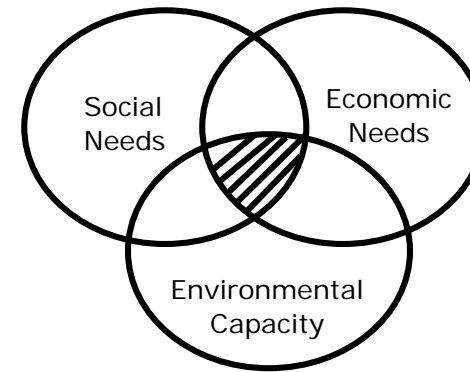
The term "sustainability" has come into prominence in the last thirty years in response to efforts from the environmental movement, and a fear of the impending collapse of global ecosystems as a direct result of resource depletion and pollution (Kearns and Turok, 2003). It is only since the 1987 World Commission on Environment and Development (the Brundtland Commission) and the 1992 Rio de Janeiro Earth Summit that the term sustainable development has moved into the mainstream in an effort to reconcile economic progress with environmental protection, whilst also subsequently including considerations of social sustainability too.

As such, the definition of sustainability has been enlarged to accommodate these changes and scales. In 1987, it could be defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987), but it has been modified by governments to make it much more relevant and less abstract. In the UK Government Sustainable Development Strategy, it was defined as "a better quality of life, now and for generations to come" to be achieved through: "social progress which recognises the needs of everyone; effective protection of the environment; prudent use of natural resources; maintenance of high and stable levels of economic growth and employment" (DETR, 1999).

Policy makers and practitioners face major impediments in implementing sustainable planning at all levels. Sustainable development has become a buzzword in economic, environmental and social circles, but its meaning is often open to interpretation and debate, less in terms of definition, but more in relation to the processes involved and necessary solutions to reach practitioner goals. As a further complication, sustainability can be analysed at various scales - global to local - and the means of translating processes from one to the other will vary according to location. In consideration of the sustainability of a *local* economy, the final obstacle to overcome is the idea of what constitutes the "local" and how methods and practices should be altered accordingly.

It becomes vital to expand the definition of sustainable development to increasingly tangible goals as practitioners move down the scale of operation, or sustainability remains an ideological concept, difficult to elucidate and even harder to fulfil practically. National sustainability definitions have been rationalised further by urban planners to definitions of sustainable cities. Here, attention moves to terms of "ecological footprints" and "carrying capacity" - the ability of the environment to live up to its consumption demands under specific economic functions of a city; agglomeration economies; proximity advantages; welfare provision; internal social interaction; economies of scale in energy consumption; and accessibility to the external world. The focus here is on local effects and dynamic processes in a practical sense, e.g. improved physical infrastructure raises efficiency, increases economic growth and improves social welfare (Camagni, 1997 in Kearns and Turok, 2003).

This approach is based on collaborative policies where planners seek a win-win outcome between environmental, economic and social interests, rather than an assumption of competition between interests, in which there are winners and losers. The holy grail for sustainable development is in seeking outcomes which are socially inclusive, economically viable, resource-conserving and aesthetically pleasing (Barton, 2000).



Searching for Sustainable Development (Barton, 2000)

Increasingly, debate exists about how this should be captured on a local level, where the definition has moved from sustainable cities to one of communities. Communities are taken to mean "the interacting localities and neighbourhoods that make up towns and cities" and have been applied to the local level in relation to issues of neighbourhood renewal, suburban decline and out-migration and an increasing emphasis on 'liveability' - services to enhance daily experiences of life where we live, focusing on anti-social behaviour, environmental management and quality of open spaces (Kearns and Turok, 2003).

Emphasis will vary according to location as to how sustainable policies should be articulated. In London, for example, a high priority is placed on providing affordable homes so that key workers essential to the delivery of the capital's public services can afford to live and work within its communities. Consequently, sustainable communities in London are defined as those that; are prosperous; have decent homes for sale or rent at a price people can afford; safeguard green and open spaces; enjoy a well-designed, accessible and pleasant living and working environment; and are effectively and fairly governed with a strong sense of community (ODPM, 2002).

The idea of a sustainable economy places greater emphasis on employment than a sustainable community, where sustainable aims are analysed in relation to how they may be achieved through employment. It is essentially still based upon the concept of 'balance': areas with a more balanced economic structure (in terms of sector types *and* sizes) tend to do better over periods of time than those less mixed economies; areas with highly internalised markets (where businesses trade with other local businesses) tend to have far less volatile and secure economic outcomes than highly externalised markets; while a settlement with excessive competitiveness tends to mitigate against environmental and social achievement.

In order to achieve these aims, a sustainable economy will need to address the same issues as sustainable communities. In order to be sustainable, an economy must consider the environmental and social too, which becomes apparent if characteristics are thought of in terms of inputs, processes, outputs and outcome. Sustainable economies might include the use of renewable resources (inputs), businesses operating with high ethical standards (processes) resulting in healthy residents/citizens/employees (outputs) - the outcome is health and wellbeing for the whole community. On this basis, the necessary conditions for an healthy and sustainable economy, specifically, are a sub-set of those for an healthy and sustainable community. The components of an healthy and sustainable community would extend to wider environmental issues, such as river quality and bird populations; wider economic principles of GDP; and wider social features of educational and health facilities, such as schools and hospitals.

The final debate concerns what constitutes the "local" in relation to these economies and communities. It is important to recognise that the notion of "local" has very different meanings for individuals of different cultural and economic horizons, e.g. a local market for a brain surgeon may be the UK, whilst for a cleaner, it may be within a ten mile radius from home. A local economy is one that: has a local balance in the range of services at the local level; takes account of unpaid work - exchange and bartering schemes, as well as voluntary; recycles money in the local economy; gives support to existing local micro-economies and employment; focuses on local labour and supply; provides facilities for local sustainability (LSDC/LDA, 2003).

Employment Factors Shaping Health

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Health & Individual Attributes

An individual's basic skills/education, socio-demographic characteristics and skills/training acquired through employment will all directly affect their health. Huge health variations exist according to gender, disability, ethnicity and income, which will all determine an individual's social and occupational status. Marmot (2004) states that "where you stand in the social hierarchy - on the social ladder - is intimately related to your chances of getting ill, and the length of your life". The Whitehall Study proved a correlation between job status and health, where those of a lower organisational grade were much more likely to suffer coronary heart disease than those at the top (NewScientist.com, 2004).

Individual health tends to be better amongst those people involved in permanent employment and other more secure employment forms than those working as migrant, temporary or contract labour: a study of 15 European countries showed that temporary workers work more in painful or tiring positions and are more exposed to intense noise and the need to perform repetitive tasks; precarious employment was found to be positively associated with fatigue, backache and muscular pains, as compared with full-time workers (Benavides et al, 2000). Temporary employment has been associated with increased deaths from alcohol-related causes and, for men, smoking related cancer (Kivimaki et al, 2003). Where individuals receive permanent contracts after spells of contract work, both their job satisfaction and security increase, with resultant positive health impacts (Virtanen, 2003).

Health & Psychosocial

The term "psychosocial" delineates the range of sociostructural work related opportunities an individual has to meet their needs of wellbeing, productivity and positive self-experience, of which self esteem is important (Siegrist, 2003). The psychosocial work environment encompasses the social support received (or not) at work through networks or clubs, relationships with colleagues and, in particular, management, as well as levels of job dissatisfaction, expressed through a feeling of low control/high demand and effort/reward imbalance. Godin & Kittel (2004) showed how these translated to poor health outcomes (depression, anxiety, chronic fatigue and reported absenteeism) as a result of low control, low social support at work, high overcommitment and high levels of work imbalance.

Research supports these views: the Whitehall II Study reported that men in the civil service, who put in high effort but received low reward, were between 70-90% at greater risk of alcohol dependence, whilst low social support led to increased psychiatric disorder in both men and women in the study (Stansfield et al, 2000); relationships between employee and boss can be pivotal for employee health and poor relationships can significantly increase the risk of heart disease and stroke (Bhattacharya, 2003); it was found that the level of organisational justice which an individual receives in the workplace is a health predictor, independent of established stress at work (Kivimaki et al, 2004); a strong association between bullying and subsequent depression has suggested that bullying is a direct cause of mental health problems, with the victims apparently at greater risk from cardiovascular disease, although this could be attributable to overweight (Kivimaki et al, 2003).

Health & "Health and Safety"

The immediate link between employee health and the work environment is through occupational hazards/diseases and poor working conditions, which will show immense variations when other factors are considered such as industry type, company size and ethos. This is closely correlated with the amount of information and training available to employees on health and safety issues, the type of work involved and the work benefits provided. One occupation may hold a direct health benefit over another in terms of the physical nature of the work entailed. As jobs have become increasingly sedentary, which has further contributed to ill-health - Europe has seen an average 500 kcal loss of energy output per day in adults aged 20-60 years in the past 50 years (Pretty et al, 2003), a physically active job may be more advantageous. The Commission of European Communities, in a survey of 12 member states in 1991, found that 42% of workers thought that health could be affected by their employment, whilst 40% felt they were at risk of an accident at work (HDA, no date).

The less direct link, but arguably just as important, is the provision of healthy facilities on-site. Access to healthy food options in the canteen or provision of exercise facilities will play an important part in improving employee health. In addition, workplace health promotions are vital to maintain a healthy workforce such as no smoking policies or stress management (Scottish Executive, 2004). Finally, worker perception of ill health must be analysed. In a study by Rasanen et al (1997), it was discovered that the most commonly occurring perceived harmful factors at work were increased work pace, mental demand, repetitive movements and noise. The most commonly occurring perceived symptoms (work-related) were musculoskeletal, mental symptoms, psychosomatic and respiratory or sensory symptoms. Such information is useful in consideration of health policies and employee health planning.

Health & Company Attributes

Company attributes will be a major influence on employee health in terms of either company size and ethos or industry type and intensification. Location of companies is the final attribute, which may also determine health impacts. Company size may impact either positively or negatively on the health of its employees, dependant on the "health and safety" work environment and the company ethos. Small employers have been more likely to report stress and fatigue (Benach et al, 2004), whilst, arguably, a more reactionary company for benefits may not harness the potential of its employees in regard to health, whilst a more creative, forward-thinking company may envisage a healthy workforce to be vital for its success.

Industry variations obviously exist in regard to impact upon health. Accidents are most frequent in construction, transport & communication and manufacturing industries, and less so in finance & business and education (HSE, 2002). Expectedly, professions with high exposure to particular agents or risks (bakers and occupational asthma, metal plate workers for upper limb disorders) have high health impacts (National Statistics, 2002/03). Intensification and company location will obviously impact also on the health of its employees.

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Health & Work Practices

Long working hours have been associated with poor health outcomes. It has been shown that these can range from cardiovascular disease, diabetes, disability retirement, subjectively reported physical ill-health and subjective fatigue. Long hours can also produce physiological changes and changes in health-related behaviour, such as reduced sleeping hours (Van der Hulst, 2003)

Under the umbrella of maintaining a positive work/life balance, it is widely understood that flexible working arrangements, such as flexi-time, home working and compressed working weeks, shorter working hours and access to childcare facilities within or at the working environment can all impact positively with health. This should be further analysed in the context of the UK, which shows unstandardised working hours in comparison to other EU member states, where there is a higher incidence of long hours for full-time workers, particularly men (Bishop, 2004).

Health & Economic Climate and Employment Health Policy/Planning

The UK currently faces an obesity epidemic, the direct cost of which is estimated to be £480 million per year in the UK alone, with an extra £1.3 million related to sickness (National Audit Office, cited in Pretty et al, 2003). Additionally, 187 million working days are estimated to be lost annually by businesses, which amounts to a £12 billion tax on industry (Department of Health, 1999). Statistics show that these people are most likely to be male (of percentage of workers), with the prevalence rate increasing with age, and most likely lower managerial and professional workers (HSE, 2003). Employers can suffer increased health consequences - work related stress increases sickness absence, leading to greater pressure on colleagues and possibly increased sickness, reduction in staff morale, performance, motivation and ultimately retention (Hammersmith & Fulham Council, 2004). It is, therefore, in the economic interests of decision makers to link health into employment policy and planning from the outset.

The HSE (2004) has launched management standards on stress to tackle the serious issues of work-related stress. Half a million people in the UK experience work-related stress at a level they believe is making them ill, up to 5 million people in the UK feel "very" or "extremely" stressed by their work and work-related stress costs society about £3.7 billion every year at 1995/6 prices (HSE, 2004). They have identified six factors leading to stress: demands such as workload, work patterns and work environment; control - how much say a person has in the way they do their work; support, which includes encouragement and resources given by the organisation, line management and colleagues; relationships - the promotion of positive working to avoid conflict and dealing with unacceptable behaviour; role - whether people understand their role within the organisation and whether the organisation ensures that the person does not have conflicting roles; change, which incorporates how organisational change is managed and communicated in the organisation (HSE, 2004).

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Additionally, employment health policy must consider the impact of economic shifts - as companies realign themselves to such changes through expansion or contraction - health effects have been noted on employees. Organisational change has been shown to negatively impact upon employee health and major downsizing can lead to an increase in ill health amongst the survivors (Ferrie, 2004). Company expansion has been shown to impact upon health as much as downsizing, with an increase in long term absences and employee sickness. In the latter study the ill effects of workforce changes were found to be greatest for women (Edelson, 2004).

Sustainable Factors of a Local Economy

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Sustainability & Social

A sustainable local economy is based upon the concept of equal opportunities, where employment should encourage diversity, improve skills and training opportunities, employ individuals with a range of education levels and people that live locally. In doing so, a location can benefit from a local, fully-integrated, multicultural workforce with reduced socioeconomic inequalities and better health outcomes. Local recruitment and retention policies can lessen local inequalities, through the introduction of sustainable practices such as flexible working arrangements. By increasing efficiency or reducing worked hours, for example, socially excluded groups are able to incorporate external life factors, such as child or parental care, into daily working lives and reap the health and economic benefits from employment.

Sustainability & Traffic/Transport

Transportation and economic development are interlinked through: economies of scale; employer access to workforce diversity and specialised occupational skills; specialised deliveries and repairs; commuting issues; the effects of accessibility on development, growth and sustainment of business clusters; relationship of urban development density on both resident costs of living and business costs of operation (Committee on transportation and economic development, 2004). Due to this relationship, the transport sector in the UK is now the largest and fastest consumer of energy (Stead, 2000). Road traffic is forecast to increase by up to 50% by 2026 from the current levels of 21 million cars (DETR, 2004), whilst most freight traffic is predominantly moved by road - in 2001, road travel accounted for 63% of tonnes moved and the number of goods vehicles travelling between the UK and mainland Europe continues to increase (DfT, 2003).

Whilst transport is vital to a local economy, without doubt many current travel behaviours could be modified to achieve a more sustainable community, particularly in regards to employment and employee health - 7 out of 10 journeys to work are by car, 58% of car trips are under 5 miles with 25% less than 2 miles. Employer encouragement of more sustainable health behaviours instead could drastically impact upon the sustainability and the health of the local economy - by relinquishing the car for the bike, the risk of heart disease can be halved, which is as little as a 2 mile walk or a 5 mile cycle ride for thirty minutes per day (DETR, 2004).

The outcomes for an employer are multiple. Aside from the health outcomes of reduced stress, improvement in quality of life and a more healthier, motivated workforce, company profits can be improved through reduced costs, either from alleviating parking problems (through reduction in rent or space required) or from the introduction of more flexible working practices and increased staff retention and recruitment. It may also lead to major environmental and reputational benefits. Improvements in accessibility and congestion will impact through less noise and dirt, improved air quality and a contribution to the reduction in global warming. At a community level, reduced congestion, journey times, improved public transport services, energy savings and reduced overspill in residential areas will all appear favourable for the company concerned (DFT, 2004).

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Sustainability & Neighbourhood

Housing is one of the largest associations between health and sustainability - there are a multitude of factors associated with poor housing, which contribute to health problems and have a knock-on effect for other sustainability issues in a neighbourhood. Good, well-planned housing can create and foster a sense of civic pride and community cohesion, whilst the condition, cost and availability of housing are critical to urban and rural communities being sustainable and healthy (Cave and Molyneux, 2004).

Poor housing can cause declines in community contact, spirit and safety by isolating people in tower blocks, which is made particularly worse for the vulnerable, such as the elderly, single and lone parents plus those with mental health problems. Residents in housing estates often feel cut off from information about housing, health and other services and lack leisure facilities and safe play areas for children of all ages. Whilst these are common complaints, there are several less common issues, which are also important, including: high tenancy turnover and low demand (which is a threat to community stability and cohesion and results in derelict land, with its own health risks); increased isolation of minority ethnic groups and disabled individuals; traffic congestion, pollution and transport difficulties resulting from poor, un-integrated planning; and the increased and often contradictory health issues from the presence of refugees and asylum seekers (Fletcher and Spencer, 2000).

Poor quality housing manifests itself in negative health effects for its inhabitants; infectious diseases arise from overcrowding, poor building design materials and poor waste disposal; chronic diseases result from damp, mould, allergens, toxic substances, air quality and temperature extremes; mental health outcomes can occur from damp, cold, mould, overcrowding, housing tenure, moving home, homelessness, temporary housing and housing design, e.g. high rise; accidents can occur from exposed heating sources, unprotected upper windows and building design and materials (Cave and Molyneux, 2004).

Housing and health are linked through employment in one vital way - the crisis of recruitment in some public sector jobs, such as teaching and nursing, relates directly to the availability of affordable housing. Where teacher shortages are most acute, housing prices tend to be higher (Cave and Molyneux, 2004). The rise in house prices in London has been spurred on by the lack of building of new houses: it is estimated that London has a backlog of unmet housing need of 112,000 households, which will grow by 20,700 per year to 2016. In the 1970s, 25,000 affordable homes were built annually, compared to just 4,000 social housing homes built in 2000 (ODPM, 2002).

Housing is not the only facet of neighbourhood which contributes to sustainability and health, although it is the most important. Crime, local facilities, population profile and quality of the environs, e.g. litter and graffiti can all affect the ability of an area to be healthy and sustainable, as can the issue of green space. Green spaces make an important contribution towards urban regeneration and renewal, health, social cohesion, education, environmental sustainability and heritage and culture (Middlesborough Council, 2003) and urban trees and green spaces do help mitigate effects of the built environment, e.g. poor air quality, noise pollution and heat build-up (Potera, 2003).

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Exposure to a natural environment has been proved to reduce stress and increase attention as well as having a positive effect on well-being. Additionally, the amount of green space in an individual's living environment is related to physical and mental health as well as longevity (Groenewegen, 2004). A study by Takano et al (2002) found supporting evidence between longevity and a proximity of public parks and tree-lined streets, as well as lower environmental noise levels. Attention capacity of children has been shown to increase after a move to a more green area from one of less (Lang, 2002) whilst green spaces also reduce stress and prevent obesity (Tibbats, 2002 in GLA, 2003). Plus, all this can sometimes be obtained for relatively little cost.

Sustainability & Environmental

As one of the three pillars of sustainable development, protection of the environment in a local economy is vital to ensure resources are used effectively and responsibly by businesses and their employees. For the purposes of this study, environmental factors are only considered in their relation to local employment and not those that impact the wider economic whole, such as analysis of bird populations or river quality. They are energy consumption, carbon efficiency, air quality and other pollutants, as well as the use of resources, recycling and waste (factors are taken from London Sustainable Development Commission).

Employers must consider their impact upon the environment and the ways in which these will have different health outcomes on certain individuals - children breathe 50% more air per pound of body weight than adults so are more exposed to changes in air quality through industry specific environmental pollutants. Employers must also consider their impact in the context of increased growth and scarcer resources. Approximately 300,000 hectares of land (equivalent in size to Cambridge) is affected by contamination from UK industry, which must be brought back into use, through development on brownfield sites, if population growth is to be assimilated. Industry is a major contributor to waste, certain types of which are estimated to double by 2025, notably originating from waste transport (Cave and Molyneux, 2004). Careful planning and responsible use of resources by employers can limit the impact of increased resource use and demand and the ensuing health outcomes.

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Sustainability & Economic

A sustainable local economy will be influenced by four main economic factors; business survival rates, profitability, green procurement and sectoral structure. A sustainable local economy will have a balance of sectors, industries and company sizes represented within it. This will include a mix of organisations ranging in scale (multinationals to corner shops) and structure (private through to public, voluntary and social enterprises). To achieve this sectoral mix, it is imperative that support at all levels is given to organisations - it is suggested that of the 5,300 social enterprises and 900 micro-social enterprises in London, that the biggest challenges faced are: low profile and understanding of social enterprises; lack of appropriate business support; difficulty finding appropriate financing; high rents and high cost of living; lack of joined up thinking and dissemination of best practice (London Assembly, 2004). Whilst some of these problems are not unique to social enterprises they do highlight the necessity of tailoring support to specific locations and sectors, particularly in regard to business start-up rates.

Combined, UK councils spend approximately £40 billion annually on procurement of essential goods and services, which covers all stages of the process - from service delivery to identification of needs to measuring impacts on customers. The voluntary sector is increasingly playing a larger role in service delivery too (Hope, 2003). In this light, procurement policies can change the structure of the local economy. Where it has been found that sustainable economies are those with highly internalised markets (where local companies trade more with each other than external organisations), so too should procurement strategies aim for local solutions and suppliers.

Sustainability & Economic Climate & Local Sustainable Policy/Planning

Undeniably, all aspects of sustainability are linked through the economic climate in which they are proposed, planned and instigated, although it is arguable as to the extent with which changes in economic climate will affect changes in sustainable planning. Potentially, sustainable procurement and 'green' issues become sidelined in periods of economic uncertainty where individuals believe such plans and goods may be cost and time prohibitive, although it is through such periods that sustainable policies can help the most by protecting resource access in a more egalitarian fashion.

Sustainable factors of a local economy "PLACE"								
Employment factors shaping health "INDIVIDUAL"	Modelling a Sustainable Healthy Local Economy		Social	Traffic/Transport	Neighbourhood	Environmental	Economic	Economic Climate & Local Sustainable Policy/Planning
			Basic Skills/Education	Commercial & Freight	Crime	Energy/Air/Carbon/Other Pollutants	Business Survival Rates	GDP
			Diversity		Facilities		Green Procurement	Economic Policies & Shifts
			Income & Expenditure		Green Space			Planning/Regulations
			Skills/Training	Commuting	Housing	Resources & Recycling	Profitability	Sustainable Procurement
	Local Recruitment & Retention	Population Profile	Sectoral Structure					
			Quality of Environs					
	Individual Attributes	Basic Skills/Education	one	seven	thirteen	nineteen	twenty-five	thirty-one
		Diversity						
		Employment Stability						
Income & Expenditure								
Occupational Status								
Skills/Training								
Psychosocial	Job (Dis)Satisfaction	two	eight	fourteen	twenty	twenty-six	thirty-two	
	Management Relations							
	Social Support							
"Health & Safety"	Employee Information	three	nine	fifteen	twenty-one	twenty-seven	thirty-three	
	Occupational Hazards							
	Provision of "on-site" facilities							
	Work Benefits							
	Worker Perceptions							
	Working Conditions							
	Work Functions							
Company Attributes	Company Ethos/Ownership	four	ten	sixteen	twenty-two	twenty-eight	thirty-four	
	Company Size/Type							
	Industry Intensification							
	Industry Sector/Type							
	Location							
Work Practices	Childcare	five	eleven	seventeen	twenty-three	twenty-nine	thirty-five	
	Flexible Working Arrangements							
	Recruitment & Retention							
	Working Hours							
Economic Climate & Employment Health Policy/Planning	Consumer Patterns	six	twelve	eighteen	twenty-four	thirty	thirty-six	
	Economic Shifts							
	Employment/Unemployment							
	Employment Initiatives							
	Employment Legislation							
	Public/Private & Voluntary							

Links Between Individual Attributes and Social

There is a direct relationship between individual attributes, social factors of a sustainable local economy and health. It is universally agreed that higher incomes lead to a better health status, but an individual's means to reach their earning potential is constrained by access to employment opportunities, through facets of their education, skillset and equal opportunities, e.g. generally, incomes will rise with higher educational levels and disparities will occur across ethnicity, occupational status and gender.

These differences have been exacerbated by an increase in job insecurity and employment instability in the past decade. This has had a direct impact upon population health, where employment instability (permanent roles vs. contract or temporary) discourages training opportunities and a less skilled workforce through a lack of permanency. Increased employment stability encourages good health in a similar fashion to higher occupational status. An individual is more likely to have good health if they are of a higher employment grade and in a permanent contract, which is directly related to the skills they hold and the income they earn.

The most important outcome of this is in relation to recruitment and retention policies in regard to equal opportunities. If the health of an individual is greater, higher up the employment ladder and with more permanent job roles, it is imperative that lower socioeconomic status groups and ethnic minorities have access to these opportunities. Gender inequalities demonstrate the difficulties inherent in women's access and roles in the labour market in tandem with child rearing and care.

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Research Findings:

- 1) Health and wealth are inextricably linked - higher incomes lead to a higher health status and every socioeconomic increase will result in a health improvement. It is widely agreed that socioeconomic disadvantage comes before poor health, so it is usually the case that income generates health in the first instance (Lynch et al, 2004). It is also true, however, that poor health can impact upon earnings. In support, a study on Finnish hospital workers, found that good health did promote the chances for a fixed term employee to reach a better labour market status (Virtanen et al, 2002).
- 2) Increasing qualification attainment will lead to increasing returns, where graduating from university can increase a student's earnings by 25%, or equivalent to £220,000 over the course of their lives (Stewart, 2003). Such returns will vary according to the institution, the subject and the social class of the individual, but between 1993 and 2000, men with undergraduate degrees earned 48.8%, on average, more than men without formally recognised qualifications (Conlon, 2004).
- 3) Statistics show large disparities in income, basic skills and education across diverse social groupings, which will have profound health outcomes. Households on low income in 2000/2001 showed marked differences across ethnic group; 21% of white households were at this level, whilst this increased to 49% for Black, non-Caribbean and 68% for Pakistani/Bangladeshi households after housing costs (DWP, 2001). The proportion of teenagers, aged 16, who achieved 5 or more GCSEs (grade A*- C) in 1999, tells a similar ethnic disparity. Indian girls, white girls and Indian boys achieved the best scores at 66%, 55% and 54% respectively, whilst Pakistani/Bangladeshi girls, Black boys and Pakistani/Bangladeshi boys fared the least well, at 37%, 31% and 22% respectively (DfES, 2000).
- 4) Race and ethnicity are important factors in an individual's opportunity for gaining employment. The chances of a minority ethnic person being in employment are much lower than that of a white person at all levels of education and when they are able to access gainful employment, they will be paid, on average, £97 per week less than their white counterparts. Additionally, their occupational status is also affected, with just 1% of senior management positions occupied by minority ethnic groups (BTEG, 2003).

5) Gender variations also exist in regard to basic skills and income. A survey of literacy in the UK, for adults aged 16-65, found women to have higher basic literacy at levels 1 and 2 than men - 56% of women and 45% of men were in these bands, although this evened out at 30% and 31% respectively for literacy levels 3. More men are in the higher level bands (level 4/5) with 24%, whilst only 14% of women reach this grade (National Statistics, 2000). Mean individual income by gender by age only translates one gender difference; men's wages are higher than women's at every age. The gap is reasonably low at a young and old age, but it widens significantly in people's forties, where men's is almost twice as high at £392 compared with £201 per week (National Statistics, 2000).

6) In the past 20 years, socioeconomic inequalities in health have deepened, whilst job security and financial security have decreased (Ferrie et al, 2003).

7) Research work has highlighted the inter-relationship between factors of human and social capital in regard to occupational status. Jamison et al (2003), in a study on stress, reported a negative association between occupational status and ill health, and that unemployment experience and educational discordance were more important factors. A Netherlands study, which found that perceived ill-health was less than good in lower occupational classes (Schrijvers et al, 1998) also reported that a large part of this association could be related more to differences in hazardous working conditions and low job control. Both emphasise the need to ensure, that to fully consider the impacts of employment on health, policy must take account of all individual attributes. In confirmation, Singh-Manoux et al (2003), in their study of subjective social status, declared that social inequality and health were multi-dimensional, with occupational position as just one facet of health, with education, income and financial security being important co-indicators.

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8) The inter-relationship between human attributes and social sustainability is increased in London where as many as 25% of economically active people have no qualifications and a skills mismatch exists - the average workforce has 19% of people with one NVQ level qualification or less, compared to 26% of London's population (Stephens, 2004). Such statistics highlight the necessity of work-based skills learning as part of recruitment and retention policies.

Links Between Psychosocial and Social

An individual's psychosocial experience in the workplace is formed out of processes relating to their social fabric - their basic skills, gender, educational history, training and income will all determine how they relate to individuals within their work environment, which will result in positive or negative health outcomes. As social factors are not evenly distributed throughout a workforce, nor too are the distribution of health outcomes. For instance, individuals with a poor psychosocial work environment tend to be of a lower socioeconomic status, which can lead to worse health outcomes; disability can result more frequently in poor psychosocial work environments; and the health benefits from the ability and desire to seek out rewarding psychosocial environments and increased community participation may vary according to age and gender.

This should hold sway for local recruitment and retention policies, the main aim of which is to employ a sustainable, locally diverse workforce. In aiming to do so, policies should take note of the beneficial health links between good psychosocial work environments and ways in which the presence of diversity can either foster or hinder social networks, possibly through bullying and discrimination. These effects can be countered through the introduction of workplace policies such as mentoring schemes and an increase in training opportunities. Companies must pay specific attention to jobs, which do not fully reward effort and aim to increase job satisfaction, which in turn will radically improve incomes and health. Companies must be mindful of the organisational processes which are more likely to initiate bullying behaviours, to both victim and surrounding workforce and be in a position to manage such health outcomes in the shadow of socioeconomic differences.

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Research Findings:

1) An individual's ability to seek a positive psychosocial work environment is a facet of their societal features. Individuals with a poor psychosocial work environment are more likely to be of a lower socioeconomic status. This becomes self-perpetuating as lower socioeconomic status groups, due to increased vulnerability, are more affected by a poor psychosocial environment (Siegrist and Marmot, 2004). Disabled women have been shown to have negative employment experiences, as a result of educational difficulties, discrimination and a choice of fewer than average roles, leading to lower incomes in low organisational roles (Burke, 1999). Good health in increasing age was positively correlated with socialising with colleagues from work and participation in clubs and associations in the wider community (Veenstra, 2000).

2) The role of gender in relation to health and psychosocial networks is less decisive. The Whitehall II study concluded that gender was not a principal determinant of ill health in relation to psychosocial factors but that status and class could have greater impact. In a study of occupational grades in the civil service, it was those individuals in the lowest grades, with the lowest feelings of control at home, who had the highest risk of depression and anxiety, and this was true for both genders. It concluded, that lack of control in work and home affects men and women differently across social class and that men's identity is not more tied to work and women's to the home (Griffin et al, 2002). In contrast, differences in subjective health across 5 occupations of varying skill were found more to be related to gender than socio-demographic, lifestyle and work-related factors in a study by Ihlebaek & Eriksen, (2003). It also suggested factors such as perceived job stress, coping & other psychological factors might have more importance to subjective health complaints than occupation.

3) Bullying is identified as a major workplace phenomenon and an increasing health and safety issue, although little reliable research exists on the topic (Mayhew, 2003). It is obviously an important issue according to a study in the UK, where 19% of men and 17% of females reported bullying as a stressful life event, with violence at work at 6% and 2% respectively (National Statistics, 2000). In regard to workplace interventions, it is said that support at work does seem to protect people from the damaging effects of bullying (Quine, 2003) and research shows that this should be spread across those people who observe bullying as much as the victims themselves. In a 2001 study, both the targets and observers of bullying reported increased stress, highlighting the need to incorporate workplace wide schemes to counteract effects and not to limit policies to just the victims (Vartia, 2001).

Salin (2003) articulated that companies must be alerted to the processes contributing to bullying, which were placed into three main groups, 1) antecedents, which must be in place such as power imbalance, frustration and low costs, 2) motivating structures, such as internal competition, reward systems and benefits, and 3) trigger circumstances, such as organisational changes, restructuring and changes in work group composition, where the research found bullying occurred as a result of an interconnection between all three. In addition, they must pay attention to those individuals who are more likely to become victims of bullying. Smith et al (2003) have discovered a modest connection between bullying at school and bullying in the workplace, with the highest connections for those individuals who were both a bully and a victim at school and that it is this proportion of people who should be a focus for concern.

4) Companies can instigate recruitment and retention policies, which will improve the health of the workforce by reducing inequalities in social support found at work. Mentored individuals in the workplace have been found to show consistent differences with non-mentored persons with regard to career outcomes, job satisfaction, organisational socialisation and incomes (Chao, 1997). It has been found that having an interesting job and good management relations are the two main determinants of job satisfaction (Sousa Poza, 2000). It is stated that "jobs with both high demand and low control carry special risk", although social support at work can possibly mitigate some of this, as can increased involvement in decision-making processes (Wilkinson and Marmot, 1998).

5) The importance of work in building psychosocial networks thereby improving health cannot be underestimated, particularly for certain disadvantaged groups. Ex-offenders face similar obstacles to finding employment as other disadvantaged groups - poor basic skills, low self-esteem and possible behavioural and health problems. They comprise a large part of the labour market - it is estimated that one third of the working population is an ex-offender and each year, 100,000 people leave jail in the UK, with 90% entering unemployment immediately upon release. It is understood that these individuals are doubly penalised - by the court and by the labour market later, which makes finding employment incredibly difficult, although it is work which will contribute the most to their health, resettlement and in preventing re-offending (Fletcher et al, 1998). It is important that businesses assimilate these groups into their workforce under inclusive recruitment and retention policies.

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6) It is important to acknowledge that individuals requiring apparently basic skills are not a homogeneous group, and they will require different things from the psychosocial networks that arise through this process. Psychosocial networks are important for all people taking ESOL courses and tests (english for speakers of other languages) to improve their ability to gain employment and to settle into life in the UK. Such individuals will stem from a variety of backgrounds and different socioeconomic situations, united by the desire to speak english. Some classes will contain refugees and asylum seekers who have different social, psychological and economic needs to other basic skills learners, whilst they will also contain professionals who are more sophisticated, highly educated with more cultural capital than basic skills learners. For many ESOL participants, the lessons are the most motivating aspect of their lives, whilst for others, the friendships developed here can motivate individuals to maintain their english long after the lessons have ended (Roberts et al, 2004).

Links Between "Health & Safety" and Social

Health and Safety attributes of the work environment will be directly correlated to social factors of a sustainable economy. There is undoubtedly greater workplace injury risk for individuals of a lower socioeconomic status and, on average, lower incomes and basic skills will be found in a lower quality health and safety environment. Increased educational and knowledge levels will improve working environments as improved access to information on health and safety issues will empower people to increasingly demand healthier working conditions (unionisation will empower this process too). Additionally, higher income levels at particular working sites will encourage the siting of facilities reliant on private spending, such as restaurants, private health clubs and healthy eating options, which will also alter the sustainable fabric of the local economy.

The health and safety work environment will be heavily altered by company type, industry sector and company ethos. This will be related to social factors where access to these professions and industries will be dependant on skills, training and local recruitment and retention policies.

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Research Findings:

- 1) In a study of the Netherlands, men and women in lower occupational classes reported more hazardous physical working conditions, and a less than good perceived ill-health, in comparison to those of a higher occupational class (Schrijvers, 1998).
- 2) There is a direct correlation between health and safety issues and individual attributes through employment stability. A study found a strong link between precarious employment and a deterioration of occupational health status - injury rates, disease risk, hazard exposures and worker/manager knowledge of health and safety issues and regulatory responsibilities were much worse for temporary workers (Quinlan et al, 2001).
- 3) A study of accidents in the workplace by industry sector holds manufacturing and construction industries as the highest absolute employers for fatalities, major illness and sickness over 3 days over the period from 1999 to 2002 (National Statistics, 2002). In addition, certain occupations have higher rates of ill health than others. During 2001-2003, work-related mental ill-health and stress was highest for those in protective service occupations such as medical practitioners, teachers, UK armed forces, police and prison service officers and social workers (HSE, 2004).

Links Between Company Attributes and Social

Health inequalities exist across different company types, styles and sizes and by the social attributes of a place. So, while some industries and company processes will result in poorer health outcomes than others, it is also true that across the same companies there will be health inequalities based on diversity, income and skills of the local economy. For instance, it may be the case that the manufacturing industry typically reports higher injury risks than other industries, which will have certain health outcomes, such as repetitive strain injury. It may be the case, however, that due to style, size and ownership issues, one company may be more prone to employing black and minority ethnic individuals, which will imply heightened health outcomes for this group of the local community.

A company's ability to deal with these employment health outcomes, such as sickness absence and discrimination on mental health grounds successfully, is directly related to a company's recruitment and retention policy. A company's ethos, ownership, size and nature will determine their responses and attitudes with regard to employment relations - some will stick to the minimum required under national equal opportunities law (e.g. Sex Discrimination Act, 1975 and Disability Discrimination Act, 1995) whilst others will choose to be more proactive and opt for additional, voluntary diversity policies (e.g. B&Q chain recruiting older people from local communities). This is also applicable for workforce skills in relation to the "local" - a company's ethos, size and type will determine its ability to employ local semi-skilled people, whom it trains to higher qualifications itself in return for the advantages of having a local workforce.

The level to which an organisation participates in, and improves, employment health will play a large role in retaining its employees and in recruiting new ones - it is important for employees to feel that they are working for an organisation that is well respected in the local community and one that makes them feel good to work for. This issue will be dependent on company attributes but will relate to all facets of health and sustainability, not just the social elements, e.g. employee perks, psychosocial networks, transport links, childcare facilities and CSR policies will all affect recruitment and retention policies.

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Research Findings:

1) Regardless of equal opportunities law and diversity policies, industry variations will exist. Analysis of census data for London shows that, as a percentage of their overall ethnic population in London, employment across industry sectors was similar for white and BME groups in most sectors (LHO, 2004). The notable exceptions were construction and real estate, where a significantly higher percentage of whites to BME were employed (5.99:2.95 in construction; 21.05:17.80 in real estate) and the wholesale and retail trade and health and social work where BME groups were the majority (12.99:18.95 in trade and 9.05:13.40 in health work). These figures become more pronounced when gender is considered.

2) Certain companies will be more prone to varying health outcomes of their workforce based upon its diversity, and local recruitment and retention policies should take into these extra factors into consideration, e.g. a study of racial and ethnic groups discovered that discrimination at work could lead to derogatory mental health outcomes (Roberts et al, 2004).

3) Absenteeism can be a major problem for businesses, although the way it is managed will vary according to company size, ethos and type. British Airways reported in spring 2004 that its 47,000 employees were taking an average of 16.7 days sick per year, twice the national average, at a cost of £60 million annually. Yet, of 300 private and public sector organisations questioned in 2004, 72% did not have a policy in place to manage absenteeism and 87% had not calculated this cost into their businesses (Sunday Herald, 2004).

4) The ability to tackle absenteeism head-on within companies can have dramatic benefits, not only on productivity, but also on employee health and recruitment and retention policies. Three years ago, 12% of all working hours at the Kwik-Fit Insurance centre in Uddingston were lost to sick leave, since when drastic measures have been taken - an occupational nurse has been hired, Human Resources now interview employees upon their return to work and managers have been trained to deal effectively with absenteeism. Additionally, two "duvet days" per year, where employees can call in thirty minutes before a shift to take the day off, and two "lifestyle" days (for weddings and taking children to school on their first day etc) have been given on top of statutory holiday leave. In response, absenteeism has decreased to between 4 and 5% (Sunday Herald, 2004).

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Links Between Work Practices and Social

Flexible work practices, such as teleworking or flexitime, offer fundamental health benefits to a workforce and can particularly alleviate health inequalities found in the social fabric of a local economy; individuals who cannot physically travel to work, such as the disabled can work from home; those who have care responsibilities, which are difficult to fit into the constraints of a normal working day are able to seek work; and individuals in lower income brackets are able to take advantage of cheaper, off-peak travel rates to travel to work.

Women are particularly impacted upon by the introduction of flexible working practices, where they are the primary care givers in society but find the greatest barrier to work in the lack of affordable childcare facilities. Under the Flexible Working Regulations 2002, they can seek some redress from their employers, but it is only when both flexibility and childcare are considered in tandem by an employer that socioeconomic balances can really be redressed effectively.

In light of the heavy role that social aspects of a local economy play in employment health, it is in the local recruitment and retention policies of a company that health inequalities can be most rebalanced. When the issue of diversity is encouraged and harnessed, the health of the overall workforce will increase in line with a company's productivity. This is also true for a company mindful of the flexibility and childcare needs of its workforce, which must also be tied into retention policies. A company's Human Resource policy is intrinsically linked to their ownership structure, ethos and size and will be a product of location in regard to access, e.g. a small rural company is likely to have different goals in a recruitment policy than a large multinational organisation.

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Research Findings:

- 1) Flexible working practices are most beneficial to those individuals where the structure of the working day is unsuitable for their other responsibilities, such as childcare; or for those for whom physical travel to work is difficult, such as the disabled. Women are predominantly the main family carers in regard to the elderly and the young (Ballantyne, 1999) and employment can bring immense health benefits - a study of Spanish women found that female workers had better health than housewives, particularly among those with a lower level of educational attainment (Artacoz et al, 2004).
- 2) Provision of childcare facilities is an important employment health attribute for women in particular and is directly linked to flexible work practices. Access to affordable, local childcare is a major obstacle to women joining the workforce, particularly lone parents, who are among the poorest in Britain (21% live in poverty). Statistics show that almost 40% of employees have dependent children, 58% of women with a child under five work and 78% of women with children aged 6-13 work outside the home. In contrast, only one in ten employers help their staff with childcare, 5% offer nursery places and a further 5% help towards childcare costs (Daycare Trust, 2004). This is compounded for those women who are multiply disadvantaged, i.e. 52% of working-age adults with a disabled child are in the bottom two fifths of income distribution (Daycare Trust, 2004).
- 3) Whilst equal opportunities is about ensuring equal advantages and reducing discrimination, i.e. making things more fair, diversity is primarily focused on harnessing the talents and skills of a mixed and diverse workforce to the company's advantage, thereby increasing productivity. Such diversity policy is able, therefore, to reduce bullying, disputes, low morale and also aid staff retention through learning new perspectives (Bagshaw, 2004).

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4) Employees with dependants who are young or disabled (children under six or under eighteen if disabled) have the legal right to ask for flexible working arrangements to manage their work and families more effectively (Flexible Working Regulations 2002). In response there are eight business grounds where an employer can refuse this request: burden of additional costs, detrimental effect on ability to meet customer demand, inability to reorganise work among existing staff; inability to recruit additional staff, detrimental impact on quality, detrimental impact on performance, insufficiency of work during periods the employee proposes to work and planned structural changes (ACAS, 2004). Care must be taken to ensure this law is abided by fairly on both sides.

Links Between Economic Climate & Employment Health Policy/Planning and Social

An individual's ability to experience positive employment health is based upon two scales. At the local level, it is a function both of employment factors that shape health and of the social aspects of a local economy; but at the national level it is controlled by legislation, economic shifts and government priorities.

At the local level, employment health is of vital importance as a determinant of overall health and will vary widely - dependent on social facets of a local economy. It is vital, therefore, that employment health policy and planning takes into consideration the health inequalities found throughout the workplace in different socioeconomic groups. This cannot be achieved in isolation of other policy initiatives in communities, or through policies targeted specifically at these groups. In most cases, employment health differentials are inter-related with many other factors and would greatly benefit from cross-departmental and cross-sectoral collaboration - women have very complex relationships with the labour market and as such can suffer indirect health effects, e.g. they can be more prone to illness through the illness of their partner, or people can suffer multiple disadvantages of gender, disability and ethnicity, reducing their quality of work-health experiences at every step.

At the national level, the connection exists between employment health and sustainability in regard to legislation. Whilst legislation exists for equal opportunities and employment e.g. sexual discrimination laws, and for human capital and employment e.g. minimum wage laws, there are no legislative guides on health and employment in relation to sustainability. With income preceding good health outcomes for the majority of the population and so many inter-related factors bound with sustainability issues in the local economy, there would seem to be scope for progress in this area.

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Downward economic shifts inevitably require companies to restructure and diversify, often resulting in redundancies and lack of available employment, particularly for those individuals of a lower socioeconomic status and/or with less ability to retrain. Those individuals who are more highly educated, of higher employment status and/or able to utilise their higher incomes to save for retirement, are in a position of increased security against adverse economic impacts, either externally from market shifts or internally from their employer's response to them.

Research Findings:

1) It is said that the economy is one of the most important social environments that affect well-being (Dooley, 2003) and as such the link between healthy and sustainable local economies becomes apparent. As Lynch et al (2004) put it: "individual income is partly determined by a person's education, skills, and efforts, but income inequality is determined by history, politics and economics" (p25).

2) Employment health inequalities do vary across groups and are inter-related, so health planning must consider mitigating strategies in collusion with other policy makers - national policy cannot aim to improve health in isolation as it is not possible to "divorce health from deprivation" (Landon, 1996, p127). For example, where it has been shown that the impact of a partner's health has an important impact upon women's health (Bartley, 1999), policy would need to consider this factor in relation to both women's and men's health. Access to healthcare is also a major consideration, which can be dictated by employment. For instance, job flexibility, sick pay and after-hours care were shown to influence the ability of low income workers to access health care facilities in Florida (Gleason & Kneipp, 2004).

3) These findings on the relationship between equal opportunities and employment attributes, which affect health, have shown the difficulties inherent in understanding the health inequalities amongst different socioeconomic groups. Inclusion in the labour market is not often attributable to only one factor. In almost every case, it is likely to be a combination of factors. Berthoud (2003) discovered that nearly one tenth of adults in his study were multiply disadvantaged, with at least three problems - the more disadvantages an individual faces, the more likelihood of unemployment. This is particularly true of lone parents, where multiple health, mental health and child health problems were evident (Casebourne and Britton, 2004). In addition, it is important to note that whilst people may fall into certain disadvantaged categories, this does not necessarily imply equivalence within these groups and that a more differentiated approach may be necessary (Macintyre et al, 2003).

4) These points all highlight the need for cross-department policy in regard to employer responsibility for workplace health. Coats (2004) argues that "for too long the main debate concerning the workplace and our well-being has centred on health and safety issues, sickness pay and absenteeism". Jobs do impact upon employee health, especially those of a low skill and wage, arguing for policy development linking work and health in a much more effective collaboration between government departments. In the case of lone parents cited above, interviewees offered an understanding employer, good housing circumstances, strong social networks and an access to information on health issues (Casebourne and Britton, 2004) as vital for the provision of their local, healthy, sustainable employment.

5) Another important policy consideration is that higher rates of injury risk in lower socioeconomic groups were found to relate not just to work injuries, but are representative of higher injury patterns of risk overall. For men in particular, an excess risk of injury was shown in all settings, not just at work, for manual workers in comparison with salaried employees (Laflamme and Eilert-Petersson, 2001).

6) Employment relations and conditions, historically, have less bearing on women's health than men's due to the differing circumstances in both genders' relationship with workplace. This is particularly true of older people (Humphrey, 2003). At a population level, the socio-economic gradients in women's health are only similar to men when women's socio-economic status is measured by the occupation of male partners. When women are in full time employment, however, work conditions do play a major role in the socio-economic gradient in ill health (Bartley, 1999).

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7) Unemployment will impact negatively on health through psychological consequences and a reduction in income (Wilkinson and Marmot, 1998) and on future likelihood of obtaining work, through lack of updated skills and training. All individuals will feel an increased burden in such times, but undoubtedly, it is those of a lower socioeconomic standing who will suffer most, both at the time and in the future. This is most notable in financial provision for retirement. In a study of older people (aged 50-69) in the UK, it was found that those who expected to retire early were most likely to be holding degrees, in managerial or professional occupations, and/or in possession of private pension plans (Humphrey et al, 2003).

Links Between Individual Attributes and Traffic/Transport

Largely as a result of the prevalence of car ownership, people are travelling significantly greater distances than twenty years ago. Furthermore, car use and transport use more broadly are not equal across different socioeconomic groups. Those of higher occupational status are more likely both to travel greater distances and to make use of a car when so doing than those in lower occupational groups. (ONS, Census 2001)

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Research Findings:

1) A greater amount of the population now have access to a car: in 1972, 52% of households had access to at least one car or van, while by 1995 this had increased to 71% and to 73% in 2002 (National Statistics, 2004).

Year	Buses & Coaches	Cars, Vans & Taxis	Rail
1958	31	44	16
1968	16	72	9
1978	12	78	7
1988	7	84	6
1998	6	86	6

Passenger transport by mode (distance travelled as % of total distance travelled by all modes) of transport (National Statistics, 1998)

2) Household expenditure on public transport has increased from £2.69 in 1971 to £5.43 per week in 1998, whilst this increases to £11.52 in 1971 and £23.55 in 1998 if motoring costs are added (National Statistics, 1998).

3) There is a significant imbalance among different socioeconomic groups in their access to the use of a car. In 1998 - 2000, only 35% of households in the lowest income quartile had regular use of a car, compared to 57% in fourth quintile and 81% in the middle quintile (DETR, 2001). Undoubtedly this will also impact on the distances these groups will travel as when households own a car they travel further than those without (National Statistics, 1998). This is significant to planners aiming to reduce private transport means and increase public transport under sustainable traffic plans. Sixty percent of respondents in a survey in 2000 believe pricing (either through congestion charging or increased petrol costs) would reduce car usage (National Statistics, 2000).

4) In 1998-2000, 82% of men held a driving license in comparison to 60% of women, 18 million to 14 million respectively (this gap is closing, however, as in 1975-76, 69% of men held driving licenses, comparable to 29% of women). As a consequence, men make 59% of their journeys by car, whilst women only use the car for 39% of theirs (DETR, 2001). Women are the predominant walkers and users of buses (DfT, 2004).

5) Analysis of car ownership by ethnic group reveals a similarity. In a survey of London households, the percentage of car ownership of white origin individuals to black and ethnic minority individuals stood almost identical for no cars (37% and 39% respectively), one car (43% each) and two cars (17% and 20% respectively). It was intra-minority assessment, however, that brought up glaring differences in car ownership: 53% of mixed-race Caribbean people did not own a car in comparison to 43% of all BME & white origin groups (LHO, 2001).

6) Unsurprisingly, disabled people predominantly travel to work via car, van, minibus or a works van at 70.6% or by foot, which includes taxi at 10.3% in England (DETR, 2004).

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7) Older people are less inclined to travel by car, and make fewer trips, largely as a result of retiring from work. They travel considerably shorter distances, generally for shopping or other personal business, and are more reliant on public transport. In addition, as part of this cohort, older women are less likely to have access to cars than older men (National Statistics, 1999).

8) Education can also be linked to transport decisions made by an individual. It has been found that those individuals educated to university degree level are more likely to adopt sustainable transport behaviours, such as joining a car club, and are generally environmentally conscious (Cairns et al, 2004). In addition, in a survey of commuters, preference was given for commuting by public transport only by those who recognised the harmful environmental impact of cars (Joireman, 2004), which, arguably is a function of education.

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9) There are seven forms of exclusion which may limit an individual's mobility: physical exclusion; geographical exclusion; exclusion from facilities; economic exclusion; time-based exclusion; fear-based exclusion; and space exclusion. All of these will be affected by the individual attributes of those within the community and therefore the transport used. It is pertinent to note that, whilst they may be transport causes of exclusion, the solutions do not have to be. For example, an improvement of childcare facilities in an area can limit several facets of this (Preston et al, 2000).

Links Between Psychosocial and Traffic/Transport

The link between psychosocial and transport is primarily related to the improvement in social support networks that arise from sustainable commuting behaviours. This can take many forms from informal train commuter clubs through to the increased social contact of a disabled person through car share schemes, who otherwise could not have left their house. Sustainable transport behaviours, such as bike or car clubs, can engender good social support networks, increase job satisfaction, improve civic pride, and reduce inequalities by increasing access to transport and therefore, employment. These will have widespread ramifications for employee health and local sustainability, although it must be noted that successful schemes usually begin at a grass-roots level and involve individuals with the same demographics.

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Research Findings:

1) Sustainable transport schemes are in a strong position to reduce health inequalities through aiding transport to work and fostering social networks in the process. It was noted in Cardiff that participation in car clubs from lower income estates allowed many social inclusion opportunities (Cairns, 2004), enabling households with no car or just one car and multiple workers to access employment opportunities (Carplus, 2004). Such schemes have obvious health benefits, but also radiate sustainable good practice to the wider community by engendering a sense of civic pride with increased social responsibility for the participants. It must be stated however, that insurance costs, vandalism and extreme poverty in some areas, can preclude such schemes outright (Bonsall, 2002 in Cairns, 2004).

2) Sustainable car schemes can radically transform psychosocial networks, although it may be worthy to note that historically, most car sharing schemes begin of their own accord, concentrated within recognised groups. One example of this is in relation to car clubs, where most UK clubs have been developed from a bottom-up approach and that "there is a sense of belonging to a 'community' club" (Cairns, 2004, p191). Thus, if policy makers were planning to initiate such schemes on behalf of the users, it would be important to locate them within such groups, which have a natural affinity with each other, and not spread across the whole community, for success to be ensured (Cairns, 2004).

Links Between "Health & Safety" and Traffic/Transport

There are health and safety facets of a workplace which will impact upon sustainable transport patterns but, inversely, traffic and transport is in itself a health and safety issue for some employers. Sustainable transport behaviour can be improved through increased workplace health education - cycling is both sustainable and healthy - and will result in a decrease in congestion in the local economy. Congestion can also be eliminated at certain times of the day through provision of on-site health facilities - a local gym or healthy eating options - where early morning/lunchtime/early evening traffic congestion is reduced. Congestion is a feature of working functions, however, and will vary according to site specific needs - a 24-hour factory will have increased congestion at the beginning and end of each shift, possibly three times a day - and it is here that sustainable transport methods can be most effective in improving employee health and local sustainability. At the other end, it is transport that is a huge health and safety issue and the cause of many accidents, less in regard to sustainability and more in relation to accident and risk prevention.

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Research Findings:

1) Workplace transport is a traditional health and safety issue and the second biggest cause of fatalities for British employers - in 2000/01, 99 people were killed, 2490 were seriously injured and 5857 people sustained injuries which kept them off work for more than 3 days. These were as a result primarily of moving vehicles hitting or running over people or people falling off them, workplace vehicles overturning and objects falling off them (HSE, 2004), most of which are preventable through increased worker safety.

Links Between Company Attributes and Traffic/Transport

Implementation of sustainable traffic and transport policies will positively influence employee health, but the scale, scope and success will vary according to company attributes - size, type, ethos, ownership and location. Employer travel plans can range from encouraging cycling and providing showers and bike storage through to organising staff buses via local council involvement. It becomes apparent, therefore, that for sustainable travel plans to become a reality, an organisation must expend some resources for assured success, which will evolve from a company's ethos and size. This does not discount smaller companies, however, as changes in staff travel behaviour could arise through simple commitment and economical time management.

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Research Findings:

1) It has been shown that lower levels of car use generally result from lower paid staff, women employees and employment based in town centres (DFT, 2004) thus implying that potentially, travel plans are not of such a high priority when these factors are in place. The age of the workforce is not a determinant of success so does not need to be considered as a separate factor. Additionally, the size of an organisation is important for a reduction in car use (the larger the better) due to the need for appropriate management and a critical mass of users for most initiatives, whilst parking restrictions and charges appear to be significant factors in changing people's behaviour. Travel plans have shown to be most successful where senior management support the scheme by example, where dedicated shuttle buses are used, where the plan is exhaustively marketed and staff time is allocated to the project. This implies that larger organisations have the most to contribute in the move to sustainable healthy travel behaviours, which also seems fair considering their impact is surely the greatest.

Links Between Work Practices and Traffic/Transport

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Working practices and traffic/transport issues are intrinsically linked through four main variables, all of which are necessary in a healthy sustainable local economy: access to affordable, local childcare; a reduction in congestion; physical site access, particularly for disabled individuals; and finally, consideration of local recruitment and retention.

For many women, access to affordable, local childcare is a pre-requisite for participation in the workforce, which in turn is a major contributor to good health. Women, predominantly, can benefit from programmes designed to facilitate access to childcare facilities, which are supplemented with good transport links. Provision of childcare facilities in inaccessible areas, such as those not serviced by public transport or gridlocked at certain times of day due to high traffic, will not result in healthy sustainable benefits. Pressure could be alleviated through the introduction of flexible working practices, for all employees, such as teleworking and flexi-time. The resultant effect of staggering arrival and departure times can ease local congestion, alter travel patterns to more sustainable healthy behaviours and result in reduced stress levels and improved health.

Flexible approaches to work can decrease health inequalities by lessening the socioeconomic disadvantages felt by large sections of the population in their journey to work. Teleworking, for instance, can improve financial gain where transport cost is an issue and allow others, e.g. disabled individuals, to earn an income where physical site access has previously hindered. Such an approach can dramatically affect work-life balance, another large health determinant, and can act as a major recruitment and retention bonus. Human resource policies must be mindful of such issues. Flexible work practices can work in tandem with local equal opportunities policy, but must also consider the transport facilities of the economy in which it operates. Policies to recruit a diverse and/or local workforce will be more successful if accompanied by flexible working practices, affordable childcare and sustainable transport methods.

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Research Findings:

- 1) Access to childcare can be improved through flexi-time, by aiding staff in their time constraints at the beginning and end of their working days, such as taking children to school. This can also encourage more staff to walk to or from work and to plan their days more effectively (DETR, 2004).
- 2) In a study on the rising trend of telecommuters in Tokyo, it is estimated that 9-14 million people will be adopting this flexibility by 2010, which will reduce congestion by 6.9 - 10.9%. In addition, this will alleviate budget constraints by savings of 7.9 - 26.4% of annual spending on public transportation (Mitomo and Jitsuzumi, 1999).
- 3) Whilst, working from home can result in less job security, isolation and less supervision, it has distinct advantages for the disabled who are possibly unable to commute to an office (worksmart.org, 2004).
- 4) The introduction of flexible working practices is a reciprocal arrangement between employer and workforce, and a fundamental factor in staff recruitment and retention. A compressed working week would be well received by staff through the prospect of extra time off, but also by a service organisation which would have staff available for longer through an extended working day (worksmart.org, 2004).

Links Between Economic Climate & Employment Health Policy/Planning and Traffic/Transport

Health and traffic/transport are linked through the introduction of sustainable transport planning, aimed at reducing the environmental impact of cars, e.g. congestion charging and car parking levies, which result in positive health outcomes through improved environmental quality, reduced stress and increased exercise. Integrated policy and planning by local decision makers - a reduction in parking spaces and an integrated public transport system in the design of new urban space - can drastically improve employee health and local sustainability.

The impact of such policies on employees, as part of their daily commute, is a fundamental part of workforce health. Sustainable transport policies, however, can only improve health if employers assimilate some of the burden felt by employees to comply with new transport systems. The indirect health costs are through the risk of increasing social exclusion through such transport policies. Congestion charging produces social inequality; those in a lower economic position will be unable to assimilate charging costs in the same way as people of a higher economic position. Indeed, this latter group may also have access to free parking at work and company cars, whose company will pay the charge. This must be considered in context of the assumed health advantages of such schemes, where an improvement in air quality in a local economy will be difficult to assess, due to its inherent disregard for boundary measurement.

Changes in consumer behaviour and economic shifts will influence transport, either financially (increase in fuel prices) or culturally (green shifts), where most people concede that cost is the major factor in determining transport methods, although more altruistic, environmental transport choices are on the increase. This is true of freight and business travel, where companies will respond to increased fuel costs; through a hike in transport charges, consolidating orders and using slower, more economical methods of transport; and through an investment in videoconferencing facilities and curbing travel for lower occupational grades, as a result of economic downturns.

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Research Findings:

1) Health and transport are directly linked. In London, the congestion charge is predicted to impact upon health in terms of: access to healthcare (the charge deterring people from making central London health visits); an improvement in road safety, based on a reduction in accidents in the current zone; an improvement in air quality, thus decreasing asthma and other respiratory illnesses; a reduction in noise, which can severely impact upon individual physiological and mental health problems; improved health through encouragement of walking and cycling; improved public safety; and a reduction in stress levels (Transport for London, 2004).

2) Studies show that for every change in particulate exposure, there are economic costs incurred per person per year for mortality risk (£8.90) and morbidity risks (£2.60) leading to an estimated total of £11.50 per person. This only takes account of urban health costs, so total air pollution costs would be additional and rather more vast in scope (Tinch, 1995). As transport accounts for 50% of total UK emissions, with the urban pollution figure at 70%, it follows that sustainable transport policies can immeasurably impact upon health.

3) Transport schemes do have direct links to workplace health, where employers can assimilate some of the cost themselves or pass them on to the workforce. An example is the Workplace Parking Levy, which is being implemented in Nottingham, to be effective in April 2005, where a price has been placed on most workspace parking spaces in a bid to reduce congestion. The annual fee of £150 will be billed to the local employer who has the option to pass this cost onto the workforce. It is estimated that £5-£15 million will be raised annually from this scheme, which will be spent only on transport projects and exemptions will only be permissible for the disabled, small businesses and emergency vehicles (Nottingham Travel Wise Service, 2004).

4) The impact on social inclusion from sustainable transport policies must be included in employment health policy and planning for lower socioeconomic groups. It is said that employer responses to workplace parking levies will take one of five forms, where, 1) the charge is passed through to employees, 2) the charge is passed through to customers, 3) employers accept a decline in profit margins, 4) employers scale down production and 5) employers relocate to areas with no charge or a lower charge. In all cases, except a decline in profit margins (3), employees of a lower socioeconomic grade will be disproportionately affected (Preston et al, 2000).

5) Parking provision is of considerable importance in the London Plan (GLA, 2004), with employers being encouraged to decrease parking possibilities as much as possible. New developments are expected to provide pedestrian and cycle routes; to keep on-site car parking to the minimum necessary; and there is to be a maximum of one car parking space per 1,000 - 1,500 m² of gross floor area.

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6) Sustainable transport decisions are on the rise - almost 1 in 5 commuters are conscious of reducing their environmental impact through using public transport and for 4% it is their prime motivation. For this 4%, the value of public transport attributable is approximately £162 million in 2002 (Cooperative Bank, 2003). It is transport costs, however, that are more likely to result in success for sustainable transport schemes; 60% of respondents in a survey in 2000 believe pricing (either through congestion charging or increased petrol costs) would reduce car usage (National Statistics, 2000).

Links Between Individual Attributes and Neighbourhood

One of the principle links between the characteristics of a neighbourhood, individual attributes and health is affordable housing. Good housing (that takes into consideration standard, affordability and location) is the benchmark of a sustainable community and the lynchpin of good health - poor quality housing can cause ill health and act as an antecedent to other negative social outcomes. Unfortunately, increasing demand for and cost of housing, particularly in London, is contributing to growing concern in this area. The ramifications of such changes in the housing sector are felt more acutely by lower socioeconomic groups forcing people to move further away from their area of work and social contacts to places they can afford to live. Due to the proliferation of home ownership in recent years, the lower socioeconomic groups concerned are not exclusively linked to the rental sector. Ultimately these factors lead to an issue of retention and recruitment for employers, as individuals leave the capital completely and hence the level of housing in terms of standard, affordability and location, impacts on the individual attributes of those in the community.

This is of specific significance to keyworkers who are engaged in education, health or public services such as the police, prisons or social workers who, whilst being integral to a community, are excluded from living there due to prohibitive costs. Hence, the establishment of keyworker housing schemes to tackle this problem provides a direct link from occupational status to housing.

The occupational status profile of a community can also impact on the facilities in that community. Broadly, the higher the occupational status of members of the community and therefore the more affluent the area, the greater the economic support for facilities. In addition, facilities may be supported by some companies offering and arranging local leisure club facilities for employees and these perks are likely to increase higher up the corporate ladder.

Social exclusion and the individual attributes of those in the community are also linked to other neighbourhood issues of crime, population profile and green space, all of which are themselves inter-related. For instance, the age profile of a community would not only have an affect on the skills base within the community but could also have an affect on the crime rate. It has long been understood that crime rises through the mid-teens to early twenties and then drops with age. An area, therefore, with a relatively young population profile would intuitively have a higher crime rate, unless counteractive measures were taken in education and community initiatives. The population profile of a community will also impact upon the demand for and use of local facilities, including green spaces. Similarly, employment stability is responsible for creating certain neighbourhood characteristics. A highly transient workforce is likely to have less regard for their environment than a permanent one, thereby contributing to a lower neighbourhood quality e.g. through the disregard of the disposal of litter.

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Research Findings:

1) In 1996, 29% of private and 40% of public sector households in the UK were living in non-decent housing. Decent housing is defined as being 1) above the current statutory minimum standard for housing, 2) in a reasonable state of repair, 3) providing a reasonable degree of thermal comfort, and 4) having modern facilities and services (National Statistics, 1999).

2) It is estimated that through demand from private owners and subsidised renting, about 240,000 new homes a year will be required in the two decades 1991-2001 and 2001-2011 (JRF, 1995). This is thought to be largely due to the increase in demand of one-person households which is estimated to become one third of all households by 2021 (Housing Corporation, 2004).

3) The average cost of a dwelling in the UK in 2002 was £148,184, up 21.5% on the 2001 price of £122,005 (National Statistics, 2002). In London, the cost is higher, where the average price of a home is £251,368. In fact, average salaries in London increased by 21% from 1999, but house prices have risen three times as fast (ClearlyBusiness.com, 2004). The result is that in 2002 the average house price in London was over seven times the average salary (National Statistics, 2002).

4) In the social housing sector, 70% of households are in the lowest 20% of incomes, 8 out of 10 have no-one working, a high proportion are lone parents (23%), women head the majority of multi-adult households and this sector has the highest proportion of Black, Bangladeshi and Pakistani households (Housing Corporation, 2004). However, poverty can also be a problem among home-owners. In a study on mortgage holders, the attributes of those most likely to be in poverty are: unemployment; single parenthood; being aged between 25 and 34; from a manual socioeconomic background; from a black or ethnic minority group; or divorced/separated (JRF, 2003).

5) In London, the higher cost of living mitigates against the incentive to move out of welfare and into work unlike elsewhere in the country. This issue is further compounded by the high cost of childcare (Stephens, 2004). Both factors are contributors to health inequalities where employment would dramatically increase health status.

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6) Neighbourhood factors are undoubtedly related to individual attributes. Employment opportunities improve neighbourhood factors of crime and quality of environs, particularly where the neighbourhood is privy to a lot of anti-social behaviour and has a high percentage of young people in its population profile. Research shows that crime rises through the mid-teens to early twenties and then drops with age. Whilst work can positively influence this relationship, preventative schemes must be encouraged through family units and partnership programmes, where it has been shown that anti-social behaviour is ameliorated by living with parents, family contact with police and a reduction in school truancy. ASBOs (anti-social behaviour orders) or fixed penalty fines are simply reactive measures - socioeconomic inequalities must be tackled through preventative initiatives, particularly when most ASBO cases are found to be caused by health factors (drug or alcohol abuse) or through educational issues, such as long term school expulsion or learning disabilities (Armitage, 2002).

Links Between Psychosocial and Neighbourhood

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A healthy sustainable local economy is undoubtedly one where an individual is satisfied with the characteristics of the local neighbourhood in which they live and work. This includes issues of crime, housing, population profile, green spaces and the overall quality of the environment.

In addition to the direct health benefits received through outdoor recreation and sporting opportunities, there is a significant body of work carried out on the psychological and social benefits gained from access to green spaces. Deskworkers with a view of nature have reportedly better overall health and broader well-being than those without. The opportunity for sporting and leisure recreation through access to greenspaces at work can contribute to greater social cohesion inside and outside of work and hence to greater satisfaction through an improved work/life balance.

Social cohesion is highly correlated with material deprivation and there is evidence that well maintained streets and urban areas reduce the fear of crime or violence with a subsequent impacts on health and psychological well-being. The impacts of the fear of crime intensify with age and hence the population profile of the community will affect its health through fear of crime. Actual levels of crime not only increase fear and the associated negative health implications but they are self perpetuating in that crime will discourage new investment, which will lead in turn to increased crime and worse health for the local community.

Poor housing environments will also impact adversely upon emotional vulnerability and social cohesion with lower socioeconomic groups being affected the most. Consideration needs to be given here to the role of the perception of neighbourhood characteristics and how perception can have subsequent health impacts. Whilst intrinsically tied up with the realities of income and status, a person's perception of their place in the social hierarchy can produce negative emotions such as shame. Emotions such as these can lead to behaviours such as smoking and drinking which can not only lead to subsequent health problems but can also result in antisocial behaviour and reductions in civic participation and, thus, less cohesion in the local community.

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Research Findings:

1) Rohde & Kendle (1994) and Lewis & Booth (1994) among others have carried out work concerning the psychological effects of an urban environment, the relationship between human beings and nature and the psychological effect of contact with nature on human well-being. Lewis and Booth (1994) found that while those living in rural areas had a much lower prevalence of mental disorder, people living in built up areas with access to gardens or green, open spaces had a lower prevalence than people in built up areas with no such access.

2) Wolf (1998) states that neighbourhoods with blighted streetscapes are perceived as dangerous and threatening to an individual, whilst tended landscapes, help to reduce feelings of fear or violence. This fear of crime and feelings of fear are said to erode quality of life and are associated with poor health (Green et al, 2002). McKee and Milner (2000) have also suggested that this can become more marked with age as in increasing age physical health is linked to crime awareness and fear of crime (McKee and Milner, 2000).

3) Poor housing environments will also produce psychosocial effects, which will impact adversely upon social cohesion in the community (LHC, 1999). The quality of housing available to an individual will compound this issue in that great inequalities exist between socioeconomic status groups in regard to the quality of housing available: lower socioeconomic status groups will be most affected. The same is also true in regard to access to facilities in the local community.

4) It has been shown that deskworkers with a view of nature claimed illness 23% less and reported better overall health, found their jobs more challenging, were less frustrated about tasks and more patient, felt greater job enthusiasm and higher feelings of life satisfaction than their colleagues without a view of nature (Wolf, 1998).

5) The link between health and employment is well documented, as are the inverse effects of unemployment, which impacts upon psychological well-being, social participation and physical health (HDA, no date). The ramifications of this in a local community, particularly if accompanied by many others in the same situation, could lead to complete neighbourhood degeneration, a closure of facilities and increased crime.

6) If strong social support at work is suddenly terminated through unemployment, the effect coupled with increased income inequality will have an even greater effect on health. Whilst this is intrinsically tied up with the realities of income and status, a person's perception of their place in the social hierarchy, based on psychosocial processes can produce negative emotions such as shame. These are directly and physiologically translated into poorer health via psychoneuroendocrine mechanisms and through stress induced behaviours such as smoking or drinking. This can result in antisocial behaviour and reductions in civic participation and, thus, less cohesion in the local community (Lynch et al, 2004). This was supported by a study of youths in NY where a sense of mastery over their lives, led to improved health status. Whereas perceived discrimination only affected mental health status and socioeconomic status only affected their physical health, their perception of mastery affected both their physical and mental health status (Caputo, 2003).

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7) It is worth considering that the effect of unemployment on health can be mitigated or exacerbated by the social cohesiveness of a local community. Social cohesion takes many forms, but will be highest in areas where there are dense networks of relationships between local people and where there are high levels of trust and an attachment to neighbourhood. Self-rated health will be higher in these areas, where there will be greater societal integration, more participation in organised activities and higher tolerance of others (Stafford et al, 2004). Arguably, health is higher in areas of higher social capital and cohesiveness and, for this reason, unemployment will not be as keenly experienced by those living in these areas, particularly if these areas experience high unemployment. This is due to improved psychosocial support, but also due to the fact that the 'culture' of the area will be more accepting of unemployment, thus reducing the health outcomes.

Links Between "Health & Safety" and Neighbourhood

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The most significant link between "health & safety" and neighbourhood characteristics is likely to be the impact certain work benefits can have on the neighbourhood in which that company operates. For example, the implementation of keyworker housing schemes will have an impact on the housing within the local community. Similarly, the provision or support of facilities, for example gyms or crèches, will also have an impact on the local community should those facilities also be made available to them. The profile of a neighbourhood will also be affected by company implementation of Employee Assistance Programmes, which traditionally improve workforce health through offering counselling services for alcohol and drug abuse, although they can encompass anything from achieving work/life balance to helping individuals with mental health problems. Occupational hazards experienced by those within a company that also pollute the environment will clearly have a wider impact on the neighbourhood and the quality of its environment.

The local neighbourhood may also be affected through the procurement policies implemented by an employer. Local procurement will promote the local economy with further potential environmental benefits and in the instance of local healthy food there are clear benefits on employee health. In this way the capacity of the neighbourhood to provide resources to a company affects the working conditions and benefits experienced by those within the company.

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Research Findings:

1) The NHS annually purchases over 300 million meals, spending £500 million in the UK every year on food. As an employer it was one of the first to offer healthy eating options in canteens, under its Health at Work Programme launched in 1992 (Beishon, 2003). If a larger proportion were spent on sourcing this food locally, the benefits to the local communities would be vast, as is being shown by a London trial of four hospitals sourcing organic food from local farms immediately after harvest for increased food freshness, improved nutrition and local economic benefits (London Food Link, 2004). The NHS has highlighted the need for other companies to follow their lead in sustainable food policies, which is directly correlated to an improvement in employee health and local economic benefits. Additionally, sustainable transport policies and environmental impact can be mitigated by increased emphasis of the local in procurement strategies relating to provision of "on-site" facilities.

Links Between Company Attributes and Neighbourhood

Companies can play a major role in creating local neighbourhoods, dependant on their size and nature. Large companies can form the backbone of local communities as the major employer, whilst inversely, a decision to leave an area by a large manufacturer, as part of a strategy of global realignment, can place huge strain on another.

Employers can provide affordable housing, sports and leisure facilities, counselling support or fund wider community groups, all of which will benefit the local community - the implementation of travel plans within a company may have wider impacts on the transport facilities available to those in the local community. Additionally, under the banner of Corporate Social Responsibility (CSR), corporate volunteering is gaining significance as a tool for civil renewal, where increasingly companies are supporting private-voluntary partnerships to build employee skills and training, company trust, reputation, staff retention and local community cohesion. All of these contributions will vary depending on the individual company and their attributes.

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Research Findings:

1) Employers are now realising the practical benefits, primarily a decrease of staff turnover, of providing affordable housing for their staff through the provision of capital to a partner housing association, although these are most likely to be larger employers and in urban locations, which exclude their employees from living locally due to prohibitive costs (London Housing Federation, no date).

2) Volunteering is seen as a key pillar of civil renewal by the government in the UK, where, in 2001, 16.5 million people (39% of the total adult population) volunteered informally, giving an average of 110 hours each (Haddad, 2004). Within this context, there has been a large growth in employee volunteering: in 2001, 21% of people who worked for employers offering volunteering schemes chose to participate. The changing nature of the workforce to one with higher skills has led to greater emphasis on teamwork and training; an increasingly fluid workforce has led to the need for companies to build reputations and employee trust; and there is a growing sense that companies can offer employee skills to the local communities, where they otherwise would not have been able to access them. These factors can be married through corporate volunteering eg. where corporate team challenges can build community centres and gardens, benefiting the organisation, employee and local economy (Truesdale and Dow, 2004).

Links Between Work Practices and Neighbourhood

The population profile of the country has been changing over the past few decades to one heavily weighted towards the ageing. Birth rates have been in decline, leaving the UK with proportionately fewer children and young adults. Whilst this is the general trend, there are marked differences across the country - London has a much higher proportion of younger working adults (20-44 years old) than the general population at large. A borough seeking to improve local health and, therefore, access to employment for the local population, will need to take into consideration the population profile of the community in order to provide housing and childcare accordingly. This population profile will also affect the use of greenspace and other facilities within the area.

The recruitment and retention policies of a company may also have an impact on the housing in the local area, particularly for keyworkers, where housing schemes are used as part of a recruitment and retention policy. There are also other housing schemes and mortgage loans programmes implemented by companies that can influence the housing requirements of the community.

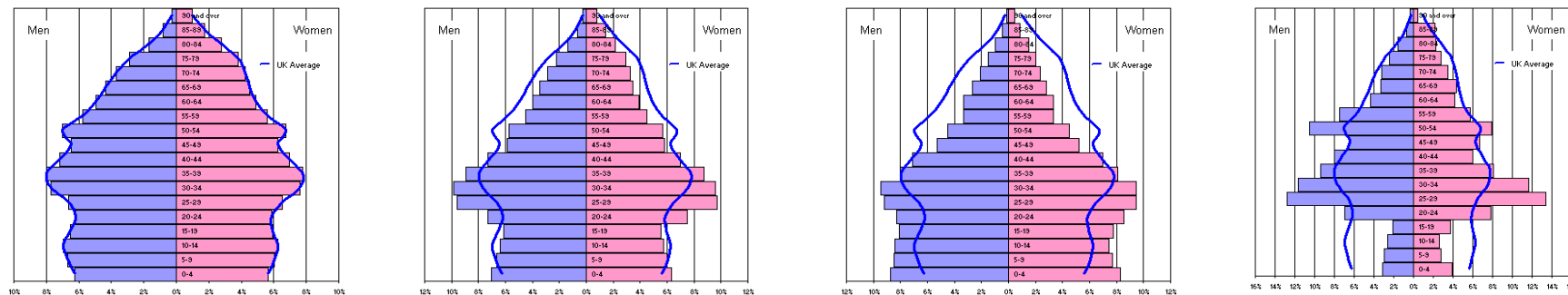
Flexi-time and working hours will also affect the operation and sustainability of childcare facilities and other community facilities. In addition, incidence of child poverty is worse in London than the rest of the UK. This will affect the type of childcare facilities required by local boroughs within London. Also, the introduction of childcare facilities in such areas must also take account of the likely greater ethnic diversity within that area.

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Research Findings:

1) The graphs below illustrate some intriguing differences in population profiles (National Statistics, 2004). Within London, there are stark differences across boroughs in population profile, which will affect employers wishing to recruit locally and the ability of local people to take up local work opportunities.

Population profile of the UK, London, and London Boroughs of Newham and City of London respectively, from 2002 census (National Statistics, 2004)



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2) The statistics show that child poverty is much higher in London than the national average. Throughout the UK, 30% of children live in poverty (defined as living on below 60% of the average household income after housing costs) while in London the total average is 41%, rising to 53% in inner London boroughs (ALG, 2004). In London special consideration needs to be given to children in poverty who are BME. Whilst 36% of children in London belong to an ethnic minority group, 76% of Pakistani and Bangladeshi and 55% of Black children live in poverty. These figures are compounded by lone parents and people with disabled children, who face greater obstacles to finding affordable childcare in the Capital (ALG, 2004).

Links Between Economic Climate & Employment Health Policy/Planning and Neighbourhood

Economic climate, employment health policy and neighbourhood attributes are entwined through the structural inequalities of a local area. Every area in the UK experiences social inequalities to greater or lesser degrees based upon a variety of factors including those attributable to neighbourhood sustainability in this context. The prevalence of crime; affordable, good quality, mixed tenure housing; access to parks; an evenly distributed population profile; access to affordable, community facilities, such as leisure centres and youth clubs; and good quality neighbourhood environs (lack of graffiti and litter etc,) will all positively impact the sustainability and the health of a local community. The lack of these factors in any community will be related to local unemployment rates - higher employment rates build more cohesive, healthier communities - and will in turn be vital considerations for local decision makers, particularly with regard to the attractiveness of an area in encouraging inward investment. Individually or combined, they make an area "desirable" both for business and residential settlement, thus driving the local economy.

Employment health attributes are unequally distributed through communities, often as a result of, or in relation to, neighbourhood attributes. A company will site itself in relation to the mobility of the workforce it needs, often taking advantage of local, manual labour for less skilled work in areas of high unemployment, which will feed the cycle of deprivation for many local communities. In such areas of high unemployment and social exclusion, more than in those of high prosperity, employment factors shaping health become more important and more pronounced in their ability to shape the health of the local community, particularly if incorporated into structured regeneration programmes. This will be further emphasised by economic shifts, where the subsequent filter down into the local economy and impact upon employment rates can further enhance or destabilise an area.

It is possible to mitigate these effects at the outset through thorough design and planning processes, where views of nature may be incorporated into buildings at very little extra cost or employee housing considerations are examined before decisions are made about new employment sites. This has been done most successfully in several instances using Section 106 of the Town and Country Planning Act, 1990.

There are specific ways in which housing and health priorities can be better linked, particularly with regard to employment - when housing bodies and associations think laterally about their roles and involvements with each other and take a community development approach, information is more widely disseminated and health improved - this has been shown to be the case where housing associations work with local agencies and employers to advertise job vacancies or childcare provision in housing offices.

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Research Findings:

- 1) An example of the value of greenspaces in attracting inward investment can be identified in the Lee Valley, where the presence of a park made it a more desirable industry location due to an improved image (GLA, 2003).
- 2) Issues of health and neighbourhood attributes are highly dependent, particularly with regard to green space. To quote Barber (2004), "the annual spend on parks and green spaces in the UK is only a third more than the NHS spends every year prescribing Prozac. What can you do with pills that you can't do by putting people into really good parks?" (p2)

- 3) Employment health policies and neighbourhood attributes are intrinsically linked, and they will have a higher importance for individual and community health in areas of higher unemployment and community discord - "high unemployment is synonymous with low skills, low wages, a high incidence of unresolved health issues and low levels of community involvement" (Advantage West Midlands, 1999, p2).
- 4) Regeneration programmes do not aim to change structural inequalities found in society, but focus more on social disparities. So, while they have fairly little power to address fundamental processes, they can have profound impacts upon local health issues in projects of a specific area, scope and duration (LHO, 2001). In this sense, regeneration projects involving factors of employment health, aimed at improving sustainable neighbourhood attributes, with a mind to mitigating the effects of uneven development and changes in the economic climate, will be more successful than those which consider employment or neighbourhood factors in isolation.
- 5) Town planning is concerned with the shaping and management of a local community and as such, is a designer of neighbourhood attributes. Planners cover most factors that affect health in one form or another; planners can alleviate recruitment and retention issues resulting from a lack of good quality, affordable housing; they can plan for population growth and implications for health care provision; planners can provide building access for disabled persons and ensure greater levels of equity; and they can protect and promote the role of open spaces through planning policies (Chapman, 2001).
- 6) The links between neighbourhood attributes and employment health factors can be enhanced through improved planning processes. An agreement under Section 106 of the Town and Country Planning Act, 1990 is often associated with the grant of planning permission and confers a benefit to the local community, e.g. where a housing development is to be built, the developer would agree to pay for new additional health facilities for the community. It is important, therefore, that town planners work closely with local health services to identify required health facilities and potential opportunities (Chapman, 2001). This has been the case in Greenwich, where the local council have incorporated a local labour clause into more than 150 local planning decisions using section 106 (Greenwich Council, 2004).
- 7) Housing, health and employment have been linked in a community led approach in Kirklees where community participation has identified health and housing goals using informal knowledge in tandem with local partnerships. Employment health can be improved through using these informal networks to identify childcare facilities or job opportunities (Fletcher and Spencer, 2000).
- 8) Employment health and neighbourhood attributes can be further linked through the power of well-being - an idea which is being increasingly promoted by the government. Well-being has been defined as: people's satisfaction with life; their personal development including engagement in life, the concept of 'flow' (a state of absorption where hours pass like minutes), personal growth, autonomy, having a purpose in life and feeling that life has meaning; and people's social well-being - a sense of belonging to communities, a positive attitude towards others, contributing to society and engaging in pro-social behaviour (nef, 2004). The links between these factors and health are well-documented (e.g. life satisfaction is linked to mental health) and are gaining increasing interest from policy makers both in improving individual health and the wider knock-on effects of healthy local communities.

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9) Indeed, the government introduced the concept of well-being in the Local Government Act 2000, which significantly widened local authority power to give councils confidence to broaden policy scope to improve community quality of life by promoting or improving the economic, social or environmental well-being of their area. This has been used in Greenwich, where the council established an employment agency to promote and improve economic well-being. Gateway Employment Limited supplies temporary staff to the council and other employers with limited involvement from the council where profits are used in the local community, local people receive better terms and conditions of employment by registering and the council saves money (in the region of £200,000 per annum). In the first three months of trading (from June 2003) over 30 people were placed in employment with a target of 104 anticipated by the end of the first year. Staff shortages are identified more effectively, in partnership with training organisations, and a local workforce is developed as a result (LGA, 2003).

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10) There are debates, however, about the degree to which levels of income inequality, social capital and health in a community may be related to local processes or much wider factors. Pearce and Davey Smith (2003) argue that these factors are more the consequences of macrolevel social and economic processes that influence health across the life course, rather than local issues. It becomes clear, therefore, that micro and macro levels have the potential to play a role in community health levels.

Links Between Individual Attributes and Environmental

A sustainable local economy is energy efficient, with low levels of pollutants and high levels of recycling and resource management. The level at which a location displays these sustainability requirements will directly correlate with the health of individuals, where, for example, high pollution rates will adversely affect health. Alternatively, individual attributes will affect local environments, where employment factors shaping health, such as employment stability, occupational status and diversity will determine rates of recycling, pollution and energy efficiency in the local economy.

Environmental impacts do not affect individuals uniformly. Large changes in impacts can result in large changes in health. It is known, for example, that there is a correlation between membership of lower socioeconomic classes and exposure to poor air quality, and that those that are most vulnerable will be affected the most. Furthermore, pro-environmental behaviour is differentiated across the population: those who are better educated and/or living a less transient lifestyle are generally more amenable to the idea of recycling and local long-term environmental protection.

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Research Findings:

1) Air pollution is linked to poor health of lower socioeconomic groups of society. King and Stedman (2000) found tentative evidence for a link between air pollution and social deprivation in the UK, supported by a study in Ontario, Canada, which recognised a link between poorer neighbourhoods and higher air pollution, where acute health impacts were double the regional impacts. It was noted, however, that other socioeconomic factors were important to this relationship, such as education levels and employment in the manufacturing industry (Jerrett, 2003). Whilst air pollution is known to cause premature mortality, increased morbidity, structural damage to buildings and crop and ecosystem damage, its impacts will not be uniform across the population. Pollutants in a local area will begin affecting those individuals who are more susceptible such as the young and elderly, but as levels increase, so too will the breadth of individuals affected so that stronger, healthier people begin to become contaminated too (Tinch, 1995).

Links Between Psychosocial and Environmental

The connections outlined below suggest a two-way flow of causation: 1) that strong psychosocial networks in the workplace can encourage pro-environmental behaviour; and 2) that engaging in pro-environmental behaviour can strengthen psychosocial networks.

1) The sense of belonging which is fostered by a cohesive psychosocial environment in the workplace may encourage an altruistic mindset which motivates voluntary pro-environment behaviour. In addition, the group ethic which results from a positive psychosocial environment could facilitate group pro-environmental practices which would have more observable impacts serving as motivation and encouraging continued action. Team work could also encourage sustainable practices such as car shares.

2) Companies which encourage voluntary work in the local community reap the benefits of improved networking opportunities amongst their staff, regardless of status, united behind relevant local issues, and directly improving the local environment. In some cases these can be directly related to health, where companies support the inception of "green gyms" involving environmental projects and exercise in the local community.

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Research Findings:

1) Economic research suggests that efficacy (the belief that one's efforts have an impact) is a core driver for pro-environmental behaviour, suggesting that the above-mentioned observable impacts could be key to instigating pro-environmental behaviour.

Links Between "Health & Safety" and Environmental

Companies can potentially cause environmental damage both due to unwanted by-products of their production process and/or due to workplace hazards which have detrimental effects on the environment such as oil spills. The risk of such environmental destruction varies by industry. For this reason Health and Safety assessments which inform workplace Health and Safety policies are undertaken on a site specific basis and are largely governed by industry specific regulation. Greater potential for environmental degradation calls for more stringent Health and Safety policies. Where such policies are lacking or insufficient we would either expect a detrimental impact due to negligence or no impact, as the features of the company are such that there is little/no potential to harm the environment.

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Some companies have policies which directly affect employee health, for example the provision of private healthcare and on-site/subsidised sports facilities. Such policies could impact upon the environment to the extent that companies promote 'green gyms', encouraging employees to engage in physical activity which benefits the environment.

Links Between Company Attributes and Environmental

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Company attributes which have the potential to alter the company's environmental impact include: the degree to which environmental costs/risks, including the potential for future regulation, are taken into account in board room decision making; the extent to which the company engages in CSR including supply chain management, seconding employees to voluntary schemes, voluntary environmentally friendly behaviour etc; the degree to which waste produced can be reused and/or recycled; and the monitoring and supervision of the production process to ensure that accidents are prevented and hazards are reduced.

The above mentioned attributes have the potential to improve a company's environmental impact but have little to bear on the magnitude of that impact. The core determinants of the size of the impact are expected to be company size and, more importantly, the nature of the business and its potential to cause environmental degradation as a necessary, if unwanted by-product of its production process. For example, energy intensive industrial companies are expected to have a larger impact than small scale service sector companies.

Industrial intensification in a particular locality could cause particular environmental concerns as individual company impacts are compounded by neighbouring firms' impacts. This could cause local thresholds to be exceeded causing severe environmental degradation. However, the clustering of 'dirty' industrial processes is often justified by the need to locate such processes away from residential areas. Thus there appears to be a trade off between global environmental impacts (which would be reduced if industrial plants were dispersed to avoid severe damage in a particular location) and local community impacts (which benefit from clustered industrial estates away from residential areas).

When assessing the environmental impact of a company it is important to take into account the company in its entirety. For example, large multinationals may be implementing sustainable behaviours in regard to environmental protection in a local community in which they operate, whilst causing immense environmental destruction in another part of the world. A consistent effort is required from companies as opposed to 'green wash' where companies engage in environmental behaviour only where it is most noticeable rather than where it is most effective.

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Research Findings:

1) UK industry spent £2.6 billion on environmental protection in 2002, with the largest spend in food, beverage & tobacco, power and chemical industries at 19%, 16% and 16% respectively (Defra, 2004). The large proportion of spending in these sectors reflects the fact that industries are heterogeneous in terms of their environmental impact and their environmental protection requirements.

2) A HDA briefing paper outlines the fact that potential environmental impact is not necessarily a cause for concern when it is well managed: 'It is said, that whilst many workplaces are intrinsically hazardous, this does not necessarily imply that they need to be risky. The risk is a function of management and social phenomenon and will thus vary from time to time, place to place and industry. to

3) There may be economic advantages to environmentally friendly behaviour, for example WRAP find that companies can spend as much as 10% of turnover in the disposal of wood waste to landfill, whilst waste reuse and recycling can generate savings of at least 1% of turnover and 10% of profits (WRAP, 2004).

Links Between Work Practices and Environmental

Work practices predominantly impact the environment through their implications for transport. For example, the extent to which workplace childcare facilities are provided or congestion is reduced due to staggered employee arrival facilitated by flexible working hours, reduces emissions from transport and so benefits the environment. This could have a positive impact on health in terms of improved local air quality.

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The facility for staff to work from home could have mixed impacts on the environment - on the one hand because there is no need to travel emissions are reduced, on the other economies of scale in terms of heating and lighting etc are left untapped causing increased energy consumption.

Links Between Economic Climate & Employment Health Policy/Planning and Environmental

Consumption patterns are intrinsically linked to the environment through the resource uses they demand. Goods which are bought locally, come from sustainable sources and are bought according to need (i.e. are not wasted) are considered to be more environmentally friendly. The main relevance to health here appears to be through food consumption patterns. For example, a preference for "ready meals" may be undesirable both because they are energy intensive in their production and because they are often considered unhealthy. Conversely, preferences for organic food support the environment through discouraging the use of harmful pesticides and preservatives.

The economic climate is relevant to the environment through the extent to which environmentally friendly behaviour is affected by the economic cycle. It would appear that this could be mixed. On the one hand, in times of recession it is expected that people are more frugal resulting in greater resource use efficiency and less unnecessary consumption. On the other, to the extent that environmentally friendly behaviour is considered to be more costly, (for example buying organics, installing PV etc) it is likely to be postponed/abandoned during times of recession. During a recession it is also expected that companies become focussed on their core activities, sidelining CSR issues. Thus all the positive health, community and environmental benefits which are associated with CSR are lost in times of recession.

In addition, preference for environmental quality is often found to be income-elastic - that is to say, as incomes rise people demand greater environmental quality, whilst at low incomes other preferences may take precedence over the environment.

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Research Findings:

1) There is a reciprocal relationship between employment health policy planning and environmental impact. Health and safety law has been established to protect the health of employees in relevant industries, but will also help to limit environmental impact. Control of Substances Hazardous to Health Regulations 2002 (COSHH) is a prime example of this, which sets basic measures of safety in regard to chemicals, both in direct use and in by-products produced in the course of work (HSE, 2002). The Chemicals Hazard Information and Packaging for Supply (CHIP) Regulations 2002 relates to suppliers of dangerous chemicals, and its main purpose is to protect both people and the environment from the effects of these chemicals through providing information and safe packaging (HSE, 2004).

2) Environmental and health objectives can be met through good planning initiatives by employers. Indeed, the London Borough of Richmond Upon Thames have shown where the links between planning, sustainability and health can be utilised to best effect through the Good Design Checklist. Applicants for planning permission must analyse how their proposals fulfil environmental design objectives of mixed use, green spaces, nature conservation, sustainable transport, energy saving, waste management and equal opportunities in terms of access to housing/local facilities (London Borough of Richmond, 2004). In doing so, sustainable planning applications will be contributing to health objectives in the local economy.

Links Between Individual Attributes and Economic

There are direct links between individual attributes, such as ethnicity or education, and economic factors shaping a sustainable local economy. An individual's decision to follow green procurement policies, for example, will be a function of their education and training, as well as their occupational status, since procurement decisions are taken in higher organisational grades. In terms of business composition, a sustainable local economy has a diverse range of sizes and varieties of companies and organisations operating within it, from a mix of public, private and voluntary sectors. From an employment health and sustainability perspective, businesses should be mindful of the same in regard to distribution of human capital within their organisations.

Sustainable communities cultivate smaller organisations as well as large, which allow empowerment of local individuals to participate in their local communities through self-employment or entrepreneurialism, which can help to level existing employment access and health inequalities. Individuals and communities can only be healthy and sustainable when local people from diverse sections of the population are participating in local jobs for a variety of organisations and working structures. Opportunities are not always equal, however: black and ethnic minority groups do not always have the same access to such opportunities as white individuals, and women tend not to be as well represented as men in starting new companies. But where such communities are in situ, business survival rates and profitability of organisations will be greatly improved, resulting in greater wealth distribution, which can systematically decrease local health inequalities.

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Research Findings:

1) Small businesses are vital in the composition of a sustainable local economy, where they accounted for 56% of employment and 99% of the 3.8 million businesses in the UK at the start of 2002 (DTI, 2004).

2) Differences exist through individual attributes as to who will be involved in these enterprises. Women are under-represented in the self-employed statistics; whilst 44% of the workforce are women, they amount to only 26% of self-employed people - men are twice as likely to be entrepreneurs in the local community. Ethnic minorities show similar self-employment rates to whites, although there are differences amongst ethnic minorities - Black and Black British being less represented than other minority groups. Education levels are also relevant, particularly when broken down by gender. One in five self employed people will be degree level educated and a further two in five will be to A Level standard, and although the rate of self-employment is low for women (as a percentage of overall female workers), those that are, are more highly educated (DTI, 2004).

Links Between Psychosocial and Economic

Success of new businesses, their profitability and the resultant impact on the sectoral structure in the locality, will be related to a strong psychosocial network that can provide financial, social and administrative support. If small companies are in a position to receive support and advice on legal and tax structures and able to provide networking opportunities for their staff with other local organisations, the health of a company and the individual will both be increased and businesses will be more likely to thrive. A contented, healthy workforce is a more productive workforce and will increase company profitability.

The need is greater for those individuals who do not have equal access to the tools to make this happen, such as disabled people, who tend to have poorer social networks due to issues of physical access, or to black and ethnic minority groups, who lack the business experience acquired by other ethnic groups through their previous employment. It is in areas of deprivation that such networks become fundamentally more important.

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Research Findings:

1) Enterprise promotion must be given support from government and local bodies, or it will hinder access to the quality and quantity of new opportunities. Larger firms can provide a great deal of support, as can small business services and these must be coordinated in tandem with social enterprises and regeneration policies, to ensure a local area, and its people, receive the social support they need to thrive (HM Treasury, 1999).

2) The Phoenix Fund and The Ethnic Business Minority Forum are examples of associations, established by the Dti, which provide bespoke support to those businesses, which need more support, where there is an under-representation in local communities (Dti, 2004).

3) This psychosocial gap existing in certain communities has been filled by nef's BizFizz project, linking well-being and regeneration. Established in locations throughout the UK, the project provides confidential and professional advice to local entrepreneurs, linking in the key themes of well-being and regeneration. This will be in the form of tailored one-to-one support and also through the establishment of a local panel of people with different backgrounds and expertise in key areas.

Links Between "Health & Safety" and Economic

Health and safety characteristics of a workplace are related to economic factors of a sustainable economy in a cyclical fashion. The health of a workforce will impact upon the health of a company; staff who are less prone to occupational hazards, more well informed about health risks and who work in less risky surroundings will be a healthier, more productive workforce. The results will be higher profitability and greater business survival rates coupled with lower absenteeism. Conversely, it is the issue of profitability that may relate to the decision to offer medical benefits and on-site health facilities, such as gyms or healthy canteen options. Smaller companies may simply not be able to afford to implement health care until they have reached a certain level of profitability, despite understanding that implementation of such schemes would be to their economic advantage. Such decisions will vary by industry, size, location and sector.

Research Findings:

1) Absenteeism clearly varies according to occupation, skillset, size of company and location. Statistics for the UK show that sickness absence is lower in Greater London (5.4 days per employee) than in Yorkshire (7.8 days); it is higher in manufacturing than the service sectors; manual workers take more time off than non-manual; larger companies have higher absentee levels than smaller companies; and there are big differences between the public sector (with 8.9 days per year) and the private sector (6.5 days) (London First, 2004).

2) A company's "health" is determined by health and safety attributes. Improved staff retention and productivity, coupled with reducing litigation risk (through gaps in health and safety compliance) and saving on sickness absence claims (on employer medical insurance and pension schemes) will all improve the economic health of a company (London First, 2004).

Links Between Company Attributes and Economic

A company's attributes - size, type, ethos and ownership - will determine its impetus to expand and contract in accordance with economic objectives. Whilst tied heavily to the economic climate in which a company operates, a company's decision to grow will be related to issues of survival rates, profitability and the sectoral structure of its local community. For example, a small, consultancy practice may wish to be restrictive in its scope and size to fulfil a niche service regardless of economic upturns, whilst a larger multinational may pursue a more aggressive attitude of expansion even through periods of recession. These decisions will directly impact upon the health of the workforce, where positive correlations exist in regard to health and company restructuring and also vary in impact based upon workforce diversity.

The sectoral structure and business survival rates of a local economy are fundamentally linked to issues of location, industry type and intensification. The success of small businesses will be heavily related to their management structure, ethos and ownership in addition to location and sector - most small businesses in the UK are concentrated in only a few sectors and the amount of similar organisations in the local economy will determine their performance. Additionally, the rate of business start-ups varies throughout regions but will be much lower in deprived areas, where the resultant health effects of successful businesses for its workforce and the local economy will be most needed.

Whilst, a sustainable local economy is one with a mixed sectoral structure, clusters of businesses do exist in certain areas where businesses and suppliers co-exist in the same local economy in an inter-dependent relationship. This can occur for high-end goods, such as suitmakers in Saville Row or at the lower end, e.g. the Birmingham jewellery centre.

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Research Findings:

- 1) When an organisation downsizes it is likely that even those who do not face redundancy will suffer health risks. Remaining employees are twice as likely to die from heart disease than the population at large and this heart-related risk is five times greater for a full four years after major downsizing (Kirchheimer, 2004). In addition, downsizing has been associated with impaired support from a spouse and an increased prevalence in smoking. The scale of shifts is important though, where sickness absence rates were 2.17 times higher after a major downsizing rather than a minor, relating to an increase in physical demand, job insecurity and a reduction in job control (Kivimaki et al, 2000).
- 2) Inversely, large scale expansion of a workforce can increase hospitalisation and sickness rates in employees. This can be due to a centralisation of operations, which may have resulted in redundancies, which can impact negatively on existing staff or from an increase in workload and a feeling of disorientation and loss of morale. So, while downsizing results in absenteeism, the same increases have been seen where workplaces are expanding by more than 18%. The appropriate situation in terms of employee health, has been found to be growth between 8 and 18% (Westerland, 2004 in Edelson, 2004).
- 3) The effects of organisational resizing will not be uniform across the workforce. In heavily expanding organisations, women's health was found to be more affected than men, where long-term absences increased by 18% (Westerland, 2004 in Edelson, 2004). Age has also found to be a factor in health effects of a company's reduction in size. The higher the proportion of employees in the workplace over 50, the higher the effects of downsizing on ill-health. Where companies had a low percentage of employees over 50, downsizing only had slight health effects (Vahtera et al, 1997).

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4) In the UK, half of small businesses are in just two sectors; business services (real estate, renting and business activities) at 28.4% and wholesale, retail and repairs at 21.7% (Dti, 2003). New enterprise is also restricted in terms of location with areas of low start-up rate activity tending to have low closure rates and low business density. In 2002, in London, there were 57 new VAT registrations per 10,000 people, whilst in the North East there were 21. They also reported the highest and lowest business densities and de-registration rates. Business start-up rates are also much lower in regions of high deprivation (Dti, 2003).

Links Between Work Practices and Economic

The decision to implement policies which encourage good health, such as flexible working arrangements or aiding staff with childcare issues, will be based on a combination of three factors - a company's lifecycle stage, ethos and industry type. An organisation's Corporate Social Responsibility (CSR) policy, relating to health and sustainability, will evolve with the company and according to legal requirements, but company ethos will determine if this is progressive or conservative. Some industries will not be as forward looking due to operational constraints such as the need to keep a production line open 24 hours per day, which will limit the amount of working-hour flexibility a company can give its staff.

Economic constraints underpin these decisions, where it is debatable as to whether Corporate Social Responsibility (in this case relating to health) precedes or post dates profitability or business survival rates. For instance, would flexible working hours and childcare facilities be offered to employees when companies commence business, or further down the line when profits can support the introduction of such schemes? The question is really how progressive companies can be in relation to health policies and still be mindful of receiving economic profits.

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Research Findings:

1) Flexible work practices can offer a mutually beneficial relationship between staff and employer. There are obvious advantages for an employee in seeking a greater "work-life" balance, but there are also advantages to having a more flexible workforce for an employer too. A company with an adaptable and flexible workforce is in a superior position to meet economic fluctuations, and, most of all, can directly impact upon a company's bottom line (Work Life Research Centre, 2004).

2) Work practices are, in some cases, bound to industry-specific guidelines and regulations, regardless of ethos or ownership, and some industries simply cannot introduce flexible working hours. Industrial jobs are generally less flexible and have set working times, whilst the knowledge-based economy can be more flexible with less defined working hours (Bishop, 2004).

3) The introduction of work-life policy is related to lifecycle stage as well as ethos. It is suggested that all organisations starting out should implement some work-life policies: flexitime; part time; personal development plans; information on local child/elderly care facilities. As an organisation moves forward, it should broaden its range to include; job share; term-time working; carer leave; paid parental leave; own or partnership childcare schemes. It is the leading edge organisations that will implement the most progressive policies, though, to additionally include: compressed working weeks, work-life balance policy; study leave; sponsorship of community care projects; carer subsidies (workliferesearch.org, 2004).

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4) In addition to ethos and a company's progressive nature in health policy, economic constraints will be a consideration as to which policies can be incorporated. Policies such as flexitime, appraisals and information packs will cost little to nothing, whilst the introduction of home working, paid paternity leave and extra support for carers of dependants with special needs will cost a company more to implement. It is policies such as carer subsidies and childcare schemes that have a higher cost implication and may prove prohibitive to some smaller companies (workliferesearch.org, 2004).

Links Between Economic Climate & Employment Health Policy/Planning and Economic

Changes in the economic climate will inevitably result in changes in employment, with levels of employment rising and falling over time. Recent years have seen much concern about increases in job insecurity, despite record levels of employment. These job insecurities have not been felt uniformly across the population, with some lower socioeconomic or minority individuals bearing the brunt of these changes.

These effects will directly impact upon employee health and local sustainability issues. Employment health policies may be rescinded in leaner years, e.g. employment health aids provided by the company to stop smoking may be offered through economic booms as a company perk but will be retracted in recessionary periods. Additionally, green procurement policies could be relaxed and the sectoral structure of a local community may change as businesses lose money and are forced to close in times of economic downturn. Typically, these are smaller companies who have less of a resource cushion to survive such times.

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Research Findings:

- 1) Economic cycles bring about changes in labour market conditions, including the amount of hours worked. It has been found that an increase in total hours occurs in periods of economic expansion, whilst it will be negative in recession (Millard et al, 1997, cited in Bishop, 2004). As income is directly related to health, the effects of these fluctuations will be widely felt.
- 2) Job insecurity is an increasing phenomenon. More than 60% of employees, across a wide range of industries and occupations, felt that the pace of work had increased in the last five years of the 1990's and many were extremely worried about the loss of valued job features such as organisational status and promotion opportunity (Burchell et al, 1999).
- 3) The health effects of organisational change (changes to nature and conditions of work, change in management style and change of employer) have been found to be wider than those of job insecurity. Such organisational change has occurred heavily throughout the economic recession and deregulation of the 1990s in post-industrial countries where companies effected major downsizing of the workforce and changes to employment contracts (Ferrie, J et al, 2004).
- 4) It is fair to say that the health effects of companies responding to economic shifts is not evenly distributed. Black and Ethnic minority individuals have suffered a downward trend in employment experiences in relation to Whites, which is attributable to changing labour market conditions and demographic characteristics, in addition to other factors. It is also true to say that there are responses to these economic situations, which have impacted the BME community more severely. This has been the case in the decline in manufacturing in the midlands and north of England where macro-economic trends have caused a reduction in demand for certain types of labour, which have impacted on everyone, but BME groups even more harshly (BTEG, 2003).
- 5) It is imperative that legislation and employment health planning take into account such economic changes and the impacts these will have on employee health and local sustainability. Job insecurity has major health outcomes and for this reason, changes in employment policy should be considerate of the wider consequences of these health effects on the workforce (Ferrie et al, 1998).

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6) Regeneration of an area can be undertaken through private initiatives, as in the case of Bridges Community Ventures - the UK's first community development venture capital company. As a company which provides finance for ambitious businesses located in and economically linked to deprived areas, the focus is on business development and not physical regeneration. It aids this process through an Entrepreneurs Club, which offers advice, guidance and support for business start-ups - a factor which has been shown to be fundamental in new business success, particularly in deprived areas and for the socially excluded.

Links Between Individual Attributes and Economic Climate & Local Sustainable Policy/Planning

The attributes of the individuals that comprise a community or a workforce determine its "human capital", which in turn dictates, to a significant extent, its economic potential. Similarly, economic potential significantly determines economic performance, which in turn affects individual attributes. Both sides are therefore inextricably linked and mutually determining.

Increased employment stability may, for example, encourage more environmentally-friendly behaviour by allowing for more long-sighted decision-making (akin, for example, to the argument that 25- and 30-year PFI contracts should, in principle at least, create room for more long-term decision-making).

There may also be links in the field of procurement: individuals of a higher occupational grade may have greater potential to improve the environment as they are more likely to make procurement decisions.

Also relevant is the extent to which the diversity of a workforce may be partly governed by legislation and industry/company specific policies. For example Equal Opportunities legislation prevents companies from discriminating against candidates on the grounds of gender and/or race. Despite this some companies/institutions engage in positive discrimination to ensure a more representative workforce.

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Research Findings:

See (1), (7), (25)

Links Between Psychosocial and Economic Climate & Local Sustainable Policy/Planning

The psychosocial attributes of an organisation will impact upon, and are partly determined by, employee job satisfaction. It is probable that, in a buoyant economy, tight labour market conditions - allowing employees to 'shop around' for jobs, as well as demand higher wages - will increase the pressure on employers to create desirable working environments in order to attract employees. This should, in turn, boost employee satisfaction and psychosocial conditions.

Unionisation can be considered as a component of the labour market which serves as an external source of psychosocial support to employees.

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Research Findings:

1) Safety representatives' roles have been more effective where 1) trade union representatives were inside the workplace, 2) the health and safety function was integrated to include these representatives, and 3) they received trade union support from outside the workplace (Walters et al, 2001).

2) Increased attention to issues of workplace satisfaction, and psychosocial conditions in the workplace in particular, has led some to suggest a new and enhanced role for trades unions. Since individual employers may find it difficult to comprehend "psychosocial issues in the workplace", nevermind implement suitable policies or practices, trade unions may be well positioned both to take a strategic view of the matter, and translate that strategic view into practical advice, for both employers and employees (Hasle and Petersen, 2004).

3) It is understood that there is not one model of community - they are "diverse, contradictory and reflect divisions of class, race, gender and power" (p188). Regeneration initiatives are more successful where local communities assess their situations and problems themselves and come up with workable solutions. Through this process, socially excluded individuals can identify with their community, improve negotiation capabilities as well as skills and confidence as a result (Diamond, 2004). This view is supported through results of the Social Enterprise Zone (SEZ) in Newham where local people have been mobilised to gather ideas for changing rules and procedures. A new voluntary service was established in Newham's jobcentre to support claimants filling in benefit application forms, thereby reducing the burden on advisors who could spend more time with clients on job searching. The results have been staggering, with 1,277 hours saved by staff, 35 of the volunteers finding employment and the number of queries decreasing by 80%. Newham JobCentre now has the highest job entry rate in the country (JRF, 2004).

Links Between "Health & Safety" and Economic Climate & Local Sustainable Policy/Planning

The broad definition of Health and Safety used here encompasses a wider concept of health and safety than simply hazard/accident avoidance. In particular the category includes the provision of facilities such as gyms. Such facilities have the potential to be community assets. Whilst offering on-site facilities for public use outside work hours would have clear advantages - ensuring efficient use of facilities and possibly providing the company with an additional income - it seems unlikely that such a policy would be put into place by companies. Communities could, however, benefit from company decisions to subsidise employee memberships to local gyms. Such arrangements are an important source of income to sports facilities and have the dual benefit in the local community of stimulating local multipliers and providing funds for the improvement for local sports facilities with knock on positive implications for health.

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Companies can also aid the local economy by, where possible, procuring food for staff canteens/ meetings locally. Such policies support local businesses, benefit the environment through reduced transport emissions and impact on staff health through food quality.

Links Between Company Attributes and Economic Climate & Local Sustainable Policy/Planning

Company attributes and sustainable policy and planning are manifestly linked through Corporate Social Responsibility. The extent to which a company pursues an agenda of sustainability, however, is directly related to a company's ethos, business function, industry type, ownership and size and these factors will determine how much further along the Corporate Social Responsibility road they travel.

Local sustainable planning will also impact upon companies in a variety of ways, for example with regard to specifications for sustainable methods of construction, or through more general procurement specifications.

Research Findings:

- 1) There is an increasing awareness that companies are obliged to be socially responsible; and corporate social responsibility reports are now an increasingly standard addition to, or part of, annual financial reports (Idowu and Towler, 2004).
- 2) The CSR projects undertaken by an employer will disseminate into the wider community through the impact of specific projects, which may be related to health. It has been shown that the quality with which companies perform their CSR functions is directly related to the extent of social cohesion in the local community (Oketch, 2004).
- 3) It has been said that when a company aligns itself to the issue of Corporate Social Responsibility in response to societal concerns, it results in structural change, which has implications for firms' strategies and for industry structure overall (Decker, 2004).
- 4) There are numerous ways that CSR can profit a large multinational: improved business performance, gaining market access and improved "reputational benefits". There are also large obstacles: perception of environmental tools as costs not revenue-enhancers, management and employee inertia, inexperience and company culture and the isolation of environmental divisions from the rest of staff (OECD, 2004).

Link Between Work Practices and Economic Climate & Local Sustainable Policy/Planning

The interaction of work practices through labour market structure and the economic climate is subject to a great deal of attention from economists. As would be expected, rather than resulting in consensus, this has led to somewhat conflicting theories. On the one hand there are those who argue for corporatism - that close interaction between the government and powerful unions can act to smooth economic cycles - on the other, it is argued that powerful unions cause excessive 'stickiness' in the labour market and make it unable to adjust appropriately to exogenous shocks such as technological changes, international competition etc. An analysis of the relative strengths of these arguments is most definitely outside the remit of this study.

Flexible working hours can benefit both employee and employers. Flexi-time has opened up the workplace to people who were previously excluded from it, for example lone parents and disabled people. It also gives employers an opportunity to adjust productive capacity in response to changes in economic climate.

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Research Findings:

1) In the UK in the past 10 years, the length of the working week has declined, although working hours are still longer than most other European countries. By and large, working hours are determined by individual/employer preference as they are frequently neither unionised nor controlled by government intervention, although this has increasingly changed under a Labour Government (Fagan, 2000 in Bishop, 2004).

2) The labour market is prone to alteration from economic cycles, which influence company profits and levels of pay. From a company's perspective, when the economy is in a boom, there will be an increase in hours worked, whilst the opposite is true in times of recession (Millard et al, 1997 in Bishop, 2004) When wages are high, individuals are in a position to consume more labour and not feel obliged to provide more, but this will be dramatically reversed if wages are low, when they will feel pressured, through financial need, to provide more labour to the market (Juster and Stafford, 1991 in Bishop, 2004).

Links Between Economic Climate & Employment Health Policy/Planning and Economic Climate & Local Sustainable Policy/Planning

Health and sustainability objectives are directly linked through the economic climate in which they exist. As economic climate will impact upon employment, so too will it impact upon consumer and company behaviour - people waste less resources and spend less in times of economic recession, which could potentially have positive sustainable effects on the local community. A reduction in resource allocation would also lead to a reduction in health budgets, where company resources were redirected to issues of profitability and not employee health.

In sustainability terms, the relationship between green procurement and the economy may change over time. Companies and individuals may lessen their ethical commitment when facing greater economic uncertainty; whilst they may travel further and look harder to seek out ethical enterprise in boom years. Conversely, it could be argued that people and companies will consume less in an economic downturn and so resources will be saved. Research has not been extensive on green procurement attributes in relation to economic shifts, but possibly a delineation needs to be made between certain types of "green behaviour". If green consumption implies spending more, then behavioural shifts will occur with different economic phases, whilst if green consumption was emphasised in terms of durability of products, then green behaviour would continue regardless.

Policy and planning of employment health and local sustainability issues should be linked at every turn to maximise any cross-cutting potential between all other factors in the matrix. By doing so, health inequalities can be reduced and a location's sustainability increased, without needing to implement separate schemes for each. This is even more evident in the health sector, where employment health is linked to local sustainability twice - firstly, through workforce health and sustainability and secondly, through providing healthcare for the local economy itself.

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Research Findings:

- 1) Ethical consumerism is on the rise - between 1999 and 2002 total sales in the UK increased from £4.8 billion to £6.9 billion. It seems that market fluctuations have not dampened this increase either - throughout 2002, ethical investments fell by 8%, against a total market decline of 17% (Cooperative Bank, 2003).
- 2) It is claimed the average British adult wastes £1,725 annually, with the bulk, at £424 per person, per year, spent on food (Prudential, 2004). Intuitively, this amount would be likely to decrease over periods of economic recession where people acted in a more frugal manner.
- 3) There is undoubtedly major cross-cutting potential amongst government departments in relation to employment health and sustainable planning. Most major governmental departments have policy, which either directly specifies health priorities or at the very least touches on them: The Department for Work and Pensions aims to increase employment rates of disadvantaged areas and groups; the Department for Trade and Industry aims to increase the use of energy saving technologies, to build an enterprise society, to bring about measurable improvements in gender equality and increase the employment rate of ethnic minorities; the Department for Education and Skills intends to raise education levels, but also tackle the adult skills deficit through the launch of Skills for Life (to improve the basic skills level of 1.5 million adults between 2001 and 2007); the Office of the Deputy Prime Minister aims to achieve better demands between housing availability and demand and to bring all social housing into decent condition by 2010.

4) Most agencies and bodies are also in a position to implement health through their own agenda. The London Development Agency has a major impact upon health through most of its policies via two key roles: 1) the LDA can promote regeneration and economic development, through the large opportunities in the health sector, e.g. economic inclusion, business growth and local area regeneration and healthy urban design and 2) the LDA can promote public health by embedding it in a cross-cutting way through all their activities, e.g. providing training for LDA staff and leading on health policy in the regional network (LDA, no date). Supporting the NHS in local procurement or exercising the LDA's powers of land acquisition to support new health and childcare facilities are just two ways in which a local agency can make the most of its health impact and help reduce health inequalities locally and nationally.

5) Employment health is of greater significance when analysed in the context of the health sector itself, particularly where the NHS has been granted a 30% increase in funding over the period of 2000-2005 for major reform and expansion. If this can be done in a sustainable fashion through utilising the links between employment health and sustainable local economies, then as an employer as well as a healthcare provider, the NHS faces a win-win situation. This is never more true than in London, where total annual expenditure by the NHS is £7 billion, it is the largest single employer with an estimated workforce of 175,000 people - an average of 4,000 per borough (or 7,000 including contract workers), it owns 922 hectares of land in London - the equivalent of Hyde Park and 70% of the national NHS research budget is spent in London (LDA, no date).

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6) Such win-win situations of matching employment health and sustainability within the health sector itself can be met through the recruitment and retention policies of the NHS - as the largest single employer in the country it could play a larger role in improving health inequalities by recruiting locally. It becomes clear, however, that the NHS must be more effective in implementing local education drives if it wishes to overcome diversity, accessibility and training obstacles. This was shown in a recent study, where young people's knowledge of the health sector beyond doctors and nurses was limited and was hindering career choices in Southwark, Lambeth and Lewisham in the health sector as a result (London Southbank Careers, 2001).

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