Warwickshire County Council

Public Health Evidence for Planning and Developers

"Local Planning Authorities should work with public health leads and health organisations to understand and take account of the health status and needs of the local population, including expected future changes, and any information about relevant barriers to improving health and wellbeing" – *NPPF 2012*

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1. Introduction

This document provides public health evidence of the opportunities and benefits of integrating health and wellbeing into planning. It has been developed to align with the Design Council's Building for Life 12 principles, which are:

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The evidence supporting each of the twelve principles has led to the development of recommendations, which are aimed specifically at Planners, Developers and Public Health teams, to support the integration of public health into planning decisions.

The Royal Town and Planning Institute (RTPI) acknowledges that to maximise the value of planning, there is a need to generate and share evidence, and that we should not focus on regulatory planning, but rather on making a much broader planning agenda more effective in adding value to development activity, economically, socially and environmentally (RTPI 2014).

The National Planning Policy Framework (NPPF) states that in order to achieve sustainable development, the planning system must take on economic, social and environmental roles. Each of these roles is mutually dependant and interlinked with health and wellbeing. For example, the NPPF says that the planning system should take on a social role by:

> *"Supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural wellbeing"*

Similar themes are embedded in Warwickshire's Health and Wellbeing Strategy 2014-2018 priority areas of: promoting independence; building community resilience and; integration and working together. More specifically, they focus on:

> *"Ensure[ing] infrastructure, public services and resources are effective, accessible and tailored to those communities that need it the most"* and;
>
> *"Improved working with housing, planning and licensing to create healthy environments for individuals, families and communities to live"*

This document can be used to reinforce the NPPF and allow planning colleagues to cross

reference relevant links to health, to ensure it is a consideration throughout the planning process.

The RTPI's submission to the Communities and Local Government committee welcomed Public Health's return to local authorities, stating that integrating health with planning can lead to the promotion of health and wellbeing for the whole community. This supports the Marmot Review's commentary that strategies that only rely on interventions in one part of the system will be insufficient to make the necessary difference.

Marmot recommends that in order to address health inequalities, we must fully integrate 'planning, transport, housing, environmental and health systems to address the social determinants of health in each locality' (Marmot, 2011). A way of achieving this is to ensure health is incorporated into planning decisions where appropriate.

1.2 Health Impact Assessments

A Health Impact Assessment (HIA) is one way of enabling planning decisions to take health and wellbeing into account. The National Planning Practice Guidance (NPPG, 2015) references HIAs as a useful planning tool:

"The impacts of major development proposals on the health and wellbeing of communities should be considered, for example through the use of Health Impacts Assessments (HIA)."

Health Impact Assessments ensure that health and wellbeing are being properly considered in planning policies and proposals. They do this by examining the links to health and wellbeing, and identifying potential impacts, both beneficial and adverse. From this, HIAs provide constructive commentary and make recommendations which help to further refine plans. HIAs can be done at any stage in the development process, but are best done at the earliest stage possible.

The Warwickshire Health and Wellbeing Board champion the use of HIAs as a way of addressing the wider determinants of health and reducing health inequalities (DPH Annual Report, 2012). The wider determinants of health are factors which affect the health and wellbeing of individuals and local communities. They are generally interlinked with one another and are made up of socio-economic, cultural, and environmental conditions. It is these factors which lead to differences in health between population groups, or, inequalities in health.

Public Health Warwickshire are committed to embedding public health principles into the planning process, and have commissioned a HIA for each of the district/boroughs within the County to help inform local plans and strategies.

Good planning can have a positive impact on public health, and designers, developers and planners can create neighbourhoods that fulfil this possibility by considering key aspects relating to Public Health.

This guidance document is underpinned by this sentiment, focusing on the fact that well designed neighbourhoods can result in positive health outcomes and Public Health Warwickshire look forward to working in collaboration with all colleagues who play an integral role achieving this.

2. Summary of Recommendations

2.1. Connections

- Developers should aim to design neighbourhoods with a good mix of housing options to enable people to be physically integrated into a community no matter what their living arrangements or family structure.
- Planners should support developers to create neighbourhoods with consideration of reducing and minimising social isolation by ensuring local amenities are no further than a five minute walkable distance. Urban measured miles are a way of encouraging active travel and where viable, should be incorporated into any new signage to connect new developments with existing key community facilities and buildings.
- Planners should identify additional inclusive infrastructure to reduce social isolation in collaboration with local partners, e.g. community/shared use/multi-purpose buildings.
- Planners and Developers should inform health partners of the anticipated population groups to be targeted with any new housing developments, e.g. family homes, smaller apartments or flats. This is to ensure adequate healthcare facilities can be planned for.
- Public Health should provide the evidence on what is recommended to support the reduction of social isolation.
- Public Health to provide planners with an evidence base of need for the identified population group through locality and health profiles.

2.2. Facilities and services

- Developers and Planners should design neighbourhoods within a 5 minute walkable distance to local amenities.
- Public Health should act as a liaison between local authority services and the NHS to ensure 'health' service requirements are fed into consultation responses on any large or strategic developments.

2.3. Public transport

- Developers should integrate means of sustainable transport into all new large and strategic sites, to include measured miles, urban miles and appropriately designed cycle lanes.
- Planners should support developers to design neighbourhoods which favours alternative transport means and enables residents to move between amenities (five minute walkable distance) without relying on car use.
- Planners should encourage partners to use the HEAT tool to conduct an economic assessment of the benefits of walking and cycling for the new development (ttp://heatwalkingcycling.org/) .
- Public Health should provide the evidence to support the health benefits of walking and cycling as an alternative to car use and the benefit on health and wellbeing.

2.4 Meeting local housing requirements

- Developers should identify a proportion of lifetime homes to be built with 40% of housing stock designed as affordable housing (or as identified by key strategic documents).
- Planners should prioritise neighbourhood and community designs that maximise the opportunity for vulnerable groups to maintain their independence.
- Public Health will support vulnerable groups in accessing information which will help improve their health and wellbeing which will contribute to reducing the likelihood they will live in isolation.

2.5. Character

- Developers should design neighbourhoods and communities that uphold the distinctive character of the local environment.
- Planners should consult with local people to listen to the views of what they value about the local neighbourhood and feed into the design of the development.
- Public Health is available for further evidence reviews, dependant on local requirements

2.6. Working with the site and its context

- Developers and Planners should incorporate the Natural England recommendations on accessible greenspace
- Public Health should continue to engage local communities in the health benefits of undertaking physical activity outdoors.
- Public Health will continue to review the evidence and liaise with the Environment Agency to identify flood risk, sustainable urban drainage systems, contaminated land, consider the water framework directive and biodiversity.

2.7. Creating well defined streets and spaces

- Developers and Planners should uphold the NPPF recommendation that local planning policies, and the location of new developments and facilities, should enable people to have a choice of high quality and attractive places to live and allow them to reach the services they need and, for the services they need to reach them.
- Planners should support the incorporation of urban mile road signage to encourage physical activity.
- Public Health should continue to promote the benefits of physical activity on health and wellbeing.

2.9 Street for all

- Developers should design neighbourhoods and communities that incorporate traffic calming measures and deter people from using cars, but encourage sustainable transport methods.
- Planners should ensure policies incorporate footpaths, bridleways and cycle lanes into local plans and core strategies. Planners should also work with colleagues on making provisions for electric car charging points to promote low carbon emissions.
- Public Health should support cycling and sustainable transport colleagues in promoting the benefits to health and wellbeing.

2.10 Car parking

- Developers should incorporate design for adequate car parking facilities into any new neighbourhoods and communities.
- Planners should support developers to identify the best location for parking at domestic properties and employment and visitor sites to ensure the facility does not dominate the development.
- Public Health should encourage and support people to park further from the town centre and walk the remaining distance or make use of the park and ride schemes.

2.11 Public and private spaces

- Developers and Planners should design neighbourhoods and communities that support the increase of physical activity, which could help prevent or manage over 20 conditions and diseases.
- Public Health should encourage the use of open green space and the benefits to physical health and wellbeing.

2.12 External storage and amenity space

- Developers and Planners should

3. Public Health Evidence for Planning and Developers

3.1 Connections:

Does the scheme integrate into its surroundings by reinforcing existing connections and creating new ones; whilst also respecting existing buildings and land uses along the boundaries of the development site? Can people travel from new to existing facilities?

Public Health interprets this as whether the physical structure of a neighbourhood can impact on social exclusion, social isolation and loneliness, whilst supporting connectedness of individuals and communities. This means ensuring people can easily access basic services such as health care facilities, social support and also creating neighbourhoods using effective design to reduce isolation.

Good planning can reduce social exclusion. Social exclusion is defined as 'the failure of society to provide certain individuals and groups with those rights and benefits normally available to the majority of people in a society, such as employment, adequate housing, health care, education and training and the ability to participate in normal relationships and activities'(ref*) Social exclusion can affect both the quality of life of individuals and the equity and cohesion of society as a whole (Levitas R et al, 2007). Designing neighbourhoods, communities and homes effectively for Warwickshire residents impacts on the social exclusion or inclusion of individuals, groups and communities. Examples of individuals and groups of people that are more likely to become socially excluded include:

- The elderly
- Children and young people – particularly children in care, teenage mothers, and children with the poorest educational attainment
- People with low educational attainment
- Single parents
- Low income households
- People with mental health problems
- People with disabilities (physical and mental)
- BME Groups
- People who are lesbian, gay, bisexual and transgender
- People who are homeless or living in inadequate housing
- Offenders

Research commissioned by the Department of Health in 2010 found that people from socially excluded groups experience poor health outcomes across a range of indicators including self-reported health, life expectancy and morbidity (SETF, 2010).

A recent meta-analysis (Holt-Lunstad et al, 2010) looking to determine the extent to which social relationships influence the risk for mortality concluded that the influence of social relationships on mortality is comparable with established risk factors for mortality, such as smoking and alcohol. In simple terms, a lack of social relationships can have similar detrimental effect on health as smoking and alcohol.

One such way of reducing the likelihood of social exclusion/isolation is to ensure that any new developments have appropriate access to natural green spaces to allow people to maximise opportunities to walk, cycle and exercise within the natural environment. There should be provision of the widest range of access opportunities for people of all abilities, ages, ethnic groups and social circumstances to actively engage in, value and enjoy the natural environment (Natural England 2010). Access opportunities encourage healthy activity and are integral to people's daily lives. Green and natural spaces also contribute to achieving a low carbon economy by encouraging sustainable transport use, such as walking and cycling.

Less green space in a living environment is associated with a greater risk of anxiety and depression, feelings of loneliness and perceived shortage of social support (Maas, 2009). Opportunities to develop social networks and participation in communities can also act as protective factors against cognitive decline and dementia for those over 65 (Fabrigoule, 1995). Social networks can also aid recovery of those who fall ill and therefore reduce the risk of mortality (Halpern, 2004). These patterns are reinforced by the negative effects of social isolation – those who are socially isolated are between two and five times more likely to die prematurely when compared to those with strong social ties (Marmot, 2011), related to this, social isolation can cause stress and depression, particularly for those with young children and older people.

Social isolation can be exacerbated by the physical environment, especially for vulnerable groups. The design of neighbourhoods, in particular street crossings and the quality of spaces can stop many vulnerable people from leaving the home. Fear of crime in public spaces and fear of traffic can often stop elderly people from reaching services and community groups (Allen, 2008).

Spatial design of local areas can prevent or promote social contact, cohesion and participation, especially for vulnerable people. Consultation and community involvement in decisions is vital in achieving sustainable healthy neighbourhoods. Good practice should involve specific groups such as the elderly and disabled when consulting on the design of the physical environment in order to ensure that this does not impede, but maximises opportunities for these groups to develop sustained social contact within their neighbourhoods.

Public Health England (2014) identifies the importance of open space – to be a platform for community activities, social isolation, physical activity and recreation, as well as reducing social isolation, improving community cohesion and positively affecting the wider determinants of health.

Developers should aim to design neighbourhoods with a good mix of housing options to enable people to be physically integrated into a community no matter what their living arrangements or family structure.

Planners should support developers to create neighbourhoods with consideration of reducing and minimising social isolation by ensuring local amenities are no further than a five minute walkable distance. Urban measured miles are a way of encouraging active travel and where viable, should be incorporated into any new signage to connect new

developments with existing key community facilities and buildings.

Planners should identify additional inclusive infrastructure to reduce social isolation in collaboration with local partners, e.g. community/shared use/multi-purpose buildings.

Planners and developers should inform health partners of the anticipated population groups to be targeted with any new housing developments, e.g. family homes, smaller apartments or flats. This is to ensure adequate healthcare facilities can be planned for.

Public Health should provide the evidence on what is recommended to support the reduction of social isolation.

Public Health to provide planners with an evidence base of need for the identified population group through locality and health profiles.

3.2. Facilities and services:

Does the development provide (or is it close to) community facilities, such as shops, schools, workplaces, parks, play areas, pubs or cafes? Can people travel from new to existing facilities?

Developments should ensure there are reasonable distances for travelling or walking to key amenities and the opportunity to choose a healthy lifestyle. This includes adequate access to green spaces, education and health facilities, reasonably priced healthy food choices and limitations on unhealthy lifestyle outlets.

3.2.1 Physical Activity Opportunities

The five-minute walkable neighbourhood (in which all basic amenities can be reached with a five-minute walk) should be seen as the basic building block of community building, and should be promoted in a form adaptable to planning at neighbourhood, local, town, city and regional level (CABE, 2007). Practical walking facilities should be integrated into the development to ensure that walking and cycling are the preferred transport methods to access local facilities. Distance and time markers should be included on any new signage and when updating existing signage. Public transport options should be easily accessible to key facilities further afield.

More walking and cycling opportunities have the potential to achieve related policy objectives (Public Health England 2013):

- Supporting local businesses and promote vibrant town centres
- Provide a high-quality, appealing public realm
- Reduces car travel, air pollution and congestion
- Reduces road danger and noise
- Making public spaces more welcoming and providing opportunities for social interaction and children's play
- Provide an opportunity for everyone to experience and enjoy the outdoor environment.

Evidence supports the view that there are many benefits to physical activity in an outdoor environment. Regular green space visits are associated with increased physical activity, a lower probability of being overweight or obese (Natural England 2011), an improvement in mental wellbeing when exercising outdoors (Thompson Coon et al 2001), and exercising in natural environments was associated with greater feelings of revitalisation and positive engagement, decreases in tension, confusion, anger and depression, and increased energy.

3.2.2 Food Choices

Obesity is a complex problem that requires action from individuals and society across multiple sectors (Public Health England, 2013). One important action is to modify the environment so that is does not promote sedentary behaviour or provide ease access to energy-dense food. There is a need for developers and Planners to support the creation of healthier places.

In Warwickshire in ****, overweight and obesity figures from the National Child Measurement

programme (NCMP) puts the county at equal levels with the national average of 31.6%. In Reception year, one in every 5 children is overweight / obese but this increases to one in three children by the time they reach Year 6. The proportion of children becoming overweight / obese almost doubles throughout primary school years making these years an important target for prevention and education programmes.

Marmot recommends improving the availability of healthier food and access to shops stocking healthy food within walking distance from peoples' homes and places of work (2011). Children's food choices are strongly influenced by the availability and affordability of different types of food in the places the live, play and study. There is evidence that supports the notion that fast foods near schools have an impact on obesity. The following are a summary of points from these studies:

- Children manage to spend less than £2 per visit making these outlets ideal for their pocket money
- The further away children lived and studied from fast food takeaways and convenience stores, the lower the obesity rates. Children who had nearby access (within 1km) to fast food restaurants tended to consume fewer fruits and vegetables.
- Having a fast food restaurant 200m (5min walk) from a school caused a 5 time increase in obesity incidence when compared to children with a fast food takeaway at least 800m (20 min walk) away.
- Just like proximity, density or clustering of fast foods restaurants also can cause increase childhood weights.
- Areas of lower deprivation tended to correlate with increased densities of fast food takeaway.

3.2.3 Access to Health

A national review by NICE into improving patient access to health services[4], identified some problems were associated with patient access to health services, especially in rural areas. The review identified the main reasons people cannot access health services as being:

1. Availability and physical accessibility of transport
2. Cost of transport
3. Inaccessible location of health services
4. Services delivered at times which reduce the opportunities for patients to attend

3.2.4 Safety and security

In order to support decision making around the health services required for a geographic location, based on the proposed development, the healthy urban Development Unit (HUDU) Planning Contributions Model is recommended. Using the most up to date data which is manually adjustable dependant on the local population, planning teams can use the tool to assess the health service requirements and cost impacts of any new housing developments. The model supports the calculation of:

- The net increase in population resulting from new development
- Health activity levels

- Primary healthcare needs (GPs and community health facilities)
- Hospital beds and floor space requirements
- Other healthcare floor space
- Capital and revenue cost impacts

This information can then be used to influence the planning process via S106 planning negotiations or CIL to support cases for necessary resources for health improvements or expansion (HUDU, 2014).

Developers and planners should design neighbourhoods within a 5 minute walkable distance to local amenities.

Public Health should act as a liaison between local authority services and the NHS to ensure 'health' service requirements are fed into consultation responses on any large or strategic developments.

3.3 Public transport:

Does the scheme have good access to public transport to help reduce car dependency?

The World Health Organisation (2011), describe the need for Planners to place an increasing emphasis on transport systems. WHO recommend that policy makers should consider the needs of disadvantaged and vulnerable groups in society, explore potential alternative transport technologies and consider the mandates and responsibilities of other policy areas such as health, transport and environmental health.

Marmot also highlights the benefits of active travel in reducing health inequalities and mitigating climate change (2011). Nobody should face disadvantage from accessing sustainable transport modes because of where they live, such opportunities should be equal to all.

Developments should support access to public transport schemes, in turn reducing car dependency whilst benefiting health and wellbeing as a by-product of increased physical activity. Walking to and from public transportation can help physically inactive populations, especially low-income and minority groups, attain the recommended level of daily physical activity. Increased access to public transport may help promote and maintain active lifestyles (Besser, 2005)

There is evidence to suggest that cycling to work is associated with less sickness absence. The more often people cycle to work and the longer the distance travelled, the less they miss work through sickness (Hendriksen, 2010). Public Health Warwickshire support local authority plans that integrate cycle lanes into any new housing developments to enable access to opportunities to increase their levels of physical activity and improve wellbeing.

WHO (2011) highlights that the public make their decisions about their mobility based on the demands and needs of their daily lives, and the cost and convenience of different transport options. Planners and developers can support the health and wellbeing agenda by prioritising active transport, public transport and cleaner technologies as key requirements in new developments, and improve connections to current infrastructure.

Individuals who believe that situational factors prevented their participation in walking engage in less activity overall. Public Health Warwickshire recommends that situational barriers that could impede people incorporating walking into their daily routines be minimised in any major development, e.g. wider pavements widths to encourage increased journeys on foot with parents, small children and pushchairs.

Developments should maximise the opportunities to encourage walking, recommendations include; improving the pedestrian environment, developing car-free zones and improving signal timings for pedestrians (Ryley, 2008). Public Health Warwickshire supports the concepts of measured miles and distance/time markers on street signs to support behaviour change of the Warwickshire population.

Active transport is a relatively new term to describe walking, cycling and the use of public transport as forms of transport that involve human physical activity with substantial benefits for health, safety and wellbeing. Greater use of active transport would result in a vast

reduction in transport pollution and improved health outcomes (Acharya, 2010). Increased active transport will also have environmental benefits, improving air quality and supporting the climate change agenda in Warwickshire.

It is possible that using public transport, where users walk to the service, may promote physical activity compared to door-to-door car travel. (Health Scotland, 2007).

In economic terms, the cost-benefit analysis of Natural England's Walking for Health Scheme (2009) found that the scheme delivered 2,817 Quality Adjusted Life Years (QALY) at a cost of £4,008 per QALY. This is well below the National Institute for Health and Care Excellence (NICE) threshold for cost effectiveness of £20,000–£30,000 per year.

In line with the National Planning Policy Framework: Promoting Sustainable Transport:

Developers should integrate means of sustainable transport into all new large and strategic sites, to include measured miles, urban miles and appropriately designed cycle lanes.

Planners should support developers to design neighbourhoods which favours alternative transport means and enables residents move between amenities (five minute walkable distance) without relying on car use.

Planners should encourage partners to use the HEAT tool to conduct an economic assessment of the benefits of walking and cycling for the new development (http://heatwalkingcycling.org/) .

Public Health should provide the evidence to support the health benefits of walking and cycling as an alternative to car use and the benefit on health and wellbeing.

3.4 Meeting local housing requirements:

Does the development have a mix of housing types and tenures that suit local requirements?

As identified in the NPPF paragraph 50.

A Cabinet Office review of neighbourhood renewal strategies (1998-2005) which suggested that 'further and faster' progress needed to be made (Evans, 2000). This argued that reversing the cycle of decline (in the most disadvantaged areas) would require 'revitalising local economies, improving housing and the local environment, stabilising communities and improving the delivery of public services and targeted support to deprived areas' (Cabinet Office, 2005).

Public Health Warwickshire supports the concept that all new homes are built to Lifetime Homes Standards and Local Plan policies promote the creation of Lifetime Neighbourhoods that are welcoming, accessible, and inviting for everyone, regardless of age, health or disability.

Developments should take account of the needs and requirements of all people in the community, including people with disabilities, special needs, the elderly, people with mental health and wellbeing problems and young people.

The quality and provision of housing has a significant impact on health and wellbeing. The variety of housing design will maximise the independence of vulnerable residents including young people, people with disabilities, older people, homeless people and other vulnerable adults. Therefore, quality, affordable housing will assist in addressing health inequalities.

A study using a survey of English Housing and census data by Glasgow University (2011) concluded four main types of benefits as a result of mixed tenure communities.

Economic & Service Impacts:

- Better quality public services, better quality private services, increased local economic activity

Community Effects:

- Enhanced social interaction, sense of community, reduction in turnover

Social Effects:

- Reduction in anti-social behaviour, better upkeep of properties, greater optimism about jobs

Overcoming Social Exclusion:

- Reduction in area stigma, more local pride, diverse social networks

Higher levels of social rented housing and more even tenure mix are both associated with greater recognition of neighbourhood problems and desire for improved local facilities and services (University of Glasgow, 2011).

It is recognised that low socioeconomic population groups are more often likely to be housed close to airports, highways and busy roads. By improving the cohesion of new developments and including a proportion (current goal is 40%) of affordable housing, this link between groups in lower social classes being the more common receptors of noise, air pollution and nuisance should be reduced. Even within developments that do aim to provide social housing allocations, Planners and developers should not limit these plots to those with

the most nuisances. (WHO 2011). By supporting active and public transport the nuisance impact of roads will also reduce.

Marmot's recommendations also remind us of the need to reduce health inequalities and mitigation of climate change and this is achievable through the improved energy efficiency of housing across the social gradient. This should result in a reduction in fuel poverty in deprived areas and a decrease in energy related emissions, which should help tackle climate change.

Developers should identify a proportion of lifetime homes to be built with 40% of housing stock designed as affordable housing (or as identified by key strategic documents).

Planners should prioritise neighbourhood and community designs that maximise the opportunity for vulnerable groups to maintain their independence.

Public Health will support vulnerable groups in accessing information which will help improve their health and wellbeing which will contribute to reducing the likelihood they will live in isolation.

3.5 Character:

Does the scheme create a place with a locally inspired or otherwise distinctive character?

Public Health Warwickshire believes this is an important issue for the population's wellbeing. District and Borough Councils are best placed to identify their local character and maintain local heritage.

For more information/guidance on examples of where this has been considered elsewhere:

- English Heritage provide guidance documents and support for undertaking studies of local character, and historic area assessments.
- Oxford Preservation Trust Oxford Preservation Trust have undertaken and commissioned numerous surveys of local character.
- CABE The Council for Architecture and the Built Environment have championed the careful consideration of character in the design of new development.
- Manual for Streets: The Department for Transport have provided guidance through Manual for Streets since 2007, with a follow-up publication in 2010. This includes character assessment as a step within Context Appraisal for new developments.
- Building for Life: How well a scheme for development respects local character by incorporating existing buildings, landscape and topography is one of the twenty criteria for assessing the success of new developments set out within the Building for Life Standard for well-designed homes and neighbourhoods.
- Natural England: Landscape Character Assessment, which applies the principles of character assessment to large geographical areas was pioneered by the Countryside Commission, now part of Natural England.
- Historic Towns Forum: The Historic Towns Forum have provided information on design of new development in context that can be downloaded by members from their website.

The findings from WHO should be noted when considering the character of place. Deteriorating feature of an urban environment such as dilapidation, vandalism and litter are disproportionately found in disadvantaged areas and lead to a sense of insecurity on streets, in parks and in play areas, meaning that the more vulnerable use them less, which can lead to reduced physical activity and social interaction.

Developers should design neighbourhoods and communities that uphold the distinctive character of the local environment.

Planners should consult with local people to listen to the views of what they value about the local neighbourhood and feed into the design of the development.

Public Health is available for further evidence reviews, dependant on local requirements.

3.6 Working with the site and its context:

Does the scheme take advantage of existing topography, landscape features (including water courses), wildlife habitats, existing buildings, site orientation and microclimates?

3.6.1 Green space and infrastructure

The RTPI highlights the benefit of green infrastructure to planning to deliver local, regional and national policy objectives, not just those relating to green space (RTPI, 201*). The RTPI identifies that there needs to be a shared understanding between developers and planners of green infrastructure, what it can achieve and how to achieve the associated benefits. Planning green infrastructure positively is supported by NPPF Paragraph 114 and 99.

Marmot recommends that in order to reduce health inequalities and mitigate climate change, there must be good quality open and green spaces across the social gradient (2011). Living in a deprived neighbourhood increases the chances of living in an area with poor environmental conditions and exposure to social and environmental characteristics that increase health risks.

We know that the most affluent 20% of wards in England have five times the amount of green space than the most deprived 10% of wards (Public Health England, 2014). There is good evidence that ensuring good access to green infrastructure will improve the health and wellbeing of our population.

Public Health Warwickshire, in partnership with statutory and voluntary organisations has produced 'Warwickshire Wide Green Space Health and Wellbeing Priorities 2014-18', that provides further evidence to support the need for Public Health and local authorities to work together to provide environments that encourage physical activity and wellbeing.

Green infrastructure helps to mitigate climate change, reduce air, water and noise pollution, provides spaces for play, increases community cohesion, provides economic benefits, delivers networks for walking, cycling and active transport, delivers distinctive landscape and design, enhances habitats and ecological connectivity and provides space for local food production and farming (TCPA, 2014). This is view is also supported by the Government White Paper Healthy Lives, Healthy People, which states that the quality of the environment around us also affects any community; pollution, air quality, noise, the availability of green and open spaces. (2010).

Integrating green infrastructure into all residential and commercial developments makes for a healthy community at work and home. By retaining and enhancing existing natural features within a development plus enabling access to and through these features will enable business and residential communities to take an active part in caring for nature. This could actively encourage walking to work along green pathways, taking work breaks outside and being able to see nature from the workplace, adding to organisations response towards their corporate social responsibility.

Natural England's Nature Nearby (2010) report summarises the Accessible Natural Greenspace Standard based on three key principals; to improve access, improving naturalness and to improve connectivity. The economic and social costs of mental illness in

England were estimated at £77.4 billion for the year 02/03. A study of town dwellers found statistically significant relationships between the use of urban greenspace and self-reported levels of stress. The results showed that the more often a person visited greenspace the less they reported stress-related illnesses, and that distance to greenspace was crucial to the amount they were used. (Natural England, 2012)

Good quality green space can foster better community cohesion and promote social inclusion. Community open space can enhance social ties, provide a sense of community and can promote social integration within disadvantaged communities. Studies have shown that:

- green spaces improve air and noise quality in urban areas (DH, 2008)
- trees can cut particulate pollution by as much as 25% (Lancaster University, 2003)
- trees and vegetation help to reduce traffic noise by absorbing and deflecting sound (HTA, 1982).
- areas with higher levels of greenspace helps lower the risk of flooding
- urban green spaces with trees can give a localised cooling effect of 1°C - 2°C in an area.

Public Health Warwickshire supports the Accessible Natural Greenspace Standard (Natural England, 2010) that everyone, wherever they live, should have an accessible natural greenspace:

- of at least 2 hectares in size, no more than 300 metres (5 minutes' walk) from home;
- at least one accessible 20 hectare site within two kilometres of home;
- one accessible 100 hectare site within five kilometres of home; and
- one accessible 500 hectare site within ten kilometres of home; plus
- a minimum of one hectare of statutory Local Nature Reserves per thousand population.

Additional recommendations for access to green space that are supported by Public Health Warwickshire are:

1. Six Acre Standard - A long-standing national standard originally developed in the 1930s. In 2008, Fields in Trust (FIT) published Planning and Design for Outdoor Sport and Play (PAD), the document which updates and supersedes the Six Acre Standard. PAD continues to uphold the original FIT recommendation that 6 acres (2.4 ha) of recreational space is required for every 1000 people, and also provides a detailed framework relating to quantity, quality and accessibility of outdoor facilities for sport and play and the importance of local assessments and standards (Natural England, 2010).

2. Towards a Level Playing Field - Sport England has produced a detailed toolkit for calculating the number of playing fields needed in a given area. It uses actual population figures and numbers of sports teams from ward data and can forecast future demand for pitches.

3. The Woodland Trust Woodland Access Standards (Natural England, 2010) - No person should live more than 500 metres from at least one area of accessible woodland of no less than 2 hectares in size. There should also be at least one area of accessible woodland of no less than 20 hectares within 4 kilometres (8 kilometres round-trip) of people's homes.

4. The National Society of Allotment and Leisure Gardeners (NSALG) has also produced a national allotment standard for a minimum provision of 20 standard plots of 250 square

metres per 1,000 households (Natural England, 2010).

Support and advice on Green Infrastructure can be obtained from WCC Ecology (ecologyplanning@warwickshire.gov.uk).

The Environment Agency also provides guidance re flood risk, sustainable urban drainage systems, contaminated land, the water framework directive and biodiversity and Public Health Warwickshire recommends this guidance be taken into account by Planners.

3.6.2 Mental Health and Wellbeing

A study by the Centre for Research on Environment, Society and Health (2012) found that regular exercise in a natural environment can cut the risk of suffering from poor mental health by 50

Increasing access and participation in green spaces has an important positive impact on mental health. Maas et al (2009) found that green space was important in affecting anxiety, depression, loneliness and social support; a lack of green space had negative effects on these factors. A study by Roe et al (2013) published in the International Journal of Environmental Health Research found that accessing green space significantly lowered people's stress levels and improved concentration and mood.

Mind's (the mental health charity) Ecominds scheme (2013) helped 254 people find full time-time employment. Economic analysis of these case studies found that this could have saved the government £1.46 million pounds over one year. This was through a reduction in JSA claims, increased National Insurance payments and a reduction in the costs to the NHS of associated health problems associated with unemployment (e.g. depression). 69% of more than 12,000 participants experienced significant increases in wellbeing.

A report from the UK Faculty of Public Health (2010) called for GPs to use more alternatives to medication for mental illness and to increase physical activity, as the two are linked. They recommend that GPs should provide advice about physical activity in green spaces as an alternative to medication for patients with mild depression or anxiety. Access to green spaces should also be increased and exercise schemes in green spaces should be supported and expanded.

Other research has identified trends in reduced hospital admissions for mental illness, the reduction being associated with more green space, even after controlling for levels of deprivation and population density (Wheater, 2007). Additionally, systematic reviews indicate that exercising outdoors in natural and green spaces such as parks, woods and canal sides for example, can bring about positive effects to health and well-being in addition to the improved health outcomes that are observed during indoor exercise (Coon, 2011). Other findings indicate that exercising outdoors also provides benefits to people with long term conditions around their mental health and wellbeing (Coon, 2011).

Further evidence is available regarding the physical and mental health benefits of green spaces:

- Maas et al (2009) found that older people live longer in areas where there is more green space close to their homes. It is also extremely important for young people and

lower socioeconomic groups.

- Mitchell & Popham (2008) published that people living closer to green space in England had lower death rates and less heart disease.
- The National Ecosystem Assessment (2011) found that observing nature and participating in physical activity in green spaces plays an important role in positively influencing human health and well-being. Exercise in green places is associated with positive health outcomes, which exceed those experienced from exercising in environments lacking nature (i.e. indoors).
- A study by Bell, Wilson and Liu (2008) found that children who live close to green spaces have higher levels of physical activity and are less likely to experience an increase in Body Mass Index over time.

3.6.3 Meeting the Housing Requirement

The NPPF acknowledges the social role of the planning system to support 'strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations.

Within this role, there is an opportunity for planners to ensure that new housing and employment developments do not cause disturbance (for example, noise), nuisance, reduced air quality or adverse transport impacts.

(* more on affordable housing)

Developers and planners should incorporate the Natural England recommendations on accessible greenspace:

- of at least 2 hectares in size, no more than 300 metres (5 minutes walk) from home;
- at least one accessible 20 hectare site within two kilometres of home;
- one accessible 100 hectare site within five kilometres of home; and
- one accessible 500 hectare site within ten kilometres of home; plus
- a minimum of one hectare of statutory Local Nature Reserves per thousand population.

Public Health should continue to engage local communities in the health benefits of undertaking physical activity outdoors.

Public Health will continue to review the evidence and liaise with the Environment Agency to identify flood risk, sustainable urban drainage systems, contaminated land, consider the water framework directive and biodiversity.

3.7 Creating well defined streets and spaces:

Are buildings designed and positioned with landscaping to define and enhance streets and spaces and are buildings designed to turn street corners well?

The National Planning and Policy Framework (NPPF) links economic, social and environmental matters and the strategies and programmes of public agencies and service providers, to create attractive places that improve the quality of life and wellbeing of individuals and communities. The planning process has a crucial role to play in addressing health inequalities as demonstrated through Marmot earlier in this document. Local planning policies, and the location of new development and facilities, should enable people to have a choice of high quality and attractive places to live and allow them to reach the services they need and, for the services they need to reach them.

In order to define and enhance spaces and streets, walking to increase physical activity will also act as social policing, therefore installing urban miles will help local people increase the likelihood of walking from one location to another. Public Health Warwickshire believes this will support people who are physically inactive to make small, measurable improvements to their daily activity levels.

Physical activity levels vary according to age, gender, disability, ethnicity and socioeconomic status. National policies, including 'Choosing activity: a physical activity action plan' (DH 2005, NICE 2013), are designed (either implicitly or explicitly) to impact on physical activity levels. 'Choosing activity' asserts that a 'culture shift' is needed if physical activity levels in England are to increase and building an environment that supports people in more active lifestyles' is required.

Public Health Warwickshire believes that with the right investment and planning developments can support the creation of an environment that supports people being more active.

Developers and planners should uphold the NPPF recommendation that Local planning policies, and the location of new developments and facilities, should enable people to have a choice of high quality and attractive places to live and allow them to reach the services they need and, for the services they need to reach them.

Planners should support the incorporation of urban mile road signage to encourage physical activity.

Public Health should continue to promote the benefits of physical activity on health and wellbeing.

3.8 Easy to find your way around:

Is the scheme designed to make it easy to find your way around?

Installing urban miles will help local people understand the effort required in terms of time to walk from one location to another. Public Health Warwickshire believes this will support people who are physically inactive to make small, measurable improvements to their activity levels.

There is lots of evidence to support the benefits of physical activity on health and wellbeing. Physical activity not only contributes to wellbeing, it is essential for good health (DH 2004, NICE 2013). Increasing physical activity levels in the population will help prevent or manage over 20 conditions and diseases. This includes coronary heart disease, diabetes, some cancers and obesity. It can help to improve mental health. It can also help older people to maintain independent lives.

Public Health Warwickshire believes that with the right investment, our collective efforts can support the creation of an environment that supports people being more active and this is a simple, low cost way of achieving this

Inactivity also creates costs for the wider economy, through sickness absence and through the premature death of productive individuals.

A Living Streets report highlights that improvements to the walking environment can increase the economic value of, and economic activity within, an area. This can be reflected by the sale price of residential properties and the rental price of retail premises (Sinnett et al. 2011), a clear incentive for developers to ensure a sustainable environment that promotes physical activity.

Using evidence from an evaluation of 'Get walking, keep walking', a large UK study, produced a cost per QALY of around £2700 (NICE, 2012).

The Department for Transport have estimated that a 20% increase in cycling by 2015 would result in decreased mortality valued at £107 million. Potential savings to the NHS are estimated at £52 million due to reduced illness, with a further £87 million saved by employers through reducing absences from work (DFT, 2011).

Developers should design neighbourhoods and communities that are easy to navigate on foot and encourage sustainable transport methods.

Planners should incorporate policies including sustainable transport, measured and urban miles into core strategy/local planning documents, ensuring that all local facilities are within a five minute walkable distance.

Public Health should continue to promote the benefits of sustainable transport methods on people's health and wellbeing and will support the uptake of increased cycling.

3.9 Streets for all:

Are streets designed in a way that encourage low vehicle speeds and allow them to function as social spaces?

Housing schemes should be sustainable in the long term and local planning policies should recognise the need to provide good quality open space for residents as part of housing developments or in the vicinity. This approach can encourage more opportunities for people to be physically active, therefore, lead to healthier lifestyles. As a minimum, major developments should:

a. Minimise the need to travel by private car;
b. Provide linkages, or develop new, footways, cycle paths and bridleways giving access, to key local facilities (especially town centres); and
c. Provide appropriate facilities to support access to high-quality public transport.

Promoting safe access for pedestrian and sustainable transport provision for residents is supported by Public Health Warwickshire. Design and layout should facilitate direct, convenient and safe walking routes to town centres, local neighbourhoods, schools, local shops, services and public transport facilities.

It is essential that priority is given to the needs of pedestrians:

a. Walking is the preferred mode of transportation in the County (either as the totality, or as part, of virtually every journey made). There is considerable medical evidence on the benefits of walking to general health; in particular on the impact walking can have on hypertension, diabetes and cardiovascular diseases.
b. Pedestrians are one of the most vulnerable residents (and the largest) in terms of both real and perceived threats to their safety and personal security; and
c. The quality of the local environment is of particular importance to pedestrians, and most particularly to children.

Public Health Warwickshire will support policies for safer cycling because physical activity and access to services and jobs can impact on the health and wellbeing of residents.

Public Health Warwickshire will support public transport policies as these will provide greater access for all and in particular for vulnerable residents. We also support the use of alternative fuel vehicles which will contribute to creating a less polluted environment. These will over time bring significant health benefits.

Developers should design neighbourhoods and communities that incorporate traffic calming measures and deter people from using cars, but encourage sustainable transport methods.

Planners should ensure policies to incorporate footpaths, bridleways and cycle lanes into local plans and core strategies. Planners should also work with colleagues on making provisions for electric car charging points to promote low carbon emissions.

Public Health should support cycling and sustainable transport colleagues in promoting the benefits to health and wellbeing.

3.10 Car parking:

Is resident and visitor parking sufficient and well integrated so that it does not dominate the street?

Public Health Warwickshire recommends that Transport and Planning support this Principle, with the considerations of the 9th Principle earlier taken into account.

Developers should incorporate design for adequate car parking facilities into any new neighbourhoods and communities.

Planners should support developers to identify the best location for parking at domestic properties and employment and visitor sites to ensure the facility does not dominate the development.

Public Health should encourage and support people to park further from the town centre and either walk the remaining distance or make use of the park and ride schemes.

3.11 Public and private spaces:

Will public and private spaces be clearly defined and designed to be attractive, well managed and safe?

Installing urban miles will help local people understand the effort required in terms of time to walk from one location to another. Public Health Warwickshire believes this will support people who are physically inactive to make small, measurable improvements to their activity levels.

There is lots of evidence to support the benefits of physical activity on health and wellbeing. Physical activity not only contributes to wellbeing, it is essential for good health (DH 2004, NICE 2013). Increasing physical activity levels in the population will help prevent or manage over 20 conditions and diseases. This includes coronary heart disease, diabetes, some cancers and obesity. It can help to improve mental health. It can also help older people to maintain independent lives.

National policies, including 'Choosing activity: a physical activity action plan' (DH 2005, NICE 2013), are designed (either implicitly or explicitly) to impact on physical activity levels. 'Choosing activity' asserts that a 'culture shift' is needed if physical activity levels in England are to increase.

Public Health Warwickshire believes that with the right investment, our collective efforts can support the creation of an environment that supports people being more active and this is a simple, low cost way of achieving this.

Warwickshire is rich in country parks, local parks, greenways, meadows, canals and many more green spaces that are underutilised. Public Health Warwickshire welcome developments and planning policies to enhance car and cycle parking facilities in green spaces, to encourage more frequent use.

Some of the smaller parks and green spaces in the county have very limited parking, and these are often the locations in the more urban settings. Public Health Warwickshire believes that insufficient space for families to park a family car or ride to the park together and be able to store their bikes safely, contributes to the underutilisation of these green spaces and ultimately a likely effect on opportunities to undertake and levels of physical activity.

Evidence suggests that there are many benefits to physical activity outdoors. Regular green space visits are associated with increased physical activity and a lower probability of being overweight or obese (Natural England 2011). Exercising in natural environments was associated with greater feelings of revitalisation and positive engagement, decreases in tension, confusion, anger and depression, and increased energy. Users also reported greater enjoyment and satisfaction with outdoor activity and said that they were more likely to exercise outdoors again at a later date (Coon, 2001)

Outdoor gyms can include much of the same equipment found in an indoor gym, but are specifically designed for outdoor use and are often situated in play areas or parks. They are suitable for all ages and abilities, and provide the opportunity for everyone to use the equipment for free while taking advantage of the benefits of being active outdoors. A local

authority in the North West found that eighty per cent of participants thought exercise was more enjoyable when outdoors than indoors and 75% believed that outdoor gyms were beneficial for their health (Bates et al 2013). There is some evidence for increased use and more new users to outdoor gyms in the short term and that they can provide a cost-effective resource for increased use of parks and park-based physical activity, particularly in densely populated areas and in parks where few facilities exist (Cohen et al 2012).

The natural environment has the potential to offer cost-effective solutions to address health inequalities and produce positive physical and mental health outcomes across all age groups. For example, analysis of the cost effectiveness of the Conservation Volunteers' Green Gyms programme (2010), over a four-year period (2005–2009), estimates that the scheme delivered 132 quality adjusted life years (QALYs) at a cost of £4,031 per QALY based on participation in one Green Gym session per week.

Allotments bring a number of benefits to both individuals and the wider community and over 70% of people believe that spending time in their gardens is important for their quality of life. Many people however do not have the space or opportunity to garden and grow their own fruit and vegetables

Allotments provide users with a number of health benefits. By promoting exercise they can help prevent and tackle problems such as diabetes, heart disease and obesity, 30 minutes of gardening can burn as many calories as aerobic exercise (National Trust 2009). Regular gardening activity has been shown to reduce the risk of dementia by 36% (Thrive 2009).

In urban areas in particular, allotments and community gardens offer a retreat and escape and can build self-esteem, be calming and relieve stress. Communal gardening improves opportunities for greater social interaction and cohesion, with support for each other (Milligan et al 2004). They can also facilitate the development and strengthening of local social ties and networks, promoting a sense of community (Hope and Ellis 2009).

There are also important educational benefits to allotments, particularly schools and children's groups. Educating people on the importance of healthy food and environmental sustainability is an important role of local authorities and schools. Growing food on allotments allows individuals and communities to reduce their carbon footprint, by reducing the energy used to process and distribute their food (Hope and Ellis 2009).

Developers and planners should design neighbourhoods and communities that support the increase of physical activity, which could help prevent or manage over 20 conditions and diseases.

Public Health should encourage the use of open green space and the benefits to physical health and wellbeing.

3.12 External storage and amenity space:

Is there adequate external storage space for bins and recycling as well as vehicles and cycles?

Planning and regulatory services are best placed to identify methods of delivering this objective. Public Health supports both recycling and sustainable transport.

Cycling for leisure and active travel has both health and environmental benefits. Increasing physical activity levels in the population will help prevent or manage over 20 conditions and diseases. This includes coronary heart disease, diabetes, some cancers and obesity. It can help to improve mental health and older people to maintain independent lives. Increasing the use of sustainable transport will reduce the levels of traffic emissions from private vehicle use. Ensuring adequate storage for cycles is vital to remove the possible barrier that lack of or difficulty with storage may have on a persons' decision to cycle.

80% of plastic battles within a UK household are not recycled. Designing homes which make this easier, can impact on health and wellbeing – as the behaviour change. Our environment plays an important factor in our health so designing places which incorporate recycling may induce behaviour change and people can recycle without extra bins adding clutter to their homes. In a study by Coca-Cola Enterprises (CCE) and the University of Exeter, participants suggested that they weren't prepared to compromise on aesthetics to accommodate recycling. However, if we are to move to truly sustainable development, then recycling is a big factor that must be addressed.

Planners should

Developers should

Public Health should

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