

Health Impact Assessment – Warwick District Local Plan

Warwickshire County Council

Final

V3

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Abbreviations and acronyms

HIA	Health Impact Assessment
SA	Sustainability Appraisal
SPD	Supplementary Planning Document
SPG	Supplementary Planning Guidance
DoH	Department of Health
WHO	World Health Organisation
HUDU	Healthy Urban Development Unit
NICE	National Institute of Health and Care Excellence
PHE	Public Health England



1 Executive summary

- 1.1.1 This is a Health Impact Assessment (HIA) of the Warwick District Local Plan (hereafter the Plan). The Plan sets out the Council's policies and proposals to support the development of the District through to 2029.
- 1.1.2 The purpose of the HIA is to examine the links between health and wellbeing and the potential effects (beneficial and adverse) of the Plan's policies. The HIA aims to provide constructive commentary for Warwick District Council's consideration with regard to possible refinements to the plan prior to its adoption.
- 1.1.3 The HIA defines health as a 'state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity' (1).
- 1.1.4 It is increasingly recognised, in England and further afield, that local council's development plans and policies can have important long-term effects on physical and mental health and wellbeing of their areas population. Planning policies set by Warwick District cover all aspects of the social, economic and physical environment for example: employment sites, housing, green and public spaces and flooding. These planning policies set a framework that is important for the health and wellbeing of people living and working in Warwick District. It is also important for addressing, and reducing, differences in health between population groups. These differences are also known as inequalities in health.
- 1.1.5 This HIA focuses on the following three components:
- A strategic review of the draft Plan's policies providing commentary against the wider determinants of health on opportunities and constraints;
 - A scoping exercise based on the issues raised by the Plan policy review to identify a select number of issues where further supporting evidence could be provided to assist in refining the Local Plan; and
 - Additional discussion and evidence for the selected issues identified through the scoping exercise.

Key Issues

- 1.1.6 The following paragraphs discuss the key messages from the report.
- Supporting health and wellbeing*
- 1.1.7 **Overall the Plan is considered positive for health and wellbeing. The Plan includes a range of policies that will contribute towards improving and protecting the health and wellbeing of people in the district, notably overarching policy *SCO: Sustainable Communities* and policy *HS1: Healthy, Safe and Inclusive Communities*. The inclusion of these policies is welcomed and strongly supported.**
- 1.1.8 This assessment of the health effects of the Plan provides the opportunity to further improve health outcomes for people living and working in Warwick district. We note that the district generally enjoys a very positive health profile. It is however apparent that new challenges to health are emerging, particularly around obesity. The Plan will play a key role in the social, economic and physical environment of the district for the next 15 years. It is thus an important consideration for the health and wellbeing of people in Warwick district. As with any complex document the Plan has to balance conflicting requirements. Compromises are therefore expected and largely unavoidable. Notwithstanding this general point, this assessment provides commentary on the policies and aims to support their refinement.



Buffer zones

- 1.1.9 Spatial planning issues include the opportunity to separate general industry employment allocations from residential areas using buffer zones. This not only protects sensitive community receptors from pollution, nuisance and disturbance, but also protects employers from more stringent restrictions on working hours and emissions that could affect their competitiveness. In some instances employment sites may not be of a scale to allow viable buffer zones. Although this does not preclude non-B1 uses¹, it does increase the constraints on developers. In these instances employment allocations, such as E1, E2 and TC12, will rely on master planning and detailed planning applications to demonstrate that there are no negative impacts to surrounding community receptors (e.g. homes, schools or amenity land). Consideration should be given to requiring detailed Health Impact Assessments for such developments.

Transport and air quality

- 1.1.10 We suggest that the ways in which the Plan's policies are implemented will be of great importance. We suggest that active and public transport is established and promoted early in the development phasing of the larger housing and employment allocated sites. We suggest that consideration is given to the phasing and the management of construction near vulnerable populations, particularly children and the elderly. The consolidation of school sites (ED1 and ED2) provides a positive opportunity for new learning and sports facilities. However the extended period of building development on these sites (as successive schools are built) could, if not managed carefully, adversely affect educational and health outcomes for pupils.
- 1.1.11 The Plan acknowledges that there will inevitably be a balancing act in aiming for an efficient and effective transport network that is not achieved at the expense of health, the environment and community wellbeing. Given the Plans growth targets and the constraints of current layouts, background traffic and air pollutant levels, it is almost inevitable that there will be a residual impact in some areas under any scenario. On-going air quality monitoring throughout the Plan period and detailed air quality assessments for the main allocations will be important. Whilst such impacts can be mitigated to an extent through promoting and even prioritising active and public transport, it may be optimistic to expect a net reduction in car based journeys. Given the importance of this issue we recommend that sustainable and active transport maintains its priority status during implementation of the Plan.

Affordable housing

- 1.1.12 It is acknowledged that Warwick district has a large gap in available affordable housing provision, largely due to the high house and rent prices in the district. Addressing this gap will be a challenge. The Plan seeks to meet current and future affordable housing needs through policies H2 and H3. These policies require developers to include at least a 40% affordable housing allocation in all but the smallest residential developments. This percentage has been tested by Warwick District Council and found to be achievable. A provision in policy EC3 allows for the conversion of some employment land to 100% affordable housing. Although this is positive in increasing affordable housing, economic regeneration and environmental uplifts, there are significant concerns that this could result in large portions of affordable housing being sited in areas with high disturbance, nuisance or pollution. This is also contrary to creating mixed and balanced communities. If this provision of policy EC3 is retained, any affordable housing development under policy EC3 will need to be very carefully considered and should be the subject of detailed Health

¹ B1 is a use which can be carried out in any residential area without detriment to the amenity of that area by reason of noise, vibration, smell, fumes, smoke, soot, ash, dust or grit (2).



Impact Assessment. Warwick district have commented that this provision of policy EC3 will only be used when developments are acceptable in planning terms and are not susceptible to inappropriate levels of external disturbance or conflict from adjoining or adjacent land uses.

Further Opportunities

- 1.1.13 In addition to the key messages there are further opportunities where relatively minor revisions to the policies could be expected to protect and improve health and wellbeing. These are summarised in Appendix C.

Key recommendations of the HIA

- 1.1.14 Review the commentary on each draft policy set out in Section 6 with the aim of taking further opportunities to enhance the potential health benefits that could be achieved through the Plan.
- 1.1.15 Take all reasonable measures to reduce traffic and meet (or wherever possible exceed) the UK national guidance on air quality standards. On-going air quality monitoring should be undertaken with reference to statutory health standards throughout the plan period and be responsive to any changes to the legislative requirements as set out in Section 7.1.
- 1.1.16 Prioritises active travel as set out in Section 7.2;
- 1.1.17 Provide new housing in line with the evidence for healthy housing as set out in Section 7.3;
- 1.1.18 Consider the planning of care homes and assisted living with reference to the evidence set out in Section 7.4;
- 1.1.19 Create and protect buffer zones at the boundaries between residential areas, schools or green/open spaces and areas designated for intensive employment use. An example of one option is presented in Section 7.5;
- 1.1.20 Include planning obligations to support child obesity goals as set out in Section 7.6;
- 1.1.21 Control the proliferation of hot food takeaways (and possibility other unhealthy food outlets) as discussed in Section 7.7;
- 1.1.22 Provide clear guidelines setting out when developers should undertake HIAs. Some options are set out in Section 7.8;
- 1.1.23 Review Appendix A: NICE Recommendations (page 85) with the aim of considering opportunities for further health policies within the Plan; and
- 1.1.24 Finally include health impacts in the Plan's monitoring and evaluation framework. Where appropriate this should link to existing indicators (e.g. the Public Health Outcomes Framework).



2 Introduction

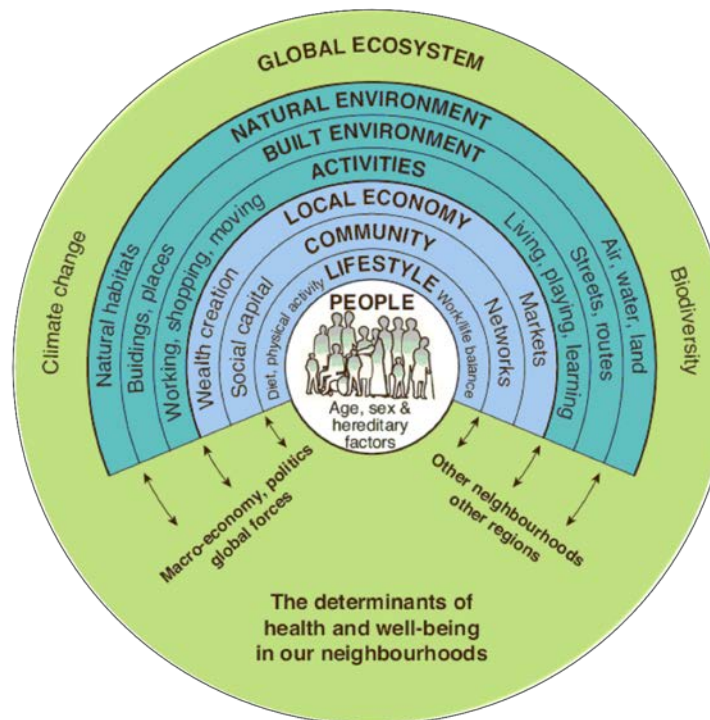
- 2.1.1 This is a Health Impact Assessment (HIA) of the Warwick District Local Plan (hereafter the Plan). The HIA has been commissioned by Public Health Warwickshire. The HIA considers the options presented in the Council's Draft Publication Document. The purpose of the HIA is to examine the links between the health and wellbeing and the potential effects (beneficial and adverse) of the policies and their associated areas of application.
- 2.1.2 The HIA is primarily desk based. It also draws on dialogue with Public Health Warwickshire and with Warwick District Council officers. The HIA's findings are based on the professional judgement of the HIA team with reference to the scientific evidence base, as well as the relevant legal and policy context.
- 2.1.3 It should be noted from the outset that this is a strategic assessment and as such does not assess specific population health effects arising from future developments that may occur within the land allocation framework set out in the Plan. The HIA makes recommendations as part of its findings on the need for future health assessment work as individual applications are brought forward.
- 2.1.4 Warwickshire County Council has drafted a public health evidence base for planning and development (3). This should be considered alongside this HIA.
- 2.1.5 The report is laid out as follows:
- a summary of key aspects of the Plan;
 - an introduction to the wider determinants of health and the HIA approach;
 - a brief record of the 'screening exercise' that determined the need for HIA;
 - results of the 'scoping exercise' that identified the potentially important health issues that are the focus of this HIA;
 - the analysis section that considers the evidence and reaches a judgement on potential conflicts or opportunities presented by the Plan;
 - the conclusion and recommendations section that draws together the key findings of the HIA and the next steps;
 - documents cited in this assessment are shown as numbers in brackets in the text and a numbered list is provided at the end; and
 - appendices.
- 2.1.6 This assessment is intended to provide constructive comment and to provide an opportunity to consider modifications to policies.



3 Approach to HIA

- 3.1.1 Health impact assessment (HIA) is a systematic process used to identify the potential health effects arising from policies, plans, programmes and projects and to help reduce health inequalities.
- 3.1.2 The International Association for Impact Assessment define HIA as (4):
... a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, programme or project on both the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.
- 3.1.3 HIA generally uses the WHO definition of health as a 'state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity' (1).

Figure 3-1: Determinants of health and wellbeing



Source: Based on the Whitehead and Dahlgren (5) diagram as amended by Barton and Grant (6)

The determinants of health

- 3.1.4 There are a number of factors, as illustrated in Figure 3-1, which can affect communities and/or individuals directly or indirectly. These are called determinants of health and include employment, transport, housing etc. These include determinants that can improve



and protect health as well as determinants which might harm health. Examining how a policy influences these determinants and the likely effects on the health of communities and individuals is a key role of HIA. As noted above these effects might be on physical health or on mental health. The effects of a policy will be experienced differently by different population groups: population groups can be identified by factors including (but not limited to) age, gender, ethnicity, socioeconomic status, place of residence or by dint of pre-existing health status. Public health policy seeks to reduce inequalities in health between population groups (7). HIA also seeks to enable the policy-maker to take steps to manage the potential effects.

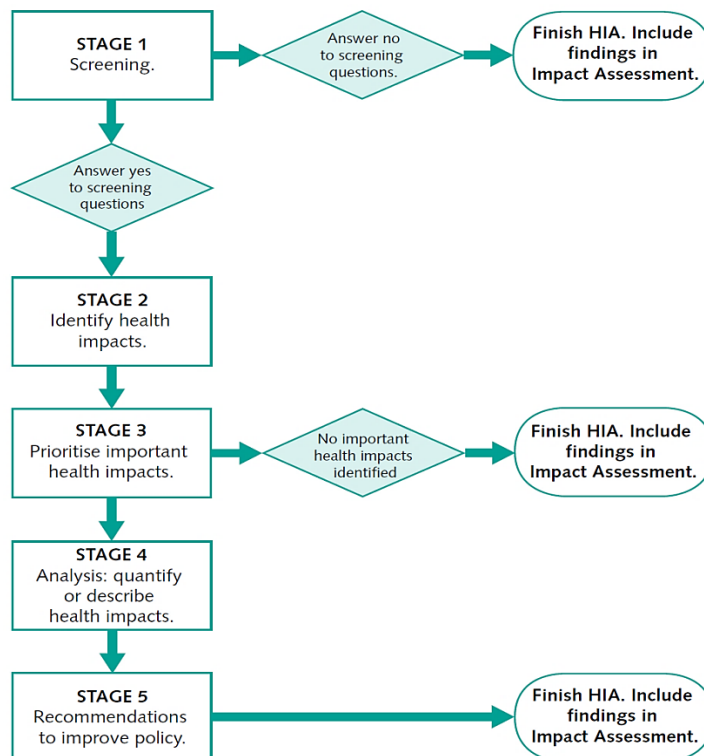
- 3.1.5 There is a social gradient in health: those living in the most deprived neighbourhoods die earlier and spend more time in ill health than those living in the least deprived neighbourhoods. Such health inequalities are determined by social inequalities, including environmental inequalities; there is a gradient in the distribution of environmental disadvantages: those living in the most deprived neighbourhood are more exposed to environmental conditions, which negatively affect health.
- 3.1.6 The Marmot Review recommends three main policy actions to try to ensure that the built environment promotes health and reduces inequalities for all local populations. All three actions should be applied across the social gradient (8).
- Prioritise policies and interventions that both reduce health inequalities and mitigate climate change by:
 - Improving active travel;
 - Improving good quality open and green spaces;
 - Improving the quality of food in local areas; and
 - Improving the energy efficiency of housing.
 - Fully integrate the planning, transport, housing, environmental and health systems to address the social determinants of health in each locality.
 - Support locally developed and evidence-based community regeneration programmes that:
 - Remove barriers to community participation and action; and
 - Reduce social isolation.
- 3.1.7 The determinants of health are used as a framework during the scoping exercise and the assessment to systematically consider a broad range of potential influences on health that could arise from the Plan's objectives and policies.



Stages of the HIA

- 3.1.8 The Department of Health (DoH) has set out guidelines on HIA of Government Policy (9). These guidelines establish an HIA methodology as illustrated in Figure 3-2 and described below. These guidelines are relevant to this assessment as (a) the proposed policy will enable implementation of Government policy; and (b) the guidelines provide the framework for scoping which are used in this document.

Figure 3-2: HIA Stages



Source:
Department of
Health (9)

- 3.1.9 Typically, the key stages of HIA involve:

- Stage 1: Screening – determining whether or not HIA is necessary;
- Stage 2: Identify health impacts – developing a long list of all of the potential impacts on the health of the population;
- Stage 3: Identify impacts with important health outcomes – determining whether impacts are: universal or affect some community groups disproportionately; are permanent or reversible; are short, medium or long term; could be publicly sensitive; or could have cumulative or synergistic effects [please note that we have changed the name of this stage from that given in Figure 3-2];
- Stage 4: Quantify or describe important health impacts – reaching a qualitative and quantitative judgement about the important health impacts and their potential costs and benefits; and
- Stage 5: Recommendations to achieve most health gains – setting out how the policy or project could be amended to maximise health benefits and reduce health inequalities.



- 3.1.10 The process set out in DoH guidance informed the approach to this HIA.
- 3.1.11 Table 3-1 identifies, for each of the stages in DoH’s guidance on HIA, the key components of this HIA.

Table 3-1: Key Components of this HIA

Stage in Dept of Health guidance (9)	Components of this HIA
1. Screening	Record of Screening
2. Identify health impacts	Results of Scoping exercise
3. Identify impacts with important health outcomes*	Results of scoping exercise
4. Analysis	Assessment and review sections
5. Recommendations	Conclusions and recommendations

* Note adapted name of this stage

- 3.1.12 Some elements of the process are sequential, although there is a large amount of interaction between the various stages. For example, some of the evidence base has been compiled in sufficient detail to inform the scoping study.
- 3.1.13 This HIA has been undertaken predominantly as a desk based exercise. The HIA has adopted a strategic approach consistent with the remit of assessing a strategic level plan.
- 3.1.14 The HIA makes reference to good quality published evidence to support its recommendations. Where possible evidence from peer reviewed systematic reviews and randomised control trials have been used as these represent the most robust form of evidence on which to base decisions. Sources used include National Institute for Health and Care Excellence (NICE) public health guidance, PubMed and World Health Organisation (WHO) environment and health publications.
- 3.1.15 It should be noted that where this report includes suggestions as to policy modifications or new policies these are advisory only and will benefit from appropriate legal review.



4 Record of screening

- 4.1.1 The IAIA (International Association for Impact Assessment) defines the screening stage as deciding what scale, if any, HIA is required. This is principally a desk-based exercise.
- 4.1.2 In this case the screening decision was determined by Public Health Warwickshire and Warwick District Council.
- 4.1.3 The screening exercise concluded that health is a key theme running through the Plan and the screening assessment illustrates the opportunity for a full HIA to be undertaken so that key potential effects (both positive and negative) can be highlighted.
- 4.1.4 Furthermore the screening exercise noted that the HIA should be carried out in consultation with Warwickshire Public Health, Warwick District Council and Warwickshire County Council.



5 Scoping

5.1.1 The scoping stage involved a strategic review of the draft Plan's policies providing commentary against the wider determinants of health on opportunities and constraints. Results of this review are set out in Section 6.

5.1.2 These issues were discussed with members of the Public Health Warwickshire and Warwick District's planning team. Based on the review findings and discussions it was agreed that within the timeframe and resource of the HIA the scope would focus on a select number of issues where further supporting evidence could be provided to assist in refining the Plan. These issues were:

- evidence on air quality;
- evidence to support active travel;
- evidence supporting healthy housing;
- evidence supporting assisted living and care homes;
- buffer zones between residential and employment areas;
- evidence to support obligations to fund obesity prevention, particularly for 6-12 year olds;
- evidence to support a new fast food policy; and
- recommendations on criteria for HIA.

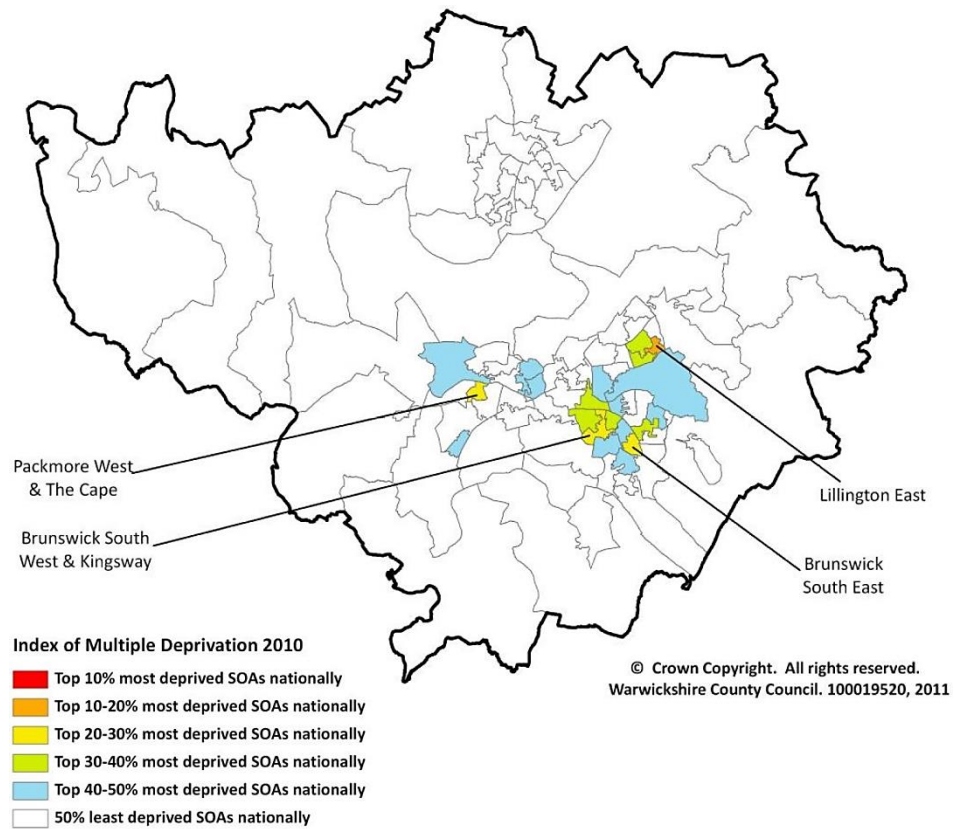
Summary health profile for the district

5.1.3 Public Health England's 2013 health profile for Warwick District Council summarises health in the district as follows (10):

- The health of people in Warwick is generally better than the England average. Deprivation is lower than average, however about 2,700 children live in poverty.
- Life expectancy for both men and women is higher than the England average. Life expectancy is 7.8 years lower for men and 6.9 years lower for women in the most deprived areas of Warwick than in the least deprived areas.
- Over the last 10 years, all cause mortality rates have fallen. The early death rate from heart disease and stroke has fallen and is better than the England average.
- In Year 6, 17.6% of children are classified as obese. The level of smoking in pregnancy is worse than the England average. Levels of teenage pregnancy and GCSE attainment are better than the England average.
- The estimated level of adult obesity is better than the England average. Rates of sexually transmitted infections, smoking related deaths and hospital stays for alcohol related harm are better than the England average.
- Priorities in Warwick include addressing alcohol misuse, smoking in pregnancy and tackling obesity.



Figure 5-1: Index of Multiple Deprivation for Warwick District



- 5.1.4 Figure 5-1 identifies the areas with the highest levels of deprivation in the district (11). Overall deprivation in the district is low with the most deprived areas near Leamington Spa. It is also noted that Coventry situated to the north has a concentration of deprived areas.
- 5.1.5 The district's 2013 Joint Strategic Needs Assessment (JSNA) (12) identifies population health statistics that provide a sense of scale on the health issues facing the district. These are reproduced in Figure 5-2 below.



Figure 5-2: Warwick District: population health issues

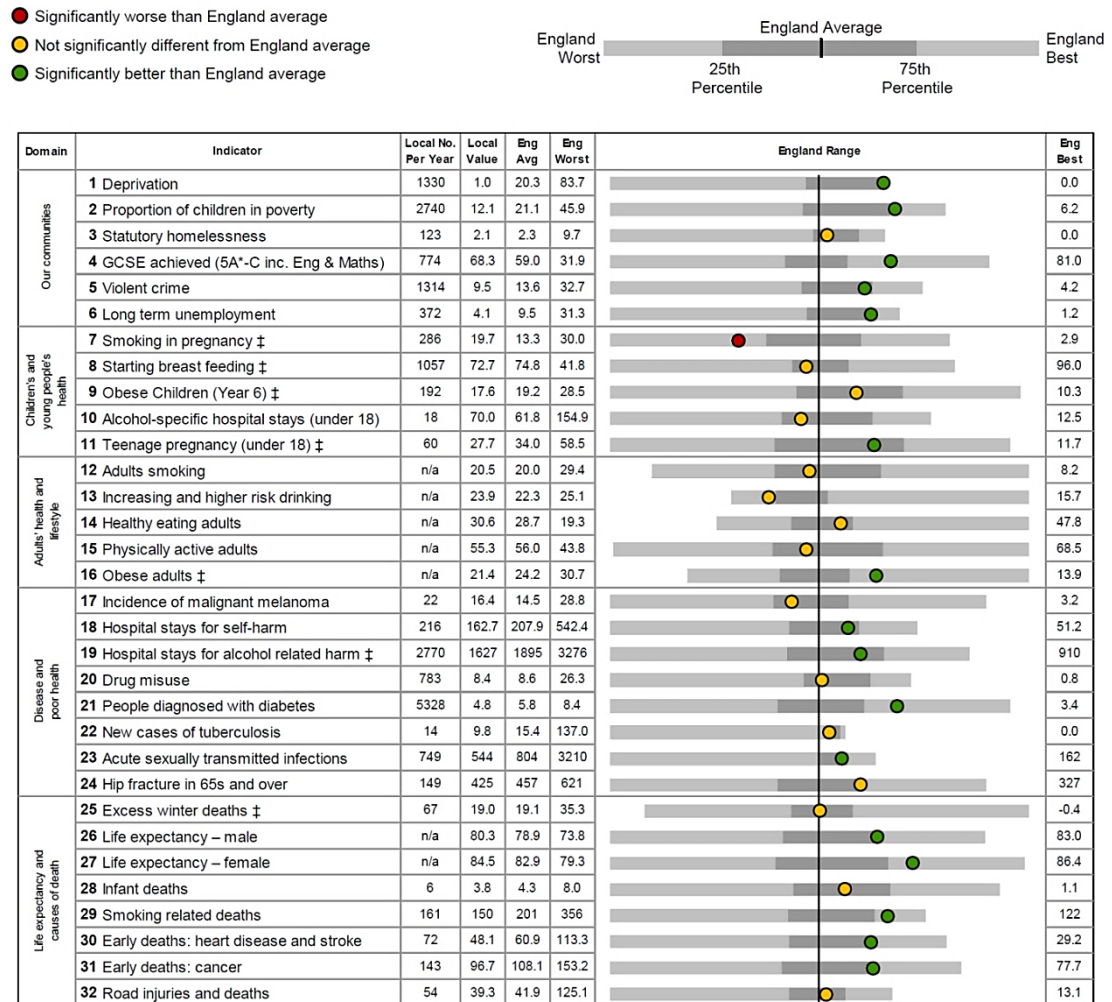
1. In Warwick District from 2002-2012 annual births have increased by nearly 19% and the over 65 population by 13% over the same period.
2. In 2012, there were 1.89 people of working age (those aged under 16 or over 64) for every dependent in Warwick District (1.70 countywide). By 2021, this figure is expected to remain reasonably steady at 1.71 in Warwick District.
3. In Warwick District, 2.2% of those aged 18 to 24 years old are claiming Jobseekers Allowance (which equates to 330 unemployed young people).
4. The number of young people aged 16-18 in Warwick District who are not in employment, education or training (NEET) is 2.8% (115 young people).
5. In Warwick District the number of adults live with at least one Long Term Condition (LTC), is an estimated 38,000 people (147,000 countrywide).
6. Warwick District at 69% has the highest proportion of students achieving the minimal level of educational attainment.
7. In Warwick District the percentage point gap between those pupils eligible for a Free School Meal (24%) and those who are not (69%) was 45 which is the largest gap in the County. This indicator is a measure of the attainment gap associated with economic disadvantage. Disadvantage remains strongly associated with poorer performance. It is a leading Government priority to narrow the attainment gaps between disadvantaged pupils and their peers (13).
8. Warwick District has a rate of Looked After Children (LAC) per 10,000 population at 51 in comparison to the County rate of 62. As a consequence of their life experiences, outcomes for looked after children are traditionally poorer than non-looked after children. In Warwick District, the rate of children subject to Child Protection (CP) per 10,000 population is 45 (119 cases).
9. In Warwick District, the number of obese adults is approximately 25,300.
10. The prevalence of obesity (BMI in excess of 30) in Reception aged children in Warwick District is 6.6% (countywide 7.8%).
11. It is estimated that in Warwick District 17,700 (15.5%) of people aged over 18 are smokers (county wide 19.7%). In Warwick District, approximately 12.4% of women are smokers at time of pregnancy delivery.
12. In Warwick District 8.8% of young people (aged under 16) are drinking alcohol every week (countywide 9%) which is higher than the 2011 national rate of 6%.
13. The rate of under-18 conceptions in Warwick District is 29.6 per 1,000 females aged 15-17 (30.9% countywide). Warwick District has some of the county's lowest rates for sexually transmitted infections (STIs).
14. According to the 2011 Census data, 26,600 (4.9%) Warwickshire residents self-reported that they were in 'very bad' or 'bad' health. In Warwick District, this figure was approximately 5,500 (4% of the District population).
15. In Warwickshire, there are 93,200 residents who self-reported, in the 2011 Census, that daily activities are limited 'a little' or 'a lot' due to ill health. In Warwick District, this figure is 20,400 (14.8%).
16. Mental health inpatient data shows that in 2010/11 there were 698 individual inpatient admissions in Warwickshire. In Warwick District, the number was 183.
17. Fuel poverty in Warwick District was lowest in the County with 13.6% of households (15% countywide in 2011, equivalent to approximately 35,000 households).
18. There are estimated to be 8,627 people, aged 18-64, with a moderate or serious physical disability in Warwick District (34,695 countywide). The figure is expected to grow to 9,031 by 2020 (36,157 countywide).
19. Countywide there were 3,020 Disability Living Allowance claimants aged under 16 (2.9% of the under 16 population). Warwick District has 630 Disability Living Allowance claimants (2.5%).
20. The number for Excess Winter Mortality (EWM) for the period 2007-2010, in Warwickshire, was 276 and in Warwick District it was 71.

From 2013 Joint Strategic Needs Assessment (JSNA) (12)



5.1.6 Figure 5-3 sets out health indicators for the district. The only indicator that is significantly worse than the English average is for smoking in pregnancy. This profile suggests that generally the health of people in Warwick is good compared to the national average.

Figure 5-3: 2013 health indicators for Warwick District





6 Review of the plan's policies

- 6.1.1 This section sets out for each of the Plan's policies commentary on potential opportunities from the health perspective. The policies are considered in relation to their potential effects on health as indicated by Figure 3-1 on page 5. The commentary is primarily based on professional judgement with reference to relevant literature where appropriate. We aim to highlight potential areas of opportunity rather than to provide detailed supporting evidence.
- 6.1.2 In Appendix A: NICE Recommendations (85) we provide summaries of recommendations made by the National Institute for Health and Care Excellence (NICE). In this section we also refer to other literature sources, notably:
- a World Health Organisation (WHO) report on the role of local government in addressing the urban dimensions of health (14).
 - an evidence summary by the WHO Regional Office for Europe on the spatial determinants of health in urban settings (15); and
 - the recent report on health and climate change by the Intergovernmental Panel on Climate Change (IPCC) (16).
- 6.1.3 The summaries are provided as robust position statements to support some of the suggested enhancements to the draft Plan policies.

6.2 Development Strategy

DS1 Supporting Prosperity

- 6.2.1 Being in good employment protects health. Conversely, unemployment contributes to poor health. Getting people into work is therefore critically important in reducing inequalities in health (14). The Plan's strategic policy to provide for growth in both the local and sub-regional economy is therefore supported.

DS2 Providing the Homes the District Needs

- 6.2.2 Affordability of housing is linked to the health and well-being of individuals and families. When a market lacks a sufficient supply of affordable housing, lower income families are often forced to limit expenditures for food, medical care, and other necessities in order to pay rent. The lack of affordable housing within a community can contribute to family residential instability, as families are forced to move frequently, live with other families in overcrowded conditions, or experience periods of homelessness (17). Studies have found that the financial strain of unaffordable housing has been associated with delays in seeking preventive and routine medical care, medication non-adherence, and increased emergency department utilisation (18). The Plan's strategic policy to provide for the Districts' affordable housing needs is therefore supported. It is recommended that large proportions of affordable housing should not be allocated in areas characterised by, for example, high levels of socioeconomic deprivation, high levels of noise or low air quality.
- 6.2.3 Vulnerable groups such as the sick and the elderly are among those most likely to live in poor housing and also tend to spend large amounts of time in their homes exposed to potentially hazardous environments (19). The Plan's strategic policy to ensure a mix of homes suitable for elderly and vulnerable people is therefore supported.
- 6.2.4 There is evidence that the elderly are at particular risk of indoor air quality (20) and achieve better health outcomes with social support (including from social networks in the wider



community) or participation in local activities (21). Consideration could therefore be given to including mention of residential care homes in this policy e.g. sited in residential areas away from sources of air pollution.

- 6.2.5 There is evidence for high levels of inequality between Gypsy and Traveller communities compared to settled communities. Such inequalities include: high infant mortality and perinatal death rates; low birth weight; low immunisation uptake; and high child accident rates (22). The Plan's strategic policy to ensure new housing sites suitable for gypsies and travellers is therefore supported. It is noted that Objective 1 of the Plan makes reference to making "provision for gypsies and travellers in order to deal with local need and historic demand". Consideration could be given to amending this to include 'future demand'. Sites should include access to local services and facilities such as schools, health facilities, fresh food and employment (see commentary on policy H8). We provide further information in Appendix B: Gypsy and Traveller health on page 92.

DS3 Supporting Sustainable Communities

- 6.2.6 Urban land-use patterns are a key influence on physical activity, especially among lower-income groups who get much of their physical activity through daily living activity and travel rather than recreation. Access to local facilities such as shops, schools, health centres and places of informal recreation are important for physical activity. Incorporating accessible and safe green space into urban neighbourhood design increases use and positively influences levels of physical activity, mental wellbeing and resilience and the perceived risk of crime (14). The Plan's strategic policy to promote high quality new development is therefore supported.
- 6.2.7 The policy addresses infrastructure needs to support sustainable communities. It is noted that 'services' are also important factors alongside infrastructure. For example successful public transport requires both good infrastructure and services. Consideration could be given to amending the policy to also include services needed to support communities and businesses.
- 6.2.8 The policy makes reference to using the principles of the Warwick District Council's garden towns, villages and suburbs prospectus (23). This approach is supported as the principles are broadly consistent with many aspects of creating and supporting healthy communities.
- 6.2.9 The explanatory notes to this policy state that development needs to be accompanied by timely infrastructure to enable new communities to have access to the facilities and services they need. This is an important point. NICE guidance (24) recommends providing specific support for people at a 'transition point' in their lives, for instance, when they are changing job, house or school. At these times people may be open to trying a new mode of transport or new types of recreation. For example ensuring public transport infrastructure and services are operating before people move into new developments could reduce car dependence.

DS4 Spatial Strategy

- 6.2.10 The use in the first instance of previously developed land within urban areas is supported as this is consistent with the regeneration of brown field sites ahead of development on green field sites. Green field sites tend to play a greater role in physical activity and mental wellbeing. It is noted that the most deprived areas of the district are located in Leamington Spa; these are areas that could benefit from regeneration.
- 6.2.11 The policy's direction that housing on greenfield sites should be located on the edge of urban areas in sustainable locations close to areas of employment or where community facilities such as shops, bus services, medical facilities and schools are available or can be



made available is supported. There is an opportunity to note that new housing should be capable of being linked to such facilities via safe walking and cycling routes.

- 6.2.12 There is also an opportunity to note that new housing and employment should not cause current or future communities significant: disturbance (e.g. noise and vibration); nuisance (e.g. odour and dust); reduced air quality (e.g. plant and vehicle emissions); or adverse transport impacts (e.g. congestion, community severance and road safety).

DS5 Presumption in Favour of Sustainable Development

- 6.2.13 The policy's presumption in favour development that improves the economic, social and environmental conditions in the area is supported.

- 6.2.14 It is noted that the 'social' dimension of sustainable development, as defined by the NPPF (25), has a strong health focus. The NPPF states the social role of the planning system is to support:

- "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".

- 6.2.15 It is also noted that case law has shown that promoting social objectives (such as health promotion) can be a material consideration for planning decisions (26).

- 6.2.16 There is an opportunity to explicitly note that health is a material consideration to sustainable development decisions, particularly where vulnerable populations may be affected.

DS6 Level of Housing Growth

- 6.2.17 It is not the role of this report to review the Council's projections of housing demand.

- 6.2.18 The Coventry & Warwickshire joint Strategic Housing Market Assessment proposes 12,300 new houses between 2011 and 2029 in Warwick (on average 683 per year) (27). As the Plan's numbers are above this it would appear that appropriate provision is being made.

DS7 Meeting the Housing Requirement

- 6.2.19 It is noted that only around half of the housing allocation to meet the district's housing requirements will be allocated in the Plan. It will therefore be important that such allocations, where feasible, take into consideration cumulative impacts from completed developments, committed sites, and windfall sites².

DS8 Employment Land

- 6.2.20 It is not the role of this report to review the Council's projections of employment demand.

- 6.2.21 The policy's allocation to redevelopment of current employment land that is not well suited to its current function (e.g. due to its proximity to residential areas) is supported. These sites are:

- Sydenham Industrial Estate, Royal Leamington Spa
- Cape Road / Millers Road, Warwick
- Montague Road Industrial Estate, Warwick
- Common Lane, Kenilworth

- 6.2.22 There is an opportunity to promote mixed use and reduced reliance on car journeys by retaining some employment use in these areas. Use class B1 may be appropriate being a use which can be carried out in any residential area without detriment to the amenity of

² NPPF defines windfall sites as: sites which have not been specifically identified as available in the Local Plan process. They normally comprise previously-developed sites that have unexpectedly become available.



that area by reason of noise, vibration, smell, fumes, smoke, soot, ash, dust or grit (2). This would not be inconsistent with the aims of the Plan's policy DS17 (canal side regeneration). It is noted that potential B1 uses would need to be appropriate to the sites not having easy access to the strategic road network.

DS9 Employment Sites to be Allocated

- 6.2.23 The distinction between different B use classes is supported as this allows for sensitive areas to be limited to B1 uses.
- 6.2.24 E1: Land North of Gallows Hill, Warwick. The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has low deprivation (29). The land is adjacent to Warwick Technology Park which had a permit up until 2011 for medical radioactive disposals (30). There do not appear to be further permits or reported pollution incidents. The site is not registered as an active or historic landfill (30). The site is not within an air quality management area (AQMA) (31). The site appears to currently be in agricultural use (32). The site would link Warwick Technology Park to the west with Warwick Heathcote Industrial Estate to the east. The Plan's policy DS11 overlaps the area of E1 with new housing development H01 (1,190 dwellings) and associated infrastructure uses. The infrastructure requirements and other uses include: extended secondary school; primary school; health facilities; local centre; and other community facilities. Housing development H02 (1,505 dwellings) lies directly to the south east of E1. Discussion of H01 and H02 are set out under policy DS11, however it is noted that the infrastructure requirements of these major housing developments are likely to significantly impact on the type of employment uses for E1.
- Given the close proximity of planned future residential development near E1, it is recommended that master planning and detailed planning applications are required to demonstrate that there are no negative impacts to surrounding community populations or other receptors (e.g. homes, schools or amenity land). Consideration should be given to requiring detailed Health Impact Assessments where non-B1 uses are proposed.
- 6.2.25 E2: Land at Thickthorn, Kenilworth. The location is indicated on Policy Map 5 – Kenilworth (28). The surrounding area has low deprivation (29). There do not appear to be any Environment Agency permits or reported pollution incidents in the vicinity. The site is not registered as an active or historic landfill (30). The site is not within an air quality management area (AQMA) (31) but is adjacent to the A46 which is likely to have elevated transport related air pollution. The site appears to currently be in equestrian use (32). The Plan's policy DS11 overlaps the area of E2 with new housing development H06 (760 dwellings) and infrastructure requirements for a local centre. Discussion of H06 is set out under policy DS11, however it is noted that the infrastructure requirements of this major housing development is likely to significantly impact on the type of employment uses for E2.
- Given the close proximity of planned future residential development near E2, it is recommended that master planning and detailed planning applications are required to demonstrate that there are no negative impacts to surrounding community populations or other receptors (e.g. homes, schools or amenity land). Consideration should be given to requiring detailed Health Impact Assessments where non-B1 uses are proposed.
- 6.2.26 E3: Opus 40, Birmingham Road, Warwick. The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has moderate deprivation (29). There do not appear to be any Environment Agency permits or reported pollution incidents in the vicinity. The site is not registered as an active or historic landfill (30). The site is not within an air quality management area (AQMA) (31) but is adjacent to the A46 which is likely to have elevated transport related air pollution. The site appears to currently



be used as a car park (32). To the east of E3 is Warwick Cemetery. The B1 use allocation for a high quality office park is supported subject to suitable design controls to manage any significant air and noise impacts from the A46.

DS10 Broad Location of Allocated Sites for Housing

- 6.2.27 It is noted that the policy allocates sites on the edge of urban areas to be of sufficient size to deliver supporting services including schools, GP services and local centres as appropriate. It will be important that master planning of such sites occurs to ensure that such infrastructure is suitably located and phased.

DS11 Allocated Housing Sites

- 6.2.28 The following section aim to provide constructive commentary on each of the Plan's housing sites from a strategic health perspective. General messages applicable to all sites are:

- Planners should ensure that local and regional infrastructure and services (including GP services) are adequate to support the increased population.
- Developers should manage construction to minimise impacts of disturbance, nuisance and pollution.
- This assessment does not preclude the need for more detailed health assessment as individual applications for development are brought forward.

- 6.2.29 Unless indicated otherwise the housing sites do not appear to be:

- in the vicinity of any Environment Agency emissions permits or reported pollution incidents (30);
- in flood risk zones 2 or 3 (30);
- registered as an active or historic landfill (30); or
- within an air quality management area (AQMA) (32).

- 6.2.30 The order of the housing allocations has been rearranged from that shown in the Plan in the order of the number of planned dwellings.

- 6.2.31 H01: Land West of Europa Way (1,190 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). There is potential for this large housing allocation on the outskirts of Leamington Spa / Warwick to increase road traffic in both centres. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established Warwick AQMA and Leamington Spa AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently agricultural, with Warwick Technology Park to the south, Heathcote industrial estate to the east and residential areas to the north (32). As noted in regard to policy DS9 above the site overlaps with employment site E1. Given the proximity consideration could be given to detailed Health Impact Assessments of any non-B1 uses in E1. Master planning of the site will be important to ensure that the associated infrastructure (including local GP services, shops and community facilities) are suitably located and phased. It is noted that overhead power lines run through H01. The scientific evidence of effects from such EMF exposure suggest health effects are unlikely (33), however there are still gaps in the scientific knowledge (34). Although there is insufficient evidence for a policy statement, caution may be advised. There is an opportunity to ensure that associated open space provision within H01 includes connecting green corridors to surrounding residential areas.

- 6.2.32 H02: Land south of Harbury Lane (excluding former sewage works) (1,505 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has low deprivation (29). There is potential for this large housing



allocation on the outskirts of Leamington Spa to increase road traffic in the town centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established Leamington Spa AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently agricultural, with residential areas to the north (32). The policy notes that an important buffer of open space to the south to be delivered as a Country Park. The park includes an stretch in flood risk zone 3 (30). The park is supported as incorporating accessible and safe green space into urban neighbourhood design increases use and positively influences levels of physical activity, mental wellbeing and resilience and the perceived risk of crime (14). There is an opportunity to encourage physical activity and active transport by linking the new residential areas to the proposed new park and ride (policy TR5) using high quality safe walking and cycling routes through the Country Park.

- 6.2.33 H06: East of Kenilworth (Thickthorn) (760 dwellings). The location is indicated on Policy Map 5 - Kenilworth (28). The surrounding area has low deprivation (29). There is potential for this housing allocation to increase road traffic in Kenilworth town centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently agricultural and leisure (32). The loss of the leisure use (rugby and cricket pitches (32)) is not consistent with promoting physical activity. It is unclear if these are school facilities that will be re-provided for as part of the ED2 development. As noted in regard to policy DS9 above the site overlaps with employment site E2. Given the proximity consideration could be given to detailed Health Impact Assessments of any non-B1 uses in E2. To the east the site borders the A46. Consideration should be given to appropriate building design to ensure that noise, and air pollution from the road does not cause significant impacts to new residents. The site should promote mixed communities and avoid allocating large proportions of affordable housing in areas considered less desirable (e.g. areas with high deprivation, pollution or disturbance). There is an opportunity to retain a portion of the current green space as a community park within H06, including connecting green corridors to surrounding residential areas.
- 6.2.34 H03: East of Whitnash/South of Sydenham (300 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has low deprivation (29). There is potential for this large housing allocation on the outskirts of Leamington Spa to increase road traffic in the town centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established Leamington Spa AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently agricultural (32). The eastern side of H03 includes area of flood risk zone 3 (30). Health effects from flooding include infectious diseases, stress and loss of essential urban infrastructure and services. Children, older people, people with disabilities, ethnic minorities and those with low incomes are vulnerable to the effects of flooding (14). Suitable flood risk management measures should therefore be required as part of development plans. The site is adjacent to the railway line to the west, with residential uses beyond. Consideration should be given to appropriate building design to ensure that noise, vibration and air pollution from the railway does not cause significant impacts to new residents. The site should promote mixed communities and avoid allocating large proportions of affordable housing in areas considered less desirable (e.g. areas with high deprivation, pollution or disturbance). There



is an opportunity to retain a portion of the current green belt as a community park within H03, including connecting green corridors to surrounding residential areas.

- 6.2.35 H04: Red House Farm (250 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area (particularly to the north) has high deprivation (29) and should therefore be considered vulnerable. The plan notes that this allocation will provide different types and tenures, and support regeneration in Lillington. There is potential for this large housing allocation on the outskirts of Leamington Spa to increase road traffic in the town centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established Leamington Spa AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently agricultural (paddocks), with a Seven Trent Water's waste treatment works adjoining to the south (32). The layout of the waste treatment works appears to reduce visual impact; however consideration should be given to appropriate building design to ensure that noise and possibly odour nuisance from the works does not cause significant impacts to new residents. The site should promote mixed communities and avoid allocating large proportions of affordable housing in areas considered less desirable (e.g. areas with high deprivation, pollution or disturbance). It is noted that overhead power lines run through H01. The scientific evidence of effects from such EMF exposure suggest health effects are unlikely (33), however there are still gaps in the scientific knowledge (34). Although there is insufficient evidence for a policy statement, caution may be advised. There is an opportunity to retain a portion of the current green belt as a community park within H04, including connecting green corridors to surrounding residential areas.
- 6.2.36 H02: Former Sewage Works, south of Harbury Lane (250 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has low deprivation (29). Part of the site includes a registered historic landfill (Heathcote Sewage Works) (30). Consideration should be given to managing any soil and water contamination, as well as any gas migration, particularly where it could accumulate within buildings. The site appears to currently be overgrown with the outline of settling ponds and other structures still visible (32). To the north is Heathcote Park, comprised of retirement bungalow-style residential (mobile) homes. Such properties are likely to be occupied during the day and may have relatively low noise attenuation. Construction activities in the vicinity should therefore treat this population as vulnerable (particularly for noise and air quality impacts). As the Heathcote Park is advertised as suitable for the elderly, less mobile and wheelchair users (35) consideration should be given to appropriate street layouts and road safety measures at nearby junctions and the surrounding road network (particularly if access is intended to be through this existing residential area). The policy acknowledges that the site requires extensive remediation and cannot come forward until a suitable access from an adjoining site is made available.
- 6.2.37 H09: Kenilworth School Site (250 dwellings). The location is indicated on Policy Map 5 - Kenilworth (28). The surrounding area has low deprivation (29). There is potential for this housing allocation to increase road traffic in Kenilworth town centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently a school (32). This educational site is being replaced by the new ED2 consolidated educational site which lies to the east. The surrounding land uses are residential. There is an opportunity to retain a



portion of the current playing fields as a community park with connecting green corridors with the surrounding residential areas.

- 6.2.38 H10: Station Approach, Leamington (220 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has moderate deprivation (29). The site appears to currently be used for parking and by as a bus company depot (32). The site is adjacent to the railway line to the south, with industrial uses beyond. To the north are residential areas. Consideration should be given to appropriate building design to ensure that noise, vibration and air pollution from the railway does not cause significant impacts to new residents. The site should promote mixed communities and avoid allocating large proportions of affordable housing in areas considered less desirable (e.g. areas with high deprivation, pollution or disturbance).
- 6.2.39 H23: Bishops Tachbrook – Land south of the school (150 dwellings). The location is indicated on Policy Map 16 - Bishops Tachbrook (28). The surrounding area has moderate deprivation (29). The site appears to currently be in agricultural use (32). The area to the north is a school. Consideration should be given to appropriate management and phasing to ensure that noise and air pollution from construction does not cause significant impacts to pupils. Environmental noise can cause problems with reading, recall, recognition and attention (15) and children have a heightened vulnerability to respirable dust (36).
- 6.2.40 H11: Land at Montague Road (140 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has low deprivation (29). There is potential for this housing allocation to increase road traffic in Warwick centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established Warwick AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site appears to currently be used as a school and ambulance station (32). The policy explains that the land is becoming available as a result of rationalisation or replacement of public sector land and services and could be developed in phases. It is understood from Public Health Warwickshire that the ambulance station is redundant and that the loss of the ambulance station does not affect the areas emergency response capability. The site is adjacent to the canal and there is an opportunity to extend the canal path which runs to the west along this site to promote physical activity. To the east is an industrial estate. It will be important to ensure that an appropriate buffer zone with this area is established to minimise disturbance, pollution and nuisance impacts (e.g. uses include a vehicle repair centre) (32).
- 6.2.41 H12: Kenilworth VI Form College (130 dwellings). The location is indicated on Policy Map 5 - Kenilworth (28). The surrounding area has low deprivation (29). There is potential for this housing allocation to increase road traffic in Kenilworth town centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently a six form college (32). The educational facilities are to be relocated under policy DS12 to allocation ED2 (consolidating six form education along with primary and secondary education facilities to a single site). To the north, west and east are residential areas, to the south are allotments and arable farming.
- 6.2.42 H13: Soans Site, Sydenham Drive (100 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has low deprivation (29). The site is not within an air quality management area (AQMA) (31). However there is



potential for this housing allocation to increase road traffic in Leamington Spa centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established Leamington Spa AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently part of an industrial estate (32). The policy notes that the site is currently being assembled for housing development utilising an area where vacancy rates in existing industrial premises are high. To the north is the canal with a primary school beyond. The school should be considered a vulnerable receptor for construction impacts (particularly air quality and noise). The canal path runs along the far side of the canal. To the east are residential areas. The industrial estate continues to the south and west. It will be important to ensure that an appropriate buffer zone with this area is established to minimise disturbance, pollution and nuisance impacts.

- 6.2.43 H14: Riverside House (100 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has moderate deprivation (29). The south of the site appears to be in flood risk zone 3 (30). Health effects from flooding include infectious diseases, stress and loss of essential urban infrastructure and services. Children, older people, people with disabilities, ethnic minorities and those with low incomes are vulnerable to the effects of flooding (14). Suitable flood risk management measures should therefore be required as part of development plans. There is potential for this housing allocation to increase road traffic in Leamington Spa centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established Leamington Spa AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently part of Warwick District Council offices (32). The canal lies to the south with the towpath running along the north bank. There is an opportunity to link the residential development to the towpath in order to encourage physical activity. To the east are various clubs and social facilities some of which could be considered as vulnerable receptors for construction impacts. To the north and west are residential areas.
- 6.2.44 H25-26: Cubbington (35+65 dwellings). The location is indicated on Policy Map 13 - Cubbington (28). The surrounding area has low deprivation (29). H25 is currently used for allotments and H26 is arable land crossed by a public footpath (32). The potential loss of both allotments and the public footpath is inconsistent with promoting healthy active lifestyles. Consideration should be given to making alternative provision of such amenities. The policy notes that H26 (65 dwellings) will be phased to support community integration.
- 6.2.45 H07: Crackley Triangle (90 dwellings). The location is indicated on Policy Map 5 - Kenilworth (28). The surrounding area has low deprivation (29). The site appears to currently be in agricultural use (32). To the north are fields, to the west are residential areas and to the east is a railway line. To the south is Kenilworth Common local nature reserve. As the site is adjacent to the railway line to the east, consideration should be given to appropriate building design to ensure that noise, vibration and air pollution from the railway does not cause significant impacts to new residents. The site should promote mixed communities and avoid allocating large proportions of affordable housing in areas considered less desirable (e.g. areas with high deprivation, pollution or disturbance).
- 6.2.46 H16: Court Street (75 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has moderate deprivation (29). To the east is an existing permitted waste treatment facility operating on the site, however there do not appear to be any reported pollution incidents in the vicinity. There is potential for this housing allocation to increase road traffic in Leamington Spa centre. Town centre air



quality issues should be carefully monitored over the plan period (particularly with regard to the established Leamington Spa AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently an industrial estate (32). Given the current industrial uses consideration should be given to ensuring appropriate remediation of the site prior to development for residential use. The canal lies to the south with the towpath running along the north bank. There is an opportunity to link the residential development to the towpath in order to encourage physical activity. Beyond the canal to the south appears to be a cooker manufacturing plant (32). The railway runs to the north. The area to the east appears to be allocated to protected Town Centre Employment Areas (TC12). This is an area where redevelopment or change of use of existing employment land and buildings to non-B Class uses will not be permitted. The area currently includes a waste treatment facility. It is noted that introducing a residential use adjacent to the TC12 area may result in future restrictions on the operations and emissions of the employment uses that the policy aims to protect. Consideration should be given to appropriate building design to ensure that noise and air pollution from the TC12 allocation, cooker manufacturing plant and railway do not cause significant impacts to new residents. The site should promote mixed communities and avoid allocating large proportions of affordable housing in areas considered less desirable (e.g. areas with high deprivation, pollution or disturbance).

- Given the close proximity of planned future residential development in H16, consideration could be given to requiring master planning and detailed planning applications for any developments on, or changes of use to, land covered by policy TC12 to demonstrate that there are no negative impacts to surrounding community populations or other receptors (e.g. homes, schools or amenity land). Consideration should also be given to requiring detailed Health Impact Assessments where non-B1 uses are proposed.

- 6.2.47 H24: Burton Green – Burrow Hill Nursery (60 dwellings). The location is indicated on Policy Map 6 - Burton Green (28). The surrounding area has low deprivation (29). The site appears to currently be in use as a garden nursery (32). To the north is an area of Surface Interest associated with the HS2 Safeguarding Directions (July 2013). The HS2 area of Surface Interest also affects the Kenilworth Green Way Project route along the associated disused railway which promotes physical activity. Cumulative impacts with HS2 should be considered.
- 6.2.48 H15: Leamington Fire Station (60 dwellings). The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28). The surrounding area has moderate deprivation (29). There is potential for this housing allocation to increase road traffic in Leamington Spa centre. Town centre air quality issues should be carefully monitored over the plan period (particularly with regard to the established Leamington Spa AQMA (31)). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in reducing car borne traffic movements. The site is currently a fire station (32) to be closed as part of service and facility rationalisations. It is beyond the scope of this report to examine such rationalisation; however consideration should be given to ensuring that the loss of the fire station does not affect the areas emergency response capability. The surrounding areas are residential.
- 6.2.49 H19: Baginton – Land north of Roswood Farm (35 dwellings). The location is indicated on Policy Map 8 - Baginton, Bubbenhall and Coventry Airport (28). The site is near the south western end of Coventry airport. Consideration should be given to suitable design controls to manage any significant air and noise impacts from the airport to new residents. The surrounding area has low deprivation (29). The site and its surroundings appear to



currently be in agricultural / equestrian use (32).H17: Garage Site, Theatre Street (20 dwellings). The location is indicated on Policy Map 4 - Warwick Town Centre (28). The surrounding area has low deprivation (29). The site is within the Warwick air quality management area (AQMA) (31). Establishing high quality walking, cycling and public transport routes from the new housing to the centre as an alternative to car use will be important in avoiding adverse air quality impacts. The site appears to currently be a vehicle MOT test centre (32). To the west is a multi-storey car park; to the east are retail areas. Given the current use consideration should be given to ensuring appropriate remediation of the site prior to development for residential use. Consideration should be given to appropriate building design to ensure that air pollution from the AQMA does not cause significant impacts to new residents (outdoor air quality being a predictor of indoor air quality) and does not exacerbate poor air quality.

6.2.50 H08: Oaklea Farm, Finham (20 dwellings). The location is indicated on Policy Map 8 - Baginton, Bubbenhall and Coventry Airport (28). The site is on the southern outskirts of Coventry. The surrounding area has low deprivation (29). The site is immediately adjacent to the Coventry city wide AQMA and by creating new residential receptors the AQMA could be extended to include this area. The site appears to currently be in residential use (32). Part of the site is in flood zone 2. Suitable flood risk management measures should therefore be required as part of development plans. To the north and west are residential areas. To the east the site is adjacent to the A46; consideration should be given to suitable design controls to manage any significant air and noise impacts to new residents. The following sites have been grouped to reduce repetition. The surrounding areas has low to moderate deprivation (29). No significant strategic health implications are identified.

- H20-22: Barford (8+60+12 dwellings). The location is indicated on Policy Map 18 - Barford (28).
- H27: Hampton Magna – South of Arras Boulevard (100 dwellings). The location is indicated on Policy Map 20 - Hampton Magna and Hampton on the Hill (28).
- H28: Hatton Park – North of Birmingham Road (80 dwellings). The location is indicated on Policy Map 21- Hatton Park (28).
- H29-33: Kingswood – (10+10+6+12+5 dwellings). The location is indicated on Policy Map 29 - Kingswood (28). The proximity of the canal presents the opportunity for links with the towpath to promote physical activity.
- H34: Leek Wootton (30+5+5+5 dwellings). The location is indicated on Policy Map 12 - Leek Wootton, Hill Wootton, Old Milverton and Blackdown (28).
- H38: Radford Semele – North of Southam Road (50 dwellings). The location is indicated on Policy Map 15 - Radford Semele (28).
- H18: Former Aylesbury House, Hockley Heath (20 dwellings). The location is indicated on Policy Map 32 - Aylesbury House (28).

DS12 Allocation of Land for Education

6.2.51 ED1: is located adjacent to Warwick Technology Park. Up until 2011 permits from the Environment Agency allowed regulated pollution emissions all from this site. Although there is no information to suggest a risk from such permits. It is noted that in locating new primary, secondary and 6th form education centres adjacent to the technology estate there may be more stringent restrictions on any permits sort by this site in the future (children being a particularly vulnerable receptor). This could affect occupancy of the technology estate.

6.2.52 ED2: East of Kenilworth (Southcrest Farm). The site is for new primary, secondary and 6th form education centres. The location is indicated on Policy Map 5 - Kenilworth (28). The



surrounding area has low deprivation (29). The consolidation of all the areas educational facilities to one site may give rise to congestion, air quality and road safety issues in the surrounding road network, particularly Glasshouse Lane. NICE recommend developing and implementing school travel plans that encourage children to walk or cycle all or part of the way to school, including children with limited mobility (24). Consideration should be given to the early establishment of high quality walking, cycling and public transport route as an alternative to car use for journeys to and from the ED2 site.

- 6.2.53 Given the extensive educational redevelopment plans for both ED1 and ED2 sites, consideration should be given to appropriate management and phasing to ensure that noise and air pollution from construction does not cause significant impacts to pupils. Environmental noise can cause problems with reading, recall, recognition and attention (15) and children have a heightened vulnerability to respirable dust (36).
- 6.2.54 There is an opportunity to provide a policy hook associated with the ED2 development to limit the number of hot food takeaways (A5 uses) and possibly other unhealthy food outlets within a reasonable distance of this site (e.g. 400m).

DS13 Allocation of Land for a Country Park

- 6.2.55 This policy is supported as access to nearby parks and natural settings is associated with improved mental health and reduced anxiety (37) and may also encourage physical activity. Opportunities to include other Country Park areas could be considered. Creating well maintained safe walking and cycling routes within the park will be important for its use.

DS14 Allocation of Land for Community Hub

- 6.2.56 The location is indicated on Policy Map 2 - Leamington, Warwick and Whitnash (28) and lies between the allocation for ED1 (education) and E1 (employment). The inclusion of a community meeting space and other community facilities is supported for their benefits on promoting access by active travel as well as benefits to social capital. However the mere provision of community facilities is not enough to constitute social capital, attention needs to be paid to the processes whereby such facilities are established and run. Greater participation by, and representation of, citizens in the conceptualisation and implementation of such facilities is an important element of success (38). The inclusion of a new medical centre is supported; the level of provision has not been assessed.
- 6.2.57 Public Health Warwickshire are currently developing a business case document based on the Bromley-by-Bow Centre as an example of good community hub practice. The Plan could consider this example when developing its plans for community hubs.
- 6.2.58 There is an opportunity to provide a policy hook associated with the DS14 local retail facilities to promote healthy eating and limit hot food takeaways (A5 uses) and possibly other unhealthy food outlets given the close proximity to the ED1 schools site.

DS15 Comprehensive Development of Strategic Sites

- 6.2.59 It is beyond the scope of this report to assess the level of infrastructure required by the new development plans. However the provision of supporting infrastructure alongside development, including strategic site planning (e.g. master planning) is supported. As noted for policy DS3 NICE guidance (24) recommends providing specific support for people at a 'transition point' in their lives, for instance, when they are changing job, house or school. At these times people may be open to trying a new mode of transport or new types of recreation. Consideration should be given to early phasing of supporting infrastructure to take advantage of this opportunity.
- 6.2.60 As noted in DS11 for many of the strategic urban extensions there is the potential for air quality impacts from associated car journeys to the main centres. Strategic planning of active and public transport systems to reduce car use will therefore be important.



DS16 Sub-Regional Employment Site

- 6.2.61 The allocation of a large area of employment land around Coventry airport for local employment opportunities is supported as good quality employment is an important determinant of health.
- 6.2.62 Given the potential for conflicts between residential and some more intensive business uses there is an opportunity to specify that areas adjoining current or future residential areas (e.g. H19) (or schools or open spaces used for physical activity) should be buffer zones.
- 6.2.63 Buffer zones could include either green infrastructure³ or allocation to B1 uses. B1 may be appropriate being a use which can be carried out in any residential area without detriment to the amenity of that area by reason of noise, vibration, smell, fumes, smoke, soot, ash, dust or grit (2).
- 6.2.64 Given the importance of retaining good quality jobs in the district the policy could also seek to protect important employers where there is a reasonable expectation that introducing adjoining residential areas would result in nuisance complaints (particularly noise) due to the nature of the commercial operations. Where such incompatibilities can be anticipated a buffer zone (B1 use or green infrastructure) could be used.
- 6.2.65 The policy and the associated map (policy map 8.) include land that is marked as an overlap between the Sub Regional Employment Allocation and Green Belt. The policy explanation describes that this will be retained as open space. Consideration should be given to more clearly designating this as a protected buffer zone to surrounding community receptors, e.g. to avoid it being used for 'open space' development such as parking.
- 6.2.66 It is noted that any general industry (B2) Advanced Manufacturing and Engineering uses may include the need for air quality abatement including stacks for dispersion of airborne pollutants. The compatibility of such structures and associated plumes with the airport should be considered. This issue links with policy TR6 (safe operation of aerodromes).

DS17 Supporting Canalside Regeneration and Enhancement

- 6.2.67 Promoting physical activity through regeneration of canal side areas including towpaths is supported. There is an opportunity to note the potential role of towpaths in promoting active travel if they are attractive, well maintained, safe and link suitable destinations.

DS18 Regeneration of Lillington

- 6.2.68 Regeneration of one of the district's most deprived wards is supported, as is the recognition of the need for environmental and housing improvements and employment opportunities in the ward. However consideration should be given to limiting uses that could perpetuate deprivation or contribute to poor health outcomes. Such uses could include: betting shops, payday loan shops and fast food outlets. The small shopping centre appears to already include at least one betting shop and several hot food takeaways (32). For an example of how such restrictions could be achieved, see section 7.7 of this report for supporting evidence for limiting fast food takeaways.

DS19 Green Belt

- 6.2.69 Green belts provide important areas to pursue physical activity and improve mental wellbeing. It is acknowledged that there are circumstances where the loss of green belt must be balanced with development needs. Where green belt is lost, particularly land with public rights of way or other leisure use, alternative provision for promoting physical activity should be made.

³ Department for Communities and Local Government (25) defines green infrastructure as: a network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.



- 6.2.70 NICE recommend actively promoting public parks and facilities as well as more non-traditional spaces (for example, car parks outside working hours) as places where children and young people can be physically active (39).

DS20 Accommodating Housing Need Arising from Outside the District

- 6.2.71 The consideration of the district within the context of wider housing demand is supported. Should the need arise under this policy to consider additional housing allocations it is recommended that early input is sort from Public Health Warwickshire.

6.3 Prosperous Communities

PC0 Prosperous Communities

- 6.3.1 The policy to promote sustainable economic development is broadly supported.
- 6.3.2 There is the opportunity for the policy to include a principle to support healthy behaviours and healthy communities. Such a policy hook could help to control the proliferation of some types of outlet that are linked to poor health outcomes, e.g. betting shops, payday loans shops and hot food takeaways.

The Economy

EC1 Directing New Employment Development

- 6.3.3 As noted in the above commentary on DS9 and DS11 there is an opportunity to allocated specific buffer zones of B1 use class in employment zones where these zones adjoin sensitive community receptors. It is noted that the NPPF defines ‘main town centre uses’ as included offices (B1 (a)) (25). Given that it may therefore be appropriate to direct offices to town centres for vitality and viability purposes, buffer zones away from main town centres could be of B1 use class other than offices. The practically of such buffer zones separating other employment uses will in part depend on the size of the employment zones. Given their modest size E1 and E2 may therefore have limited potential for using buffer zones. Consideration should also be given to protecting buffer zones from changes of use under permitted development rights. One option could be to consider use of Article 4 directions to cover the buffer zones.

EC2 Farm Diversification

- 6.3.4 The protection of best and most versatile agricultural land is supported in line with reducing food poverty and increasing food security. The issues of ‘food poverty’ and ‘food security’ link to affordable healthy food:
- In 2005 the Department of Health defined food poverty as the inability to afford, or to have access to, food to make up a healthy diet (40).
 - According to the Food and Agriculture Organization of the United Nations (FAO), food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (41)

EC3 Protecting Employment Land and Buildings

- 6.3.5 National planning policy is clear that Local Plans should meet the full, objectively assessed need for both market and affordable housing in the housing market area.
- 6.3.6 The policy's explanatory text notes that although the Plan allocates sufficient land for the provision of its total housing requirement over the plan period, the affordable housing element may not be fully deliverable through Policy H2.
- 6.3.7 Consideration should be given to the appropriateness of converting existing employment land under policy EC3 to sole affordable housing use. There is a risk of allocating large



proportions of affordable housing in areas considered less desirable (e.g. areas with high deprivation, pollution or disturbance). Particularly if the change of use affects only part of a large employment site. This could also be inconsistent with creating mixed communities.

- It is recommended that the district's full affordable housing need is met through policies H2 and H3. If the provision of policy EC3 is retained, any affordable housing development under policy EC3 will need to be very carefully considered and should be the subject of detailed Health Impact Assessment.

Retail and Town Centres

TC1 Protecting and Enhancing the Town Centres

6.3.8 As with policy PC0 above there is the opportunity for the policy to mention supporting healthy behaviours and healthy communities. Such a policy hook could help to control the proliferation of some types of outlet that are linked to poor health outcomes, e.g. betting shops, payday loans shops and hot food takeaways.

6.3.9 Given appropriate local policy support there is an opportunity for public health arguments to be made alongside those of shopping frontage vitality and viability in resisting overconcentration of such uses.

TC2 Directing Retail Development

6.3.10 Urban land-use patterns are a key influence on physical activity, especially among lower-income groups who get much of their physical activity through daily living activity and travel rather than recreation. Access to local facilities such as shops, schools, health centres and places of informal recreation are important for physical activity (14). The policy's aim of maintaining the shopping function of the town centres and reducing reliance on car journeys to access larger retail developments is therefore supported.

TC3 Safeguarding Existing and Potential Retail Floorspace

6.3.11 As with TC2 the protection of retail areas is supported. It is noted that the policy does not restrict changes of use within Use Class A. Permitted development rights would therefore allow for the proliferation of betting shops or payday loan shops (both A2 uses) from A3 (restaurants and cafes), A4 (drinking establishments) or A5 (hot food takeaways) uses (2). Consideration could be given to use of an Article 4 Direction to cover specific shop frontages where proliferation of such uses is an emerging concern.

TC4 and TC5 Shopping Growth in Chandos Street & Royal Leamington Spa Town Centre

6.3.12 Maintaining Leamington Spa town centre as a sub-regional shopping destination is supported. The redevelopment of the Chandos Street car park has the potential to reduce car journeys, congestion and air pollution if supported with effective public and active transport alternatives.

6.3.13 There is an opportunity to 'prioritise' rather than just promote active modes of transport, such as walking and cycling as well as their integration with public transport to support longer journeys.

6.3.14 There is also an opportunity to include good quality open spaces and street furniture that promotes physical activity.

6.3.15 NICE recommend (42) encouraging local planning departments to prioritise the need for people (including those whose mobility is impaired) to be physically active as a routine part of their daily life (for example, when developing the local infrastructure and when dealing with planning applications for new developments).



- 6.3.16 NICE recommend public open spaces are maintained to a high standard; are safe, attractive and welcoming to everyone; can be reached on foot, by bicycle and using other modes of transport involving physical activity; and are accessible by public transport (43).
- 6.3.17 NICE recommend that planners make provision for children, young people and families to be physically active in an urban setting (39). They should ensure open spaces and outdoor facilities encourage physical activity (including activities which are appealing to children and young people, for example, in-line skating).
- 6.3.18 Construction impacts to local residential and other sensitive community receptors should be considered.

TC6 and TC7 Primary & Secondary Retail Frontages

- 6.3.19 Consideration could be given to including a provision that changes of use from A1 to other Class A uses will take into account the potential health impacts from over concentration of certain uses e.g. betting shops, payday loans shops and hot food takeaways. As noted in the commentary on policy TC3 consideration could also be given to restricting permitted development rights for subsequent changes between A2-A5 uses.

TC8 Warwick Café Quarter

- 6.3.20 The proposed café quarter in Market Place is surrounded by, but not part of, the Warwick AQMA. Consideration could be given to air quality monitoring in Market Place if it is to be a centre of alfresco café culture. An air quality report informing the Plan suggests that compared to other parts of the AQMA, those areas closest to Market Place have relatively low air pollution (44). The report notes that Market Place was modelled, but does not provide this detail in the report. It is recommended that the supporting data is reviewed to determine whether significant air quality impacts are expected to the café quarter.
- 6.3.21 NICE recommend pedestrians, cyclists and users of other modes of transport that involve physical activity are given the highest priority when developing or maintaining streets and roads. Including: re-allocate road space to support physically active modes of transport; restrict motor vehicle access; introduce road-user charging schemes; and introduce traffic-calming schemes (43). Consideration could be given to introducing such measures for the roads surrounding the café quarter.
- 6.3.22 With regard to restricting future changes of use from cafes and restaurants, it is noted that the use of planning conditions restricting permitted use class changes have been challenged and rejected by some planning inspectors (45;46). An alternative mechanism could be considered. One option might be an Article 4 Direction.
- 6.3.23 Consideration should be given to impacts on local residents, particularly from A4 uses (drinking establishments). This should include consideration of: nuisance (e.g. odour); disturbance (e.g. noise); pollution (e.g. air quality); and social impacts (e.g. crime and antisocial behaviour).

TC9 Royal Leamington Spa Restaurant and Café Quarter

- 6.3.24 The proposed café and restaurant quarter is outside the Leamington Spa AQMA.
- 6.3.25 The Eatwell Plate is a policy tool that defines the Government's recommendations on healthy diets (47). TC8 and TC9 could play a role in promoting the balance of foods required to maintain a healthy diet, along the lines of those provided in the Eatwell Plate.
- 6.3.26 As noted in TC8 planning conditions restricting permitted use class changes have been challenged and rejected by planning inspectors. An alternative mechanism could be considered, one option might be an Article 4 Direction.



- 6.3.27 The policy's recognition that new restaurant and café uses should not give rise to significant impacts to local residents is supported. This should include consideration of: nuisance (e.g. odour); disturbance (e.g. noise); and pollution (e.g. air quality).

TC10 Royal Leamington Spa Area Action Plan (AAP)

- 6.3.28 The preparation of an Area Action Plan is supported. It is recommended that community involvement in its development is maximised. Early input from Public Health Warwickshire could also be considered.

TC11 Warwick Town Centre Mixed Use Area

- 6.3.29 The proposed mixed use area is part of the Warwick AQMA. Consideration should be given to appropriate use classes, building design and traffic reduction measures to ensure that air pollution from the AQMA does not cause significant impacts to residents, staff or visitors (outdoor air quality being a predictor of indoor air quality) and does not exacerbate poor air quality.

TC12 Protecting Town Centre Employment Land and Buildings

- 6.3.30 As employment is an important determinant of health the protection of existing employment land in town centres is supported. However as noted that employment land close to residential receptors should ideally be B1 uses. This is relevant to all the town centre employment land allocations under this policy. For example in H16 (Court Street housing allocation) the existing employment use of the adjoining Althorpe Street protected employment land (a waste treatment facility) may not be compatible. Indeed any other non-B1 Class B use change under this policy could potentially create similar incompatibilities. Consideration could be given to requiring master planning and detailed planning applications for any developments on, or changes of use to, land covered by this policy to demonstrate that there are no negative impacts to surrounding community populations or other receptors (e.g. homes, schools or amenity land). Consideration should also be given to requiring detailed Health Impact Assessments where non-B1 uses are proposed.

TC13 -15 Protecting the Residential uses in Town Centres

- 6.3.31 As housing and the associated urban landscape are important determinants of health this policy is supported. Consideration should be given to minimising impacts on local residents, e.g. from ground floor uses. This should include consideration of: nuisance (e.g. odour); disturbance (e.g. noise); pollution (e.g. air quality); social impacts (e.g. crime and antisocial behaviour); and fire safety.

TC16 Design of Shopfronts

- 6.3.32 Consideration could be given to encouraging attractive and active window frontages. Such a provision would link with encouraging vibrancy and vitality in shop frontages. Active frontages have been a consideration in planning decisions associated with payday loan shops and betting shops which generally have opaque in-active frontages (48). Such a policy could strengthen the case for resisting proliferation of such uses.

TC17 Local Shopping Facilities

- 6.3.33 There is the opportunity for the policy to include a provision that decisions on changes of use will consider the impact to promoting healthy behaviours and healthy communities. Such a policy hook could help to control the proliferation of some types of outlet that are linked to poor health outcomes, e.g. betting shops, payday loans shops and hot food takeaways.



TC18 Farm Shops

6.3.34 The promotion of farm shops is supported in line with reducing food poverty and increasing food security. The issues of 'food poverty' and 'food security' link to affordable healthy food:

- In 2005 the Department of Health defined food poverty as the inability to afford, or to have access to, food to make up a healthy diet (40).
- According to the Food and Agriculture Organization of the United Nations (FAO), food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (41)

6.3.35 The Eatwell Plate is a policy tool that defines the Government's recommendations on healthy diets (47). TC18 could play a role in promoting the balance of foods required to maintain a healthy diet, along the lines of those provided in the Eatwell Plate.

Culture, Leisure and Tourism

CT1 -CT7 Tourism, Leisure and Cultural Development

6.3.36 The district has many important destinations that promote learning and physical activity for both residents and visitors, as well as making important contributions to the local economy. The culture, leisure and tourism policies are therefore supported. Support is also given to the policy aims of active / sustainable transport and avoiding significant additional traffic.

Major Sites in the Economy

MS1 University of Warwick

6.3.37 Educational attainment has a strong social gradient and is significantly correlated with health (14). Maintaining the University of Warwick as an institute of Higher Education of international importance is therefore supported. Where green belt is lost, particularly land with public rights of way or other leisure use, alternative provision for promoting physical activity should be made.

MS2 Major Sites in the Green Belt

6.3.38 Development at green belt sites including the Former Honiley Airfield (for advance engineering), Stoneleigh Park (as a rural innovation science park) and Stoneleigh Deer Park (as a business park) should have regard to both local residents and impacts to the amenity value of surrounding land used for leisure purposes. Consideration should be given in particular to noise and visual impacts that could discourage physical activity.

6.4 Housing

H0 Housing

6.4.1 Housing is an important determinant of health. Households with lower income are more likely to occupy low-quality housing, which is more difficult and more expensive to heat. Children, older people and people with long-term illnesses are the most vulnerable to cold weather deaths. Rising fuel prices exacerbate the problem for people in poorly insulated homes, causing fuel poverty and worsening health. Environmental noise problems can lead to sleep disturbance, cardiovascular disease and impaired mental health, and this is more severe in areas of deprivation and in the areas of high-density housing (14). There is good evidence that improved warmth in the home may produce long-term positive socioeconomic health benefits, such as less time off work/school, and increased social and educational opportunities (19). There is good evidence that residential dampness and



mould are associated with increases in both respiratory infections and bronchitis (49). There is good evidence that remediation of mould in houses decreases asthma-related symptoms and decreases respiratory infections. Such remediation methods may vary from complete rebuilding to improving heating and ventilation (50).

- 6.4.2 The overarching policy to provide the district with the right amount, quality and mix of housing (including homes that are suitable for older and vulnerable people and sites for gypsies and travellers) is supported. There is an opportunity to include in the policy a requirement that housing and associated infrastructure is provided in a manner that promotes healthy living and healthy communities.

New Housing

H1 Directing New Housing

- 6.4.3 See commentary above on the allocated housing sites under policy DS11.

Inclusive and Mixed Communities

H2 and H3 Affordable Housing

- 6.4.4 As lack of affordable housing is an identified need for the district this policy is supported. It will be important to include early provision to meet current affordable housing needs. The Coventry & Warwickshire joint Strategic Housing Market Assessment notes that (27):
- 40% of the new homes in Warwick should be affordable housing. Guide values suggest within this proportion: 30-35% 1-bed; 25-30% 2-bed; 30-35% 3-bed; and 5-10% 4+ bed. Although the tenure structure should be determined in conjunction with local evidence, the analysis suggests it should be predominantly social rent, but also include affordable rent and some equity based products (e.g. shared ownership and shared equity homes).
 - There is a current need for 1,446 specialist extra care homes in Warwick, which is expected to increase to 2,479 homes by 2031. The annual need for extra-care housing (ECH) units in Warwick is 122 of which a minimum of 25% should be social/affordable rented.
- 6.4.5 Affordability of housing is linked to the health and well-being of individuals and families. When a market lacks a sufficient supply of affordable housing, lower income families are often forced to limit expenditures for food, medical care, and other necessities in order to pay rent. The lack of affordable housing within a community can contribute to family residential instability, as families are forced to move frequently, live with other families in overcrowded conditions, or experience periods of homelessness (17). Studies have found that the financial strain of unaffordable housing has been associated with delays in seeking preventive and routine medical care, medication non-adherence, and increased emergency department utilisation (18).
- 6.4.6 Although suggested by the accompanying policy explanation, there is an opportunity to include a requirement directing that developments should avoid allocating large proportions of affordable housing in areas considered less desirable (e.g. areas with high deprivation, pollution or disturbance). Affordable housing should also include appropriate insulation and ventilation to allow affordable temperature control and avoid poor indoor air quality. The literature also supports increased usable space to promote improvements in diet, privacy, household and family relationships, as well as opportunities for leisure and studying (51).
- 6.4.7 NICE recommend creating local environments that encourage people to adopt a healthier diet, for example, by ensuring local shops stock good quality, affordable fruit and vegetables (42). Affordable housing should be located with safe and well maintained



walking and cycling links to local amenities and facilities, including access to such healthy foods.

- 6.4.8 As noted in EC3, it is recommended that the district's full affordable housing need is met through policies H2 and H3. If the provision of policy EC3 is retained, any affordable housing development under policy EC3 will need to be very carefully considered and should be the subject of detailed Health Impact Assessment.

H4 Securing a Mix of Housing

- 6.4.9 The policy to require a mix of housing types and sizes, including 10% age friendly and/or adaptable homes, is supported to help meet different family and lifestyle needs, including those of an aging population.

H5 Specialist Housing for Older People

- 6.4.10 Vulnerable groups such as the sick and the elderly are among those most likely to live in poor housing and also tend to spend large amounts of time in their homes exposed to potentially hazardous environments (19). The elderly are at particular risk of poor indoor air quality (20). Furthermore social support (including from social networks in the wider community) or participation in local activities are associated with better health amongst elderly populations (21).

- 6.4.11 As commercial/industrial areas are generally more likely to include infrastructure associated with significant localised air pollution emissions (outdoor air quality being an important predictor of indoor air quality) and are less likely to support social networks or local activities, the siting of care homes in areas allocated for employment uses has the potential to result in disproportionate adverse health impacts.

- 6.4.12 Consideration could be given to specifying that specialist housing for older people should be sensitively integrated into residential areas. By way of an example Liverpool has a SPG on residential care homes (52). With respect to location this states:

- Residential care homes should be located in residential areas where they can blend into the neighbourhood and should not involve significant changes to the street scene.

- 6.4.13 The policy's other requirements as to appropriate proximity to shops, amenities, public transport and primary health care, are supported.

H6 Houses in Multiple Occupation and Student Accommodation

- 6.4.14 Overcrowding can have adverse health impacts. Houses in Multiple Occupation could aim to include usable space allocations that promote improvements in diet, privacy, household and family relationships, as well as opportunities for leisure and studying (51). It is noted that this policy is supported by a 2012 Article 4 Direction in Leamington Spa to enable the Council to control concentrations of houses in multiple occupation.

- 6.4.15 The policies requirement for proximity to bus stops is supported to promote sustainable transport, as is the aim of safe waste management.

H7 to H9 Gypsies and Travellers

- 6.4.16 The policy to provide for the identified accommodation needs need its Gypsy and Traveller community is positive, however it is noted that no sites have currently been identified.

- 6.4.17 The policy requiring that suitable sites are within a reasonable distance of schools, GP surgeries, dentists, hospitals, shops and community facilities is supported.

- 6.4.18 There is an opportunity to also specify that suitable sites will include walking, cycling and public transport accessibility to both town and district centres and employment.



- 6.4.19 Ongoing consultation with this community is recommended to ensure that the sites provide appropriate links with other services, such as health and education. Wider community consultation is also recommended to ensure that as far as possible this marginalised group is integrated with the district's other communities.

H10 -14 Rural Housing

- 6.4.20 See commentary above on the allocated housing sites under policy DS11.
- 6.4.21 The policy for housing the rural workforce is supported.

6.5 Sustainable Communities

SC0 Sustainable Communities

- 6.5.1 The overarching policy addresses many important health issues and is supported. For example the policy specifies that developments should:
- ensure access and circulation are inclusive and provide for a choice of transport modes including public transport, cycling and walking;
 - take account of community safety including measures to prevent crime and road accidents;
 - provide good access to community facilities including meeting places, local shops, transport services, health facilities, and open space;
 - ensure proposals are adaptable to climate change;
 - have a focus on healthy lifestyles, including measures to encourage walking and cycling, to provide access to open space, play areas, playing fields and sports facilities and to encourage healthy diets;
 - manage flood risk to ensure that proposals do not unduly increase the risk of flooding.

Built Environment

BE1 Layout and Design

- 6.5.2 The design and quality of the built environment can be an important factor in promoting healthy living. Incorporating accessible and safe green space into urban neighbourhood design increases use and positively influences levels of physical activity, mental wellbeing and resilience and the perceived risk of crime. However these benefits only arise if the green spaces are of high quality, accessible and safe (14).

- 6.5.3 The policy is supported as it specifically addresses:

- design and layout to reduce crime and fear of crime;
- convenient, safe and integrated cycling and walking routes linking to public transport;
- adequate public and private open space;
- accessibility and inclusion regardless of disability, age or gender; and
- resilience to climate change.

BE2 Developing Strategic Housing Sites

- 6.5.4 The policies plans for development briefs for the major strategic site developments are welcomed. It is recommended that these take into consideration the issues raised in the commentary on DS11 above. It is noted that these will include requirements for design for healthy lifestyles including provision for cycling, walking, playing pitches, parks and open spaces and other green infrastructure.

BE3 Amenity

- 6.5.5 The restriction on developments which have unacceptable adverse impacts on the amenity of nearby current and future users is supported. This policy could be supported with



criteria and thresholds for impact assessment. For example the Health Impact Assessment screening template issued by the Department of Health (9) could be adapted for project level developments. This should include consideration of: nuisance (e.g. odour and dust); disturbance (e.g. noise and vibration); pollution (e.g. air quality); and social impacts (e.g. crime and antisocial behaviour).

BE4 Converting Rural Buildings

- 6.5.6 Consideration could be given to the ability of these buildings to be adapted to suitable standards of affordable thermal control and ventilation, as well as safe removal of any historical hazardous materials (e.g. asbestos or lead pipes).

BE5 Broadband Infrastructure

- 6.5.7 Where such measure support economic growth this policy is supported.

Transport

- 6.5.8 The preamble to the transport policies notes that significant transport issues include: safety; air quality; climate change; congestion; and community cohesion. These impacts need to be managed carefully through this Plan so that the achievement of an efficient and effective transport network is not achieved at the expense of health, the environment and community wellbeing.

TR1 Access and Choice

- 6.5.9 The policy addresses health impacts of transport, including for those with disabilities, and is therefore broadly supported. There is an opportunity to also include mention of other groups that may have additional transport service or infrastructure needs, such as the elderly and those with young families.
- 6.5.10 There is an opportunity to 'prioritise' rather than just promote active modes of transport, such as walking and cycling as well as their integration with public transport to support longer journeys. Developments that deliver this goal could themselves be prioritised. NICE recommend (42) encouraging local planning departments to prioritise the need for people (including those whose mobility is impaired) to be physically active as a routine part of their daily life (for example, when developing the local infrastructure and when dealing with planning applications for new developments).
- 6.5.11 It is important that sustainable transport infrastructure is delivered at least in tandem, if not before housing and employment developments. NICE recommend (24) providing specific support for people at a 'transition point' in their lives, for instance, when they are changing job, house or school. At these times people may be open to trying a new mode of transport or new types of recreation.
- 6.5.12 There is an opportunity for the policy to require development applications to support school travel plans, including particular consideration of road safety. NICE recommend (24) developing and implementing school travel plans that encourage children to walk or cycle all or part of the way to school, including children with limited mobility.

TR2 Traffic Generation

- 6.5.13 The policy states that any development that results in significant negative impacts on health and wellbeing of people in the area as a result of pollution, noise or vibration caused by traffic generation will not be permitted unless effective mitigation can be achieved. This policy statement is supported and could be extended to also include significant negative impacts from road safety and community severance.
- 6.5.14 How significant negative impact is defined will be important. For example Table 6- sets out some evidence based noise thresholds for health impacts compiled by the European



Environment Agency (53), which might suggest that any persistent exceedance of 42 dB Lden could potentially be considered a significant negative impact. The World Health Organization state that a threshold of 40 dB Lnight outside should be the target of the night noise guideline to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly (54). The Community Guidelines from the World Health Organization (55) recommends 50/55 LAeq, 16hr as health based threshold, which is in line with earlier recommendations and guidance from ISO and national and international environment agencies (53). The WHO Community Guidelines are currently being updated (56).

Table 6-1: Evidence based effects of noise on health and wellbeing

Effect	Dimension	Acoustic indicator ⁴	Threshold ⁵	Time domain
Annoyance disturbance	Psychosocial, quality of life	Lden ⁶	42	Chronic
Self-reported sleep disturbance	Quality of life, somatic health	Lnight ⁷	42	Chronic
Learning, memory	Performance	Leq	50	Acute, chronic
Reported health	Wellbeing clinical health	Lden	50	Chronic
Hypertension	Physiology somatic health	Lden	50	Chronic
Ischaemic heart diseases	Clinical health	Lden	60	Chronic

6.5.15 Similarly for air quality, any exceedance of the thresholds set out by the World Health Organization (57) could be considered a significant negative impact. Such standards are in some cases more stringent than those for AQMAs set out in the UK Air Quality Standards Regulations 2010 (58) (see Table 6-2). Notably for Particulate Matter there is no evidence of a safe level of exposure or a threshold below which no adverse health effects occur (59).

6.5.16 The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (60) sets out air quality objectives and policy options to further improve air quality in the UK. Notwithstanding that there are lower aspirational targets set by the WHO (57) the appropriate air quality requirement for the Plan are the statutory values set out in the Air Quality Standards Regulations 2010 (58).

Table 6-2: Comparison of UK Air Quality Objectives and WHO Guide Values

Pollutant	UK Air Quality Objective	WHO Guide Value
Particles (PM10)	50 µg/ m ³ 24 hour mean	50 µg/ m ³ 24 hour mean
	40 µg/ m ³ annual mean	20 µg/ m ³ annual mean
Particles (PM2.5)	25 µg/ m ³ annual mean	10 µg/ m ³ annual mean
Nitrogen dioxide	200 µg/ m ³ 1 hour mean	200 µg/ m ³ 1 hour mean
	40 µg/ m ³ annual mean	40 µg/ m ³ annual mean
Ozone	100 µg/ m ³ 8 hour mean	100 µg/ m ³ 8 hour mean
Sulphur dioxide	125 µg/ m ³ 24 hour mean	20 µg/ m ³ 24 hour mean

⁴ Lden and Lnight are defined as outside exposure levels.

⁵ Level above which effects start to occur or start to rise above background.

⁶ Lden is the day-evening-night equivalent level. This is the A-weighted, Leq noise level, measured over the 24 hour period, with a 10 dB penalty added to the levels between 2300 and 0700 hours and a 5 dB penalty added to the levels between 1900 and 2300 hours to reflect people's extra sensitivity to noise during the night and the evening.

⁷ Lnight is the night equivalent level Leq. This is the A-weighted, Sound Level, measured overnight 2300 - 0700 hours.



- 6.5.17 The policy also includes measures to require air quality assessment and mitigation where there will be significant adverse impacts on air quality within identified Air Quality Management Areas or on the health and wellbeing of people in the area as a result of pollution. This policy statement is also supported; however the area of affect for such assessments will be important. For example the proposed new housing allocations (notably HO1, HO2, HO3, HO4, HO6, HO7 and HO9) should assess the impact the additional car journeys generated by these developments will have on the AQMAs in their respective town centres. It is also noted that the introduction of new residential developments could trigger new AQMAs in areas with high emissions but previously no receptors.
- 6.5.18 The Plan's transport assessment notes that modelling for the allocations suggests generally increased average network journey times and reduced average vehicle speeds (61). The transport assessment recommends ongoing work as more information becomes available. Transport assessments as part of specific planning applications for major developments will also be important.
- 6.5.19 The Plan's air quality assessment(44) notes that although pollutant levels may generally be lower by 2028 (due to stricter vehicle emission standards), the allocations lead to improvements in emissions levels in some areas (importantly Warwick High Street and Jury Street), but reduction in others. Detailed air quality assessments for the main allocations will be required to determine potential impacts. Whilst such impacts can be mitigated to an extent through promoting and even prioritising active and public transport, it may be optimistic to expect a net reduction in car based journeys. The air quality report makes assumptions around the adoption of new vehicles Euro standards. On-going air quality monitoring throughout the lifespan of the Plan (particularly in the areas identified in the report as potentially expecting adverse impacts) would be informative to test progress.
- 6.5.20 A strategic transport assessment of the development allocations impacts to the Warwick and Leamington area road network concludes that despite the proposed mitigation strategy there are likely to be residual transport impacts (61):
- Detailed testing results analysis undertaken within the Warwick and Leamington areas concluded that there is likely to be an increase in the average network journey times and a reduction in average speeds that vehicles are able to achieve. These impacts occur in spite of a proposed mitigation strategy. Further improvements to the St Nicholas Church Street/Castle Hill junction could improve results.
 - Detailed testing results analysis undertaken within the Kenilworth and Stoneleigh areas concluded that there is likely to be a relatively small increase in the average network journey times and a reduction in average speeds that vehicles are able to achieve.
- 6.5.21 The report identifies the need for more work on measures which may reduce the car based trip generation, through alternative, sustainable modes of transport. The modelling underpinning this conclusion also excludes changes in road network trips from education and HGV trips. The impacts may therefore be greater in some locations, notably near new employment sites with high HGV movements, and near the ED1 and ED2 consolidated educational areas. HGV movements are typically associated with greater health impacts from disturbance, air pollution and community severance. The assessment acknowledges this limitation and recommends that as more certainty emerges on the provision of education facilities alongside the allocation strategy, further testing should be undertaken which includes more detailed assumptions regarding the access strategy including any additional pedestrian facilities, trip generation and the distribution thereof.
- 6.5.22 An air quality report (44) informing the Plan notes that lower concentrations of particulate matter and nitrogen dioxide are predicted in 2028 compared to 2011 due to the introduction of more stringent emissions controls on new vehicles via Euro standards.



However the report cautions that modelled estimates for 2028 concentrations, especially those for nitrogen dioxide, may be higher than presented, as they rely on new vehicles meeting the emission control standards currently coming into force, which experience suggests may be optimistic. In addition, the changes set out within the policy scenarios will affect traffic flows well before 2028, and thus have effects on air quality at a time when emissions, and hence concentrations, are still high. Due to these two factors the report acknowledging that the picture presented by the analysis may be overly optimistic. Regardless the report suggests that whilst the Plan's revised allocations may have improvements in air quality in the worst affected parts of Warwick (High Street and Jury Street), there will be adverse impacts elsewhere. Impacts in Leamington Spa are negative at all locations under the Plan's revised allocations. Modelling a scenario without the Warwick Town Centre Improvements the assessment found smaller adverse impacts and greater improvements than the scenario with Warwick Town Centre Improvements.

6.5.23 The explanatory text to the policy makes reference to Warwick District Council's Low Emission Strategy Guidance Planning {Warwick District Council, 2014 13562 /id}. The guidance recognises that development will typically increase road transport emissions, both during the construction and operational phases. However, it also recognises that sustainable development can be a positive force for change. The guidance seeks to minimise road transport emissions wherever practicable to sustainable levels, while also seeking to counter the cumulative impacts arising from the aggregation of incremental emissions arising from each development scheme. The guidance makes links between air quality, transport and health. The guidance sets out a protocol for assessing developments' air quality impacts. The suggested mitigation in this guidance is positive: we note that there is no mention of active travel, physical activity or school travel plans. Consideration could be given to such additional mitigation when assessing air quality and transport impacts of specific developments.

6.5.24 There is an opportunity to make clear links between transport related greenhouse gas emissions, climate change and the co-benefits of reducing such emission for health. See paragraph 6.5.47.

TR3 Transport Improvements

6.5.25 The policy to support wider transport infrastructure improvements, including walking, cycling and public transport infrastructure, through development contributions is supported. There is an opportunity to include specific mention of school travel plans to encourage walking and cycling to school.

TR4 Parking

6.5.26 The removal of car parking to reduce car journeys, congestion and air pollution is positive if supported with effective public and active transport alternatives. There is an opportunity to clarify that generally parking provision should be controlled not expanded.

TR5 Safeguarding for Transport Infrastructure

6.5.27 There are a number of residential properties that fall within the HS2 Safeguarding Directions (2013) area of surface interest, notably in the village of Burton Green (see Policy Map 6 - Burton Green (28)). These should be treated as sensitive receptors.

6.5.28 The area planned for Kenilworth station currently appears to be a builders merchants (32). It is noted that the surrounding area is residential and is therefore sensitive to construction disturbance and any air quality impacts from increased road and rail activity.

6.5.29 With regard to the park and ride search areas, the contribution of such schemes to reducing car journeys to centres is supported. The search areas are predominantly



agricultural in nature. It is noted that the search area around Blackdown appears to include some houses, which should be treated as sensitive (32).

TR6 Safe Operation of Aerodromes

- 6.5.30 Consideration should be given to making clear cross reference between this policy and any implication for policy DS16's sub-regional employment allocation around Coventry Airport. It is unclear if the policy only refers to safeguarded areas as defined in policy TR5.

Healthy, Safe and Inclusive Communities

- 6.5.31 The preamble to this section of the Plan shows a good appreciation of the district's health challenge and how spatial planning can be used to improve health and reduce inequalities.

HS1 Healthy, Safe and Inclusive Communities

- 6.5.32 That the potential for creating healthy, safe and inclusive communities will be taken into account when considering all development proposals is supported. The reference to the Marmot Review (7) in relation to inequalities is welcomed.

HS2 Protecting Open Space, Sport and Recreation Facilities

- 6.5.33 The protection of open spaces, sport and recreational facilities is supported. The application of this policy in relation to policy H06 which includes loss of sports facilities in East of Kenilworth (Thickthorn) will be important. There is an opportunity to note in the policy that as the benefits of increases in physical activity and improved mental health only arise if the spaces are of high quality, accessible and safe (14), any alternative provision should meet these requirements. Consideration should also be given to ongoing maintenance and management responsibilities.

HS3 Local Green Space

- 6.5.34 The opportunity for local communities to identify and protect locally important green space is supported. Considerations could be given to encouraging communities to exercise this principle in relation to the Plan's new allocations prior to their development to ensure that any locally important pockets of green space are protected for current and new residents.

HS4 Improvements to Open Space, Sport and Recreation Facilities

- 6.5.35 The proposals for contributions to support facilities that encourage physical activity are supported. Consideration should also be given to ongoing maintenance and management responsibilities to ensure that such facilities remain in safe and in good repair.

- 6.5.36 There is an opportunity to direct contributions more widely to support multi-component child obesity prevention programmes, particularly for programmes targeted to children aged 6-12 years (62). NICE recommend (63) ensuring family-based, multi-component lifestyle weight management services for children and young people are available as part of a community-wide, multi-agency approach to promoting a healthy weight and preventing and managing obesity. Programmes should focus on: diet and healthy eating habits; physical activity; reducing the amount of time spent being sedentary; and strategies for changing the behaviour of the child or young person and all close family members.

HS5 Directing Open Space, Sport and Recreation Facilities

- 6.5.37 The support for new and improved open space, sport and recreation facilities is welcomed. Given the general rise in levels of adult and child obesity, opportunities for increasing physical activity in the population as part of their daily lives or through new recreational facilities should not be unduly restricted.



HS6 Creating Healthy Communities

- 6.5.38 This policy addresses important community determinants of health and is supported. There is an opportunity to also include:
- access to the balance of foods required to maintain a healthy diet, along the lines of those provided in the Eatwell Plate (47);
 - support and integration with current and emerging school travel plans; and
 - a requirement that the quantity, quality and location of affordable housing does not contribute to increased inequalities.
- 6.5.39 Consideration could also be given to ensuring that access to healthcare facilities includes sufficient capacity in healthcare services provided at those facilities.
- 6.5.40 The explanatory text to the policy notes that Public Health Warwickshire is to produce health guidance that will assist in the assessment of planning applications to ensure good development outcomes.
- 6.5.41 The explanatory text also notes the importance of monitoring the on-going impacts of policy and highlights the Director of Public Health's annual report as a vehicle for providing information about the health of local communities and identifying health gaps and priorities that need to be addressed.

HS7 Crime Prevention

- 6.5.42 Access and use of spaces in the immediate and wider environment at different times during the day or night, is encouraged by connectivity, such as comprehensive local public transport systems. One of the main social effects related to urban form is residents' perceived fear of violence or crime, which negatively affects mental health. Women, especially mothers with low income and those with mental health problems tend to feel the most vulnerable. Perceptions of safety are also influenced by road traffic accidents and the aesthetic impression of the surrounding community (e.g. graffiti and litter) (14).
- 6.5.43 The policy to use the layout and design of development to minimise the potential for crime, anti-social behaviour and improve community safety is supported. There is an opportunity to note the importance of perceptions of crime and safety as well as actual crime or safety. Design to facilitate maintaining communal spaces and routes in a high state of repair will be important.

HS8 Protecting Community Facilities

- 6.5.44 Protecting community facilities is important as these are hubs of social cohesion. However the mere provision of community facilities is not enough to constitute social capital, attention needs to be paid to the processes whereby such facilities are established and run. Greater participation by, and representation of, ordinary citizens in the conceptualisation and implementation of such facilities is an important element of success (38). Effective community consultation prior to any changes of use of existing facilities or development of new community facilities will be important.

Climate Change

- 6.5.45 Climate change may affect both temperature levels and flood risk. Exposure to heat causes illness and death in the urban environment. People with lower socioeconomic status and ethnic minority groups are more likely to experience greater exposure to heat stress and drought. High settlement density, sparse vegetation and having no open space in the neighbourhood have been significantly correlated with higher temperatures (14).
- 6.5.46 Direct Health Risks from Climate Change include: excess mortality and morbidity in the summer months from temperature extremes; mental health and stress effect flood and



potential flood situations, potential for water-borne disease outbreaks; changes in patterns of disease; adverse effects on quality and availability of drinking water; likely increases in incidents of food poisoning; higher ground level ozone concentrations in the lower atmosphere; and increased cases of skin cancer and cataracts due to ultraviolet radiation exposure (15).

6.5.47 The Intergovernmental Panel on Climate Change (IPCC) released its latest report in March 2014. This report was the second instalment of the Fifth Assessment Report, prepared by Working Group 2, on impacts, vulnerability, and adaptation to climate change. Chapter 11 specifically addresses human health (16). The following is a summary of key findings.

- The health of human populations is sensitive to shifts in weather patterns and other aspects of climate change [very high confidence].
- Until mid-century climate change will act mainly by exacerbating health problems that already exist [very high confidence].
- If climate change continues as projected until mid-century, the major increases of ill-health compared to no climate change will occur through:
 - Greater risk of injury, disease, and death due to more intense heat waves and fires [very high confidence].
 - Increased risk of under-nutrition resulting from diminished food production in poor regions [high confidence].
 - Consequences for health of lost work capacity and reduced labour productivity in vulnerable populations [high confidence].
 - Increased risks of food- and water-borne diseases [very high confidence] and vector-borne diseases [medium confidence].
- Impacts on health will be reduced, but not eliminated, in populations that benefit from rapid social and economic development [high confidence].
- In addition to their implications for climate change, essentially all the important Climate Altering Pollutants (CAPs) other than CO₂ have near-term health implications [very high confidence]. In 2010, more than 7% of the global burden of disease was due to inhalation of these air pollutants [high confidence].
- There are opportunities to achieve co-benefits from actions that reduce emissions of CAPs and at the same time improve health. Among others, these include:
 - Reducing local emissions of health-damaging and climate-altering air pollutants from energy systems, through improved energy efficiency, and a shift to cleaner energy sources [very high confidence].
 - Providing access to reproductive health services (including modern family planning) to improve child and maternal health through birth spacing and reduce population growth, energy use, and consequent CAP emissions over time [medium confidence].
 - Shifting consumption away from animal products, especially from ruminant sources, in high-meat consumption societies toward less CAP-intensive healthy diets [medium confidence].
 - Designing transport systems that promote active transport and reduce use of motorized vehicles, leading to lower emissions of CAPs and better health through improved air quality and greater physical activity [high confidence].

CC1 Planning for Climate Change Adaptation

6.5.48 The policy requirements for developments to be resilient to climate change are supported.

CC2 Planning for Renewable Energy and Low Carbon Generation

6.5.49 Proposals that new low carbon and renewable energy technologies minimise any adverse impacts on adjacent land uses and local residential amenity are supported.



CC3 Buildings Standards Requirements

- 6.5.50 The requirement for residential buildings to achieve Code of Sustainable Homes level 4 or 5 and for non-residential buildings to achieve a minimum BREEAM standard of 'very good' is supported. Consideration should be given to ensuring that affordable housing does not consistently adopt lower standards due to financial viability issues, such that affordable homes have more expensive thermal control.
- 6.5.51 It is noted that as a large part (if not most) of a buildings lifetime carbon footprint is due to occupation (e.g. people living in the building), there is an argument that an initial carbon outlay during development that significantly reduced the occupational carbon footprint could be justified.

Flooding and Water

FW1 Development in Areas at Risk of Flooding

- 6.5.52 Health effects from flooding include drowning, injuries, infectious diseases, stress and loss of essential urban infrastructure and services. Children, older people, people with disabilities, ethnic minorities and those with low incomes are vulnerable to the effects of flooding (14).
- 6.5.53 The policy's requirements for reducing flood risk are supported. There is an opportunity to include criteria for access by emergency services that is resilient to flooding.
- 6.5.54 From a health perspective post-flooding impacts are also important for physical and mental health (64-66). Flood resilience measures that reduce flood water ingress into homes could reduce these risks. Consideration could be given to measures that increase such resilience to flooding, e.g. height and orientation of entrances.
- 6.5.55 It is noted that some of the Plan's housing allocation sites include areas in flood risk zones 2 and 3, such as H03, H08 and H14 (30). Suitable flood risk management measures should be required as part of development plans.

FW2-4 Sustainable Urban Drainage, Water Conservation and Water Supply

- 6.5.56 The policies for appropriate Sustainable Urban Drainage Systems (SUDS), water conservation and water supply are supported.

Historic Environment

HE1 -HE6 Historic Environment

- 6.5.57 As with rich natural environments, rich cultural environments offer an opportunity for encouraging walking and cycling both at the sites and through associated active transport.
- 6.5.58 There is an opportunity, where these sites are open to the public, to include enhancements to their access, including links to active and public transport.
- 6.5.59 The use of engaging signs and 'fun trails' for children could be encouraged.

Natural Environment

NE1 Green Infrastructure

- 6.5.60 The protection, enhancement and restoration of green infrastructure (a network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities) is supported. Green infrastructure has an important role to play in promoting physical activity and sustainable travel.



NE2 Protecting Designated Biodiversity and Geodiversity Assets

- 6.5.61 Consideration could be given to increasing green infrastructure buffer zones around protected and designated sites so that people can be encouraged to visit and learn about the sites whilst minimising disturbance. The balance between increasing access to protected sites and ecological disturbance will be important.
- 6.5.62 Access should encourage physical activity by creating safe routes (that reduce actual and perceived risks of crime) that are suitable for all ages and those with reduced mobility. Access should include links to sustainable transport.
- 6.5.63 Use of engaging signs and 'fun trails' for children could be encouraged.

NE3 Biodiversity

- 6.5.64 As natural environments are linked to positive wellbeing and offer the opportunity for physical activity this policy is supported.

NE4 Landscape

- 6.5.65 Landscape character can have a limited effect on health and wellbeing. Direct effects are generally short term and linked to visual disturbance for those with regular views of developments. Indirect effects may include economic impacts from changes in levels of tourism. No policy changes are suggested.

NE5 Protection of Natural Resources

- 6.5.66 The policy that development proposals should not give rise to soil contamination or air, noise, radiation, light or water pollution where the level of discharge, emissions or contamination could cause harm to sensitive receptors is supported. The explanatory text to the policy note that this includes human health.
- 6.5.67 The policy regarding making contaminated land fit for its intended purpose is also supported. There is an opportunity to require that development proposals demonstrate that there are no significant barriers to future decommissioning activities remediating conditions created by the proposed development to safe levels for sensitive receptors (including human health).

NE6 High Speed Rail 2 (HS2)

- 6.5.68 Seeking to minimise any adverse impacts from HS2 to residents is supported.

NE7 Use of Waterways

- 6.5.69 There is an opportunity for the policy to encourage development proposals to increase access to and connectivity with the district's waterways, particularly canal towpaths. Such access should be safe, high quality and well maintained.

Neighbourhood Planning

NP1 and NP2 Neighbourhood Plans and Community-led Planning

- 6.5.70 The involvement of local communities in local planning is supported.
- 6.5.71 NICE make the following recommendations with regards to community engagement (67):
- Give community groups the power to influence local authority decisions and regional and national issues related to area-based initiatives. Also give them the power to help improve communication across sectors. Both can be achieved by:
 - providing resources (such as access to community facilities) to support community participation in area-based initiatives; and
 - involving communities in decision-making and the planning and delivery of services to address the wider social determinants of health.



- Identify and recognise local diversity and local priorities (both within and between communities).
- Working with the community, assess its broad and specific health needs. In particular, work with groups that may be under-represented and/or at increased risk of poor health, such as black and minority ethnic groups, older people, those with disabilities and people living in rural communities.
- Regularly inform communities about the progress being made to tackle issues of concern. Use mechanisms such as existing community networks or forums.

Waste

W1 Waste Core Strategy

- 6.5.72 Policies for waste management are supported. Where appropriate these should include pest and odour control strategies.

W2 New Waste Disposal Facilities

- 6.5.73 Consideration should be given to requiring a detailed Health Impact Assessment of any new waste disposal facility that is brought forward during the period of the plan.



7 Review of specific health issues arising from the plan

7.1 Evidence on air quality

7.1.1 The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (60) sets out air quality objectives and policy options to further improve air quality in the UK. Notwithstanding that there are lower aspirational targets set by the World Health Organization (57) the appropriate air quality requirement for the Plan are the statutory values set out in the Air Quality Standards Regulations 2010 (58). The following sections set out additional evidence on health impacts to demonstrate the benefits of where possible achieving concentrations below the statutory requirements.

7.1.2 Important air pollutants particularly relevant to the Plan are introduced in the flowing paragraphs, this is not an exhaustive list of all air pollutants that affect health (57).

- Particulate matter (PM) affects more people than any other pollutant. The major components of PM are sulphate, nitrates, ammonia, sodium chloride, black carbon, mineral dust and water. It consists of a complex mixture of solid and liquid particles of organic and inorganic substances suspended in the air. The most health-damaging particles are those with a diameter of 10 microns or less, (PM₁₀ and PM_{2.5}), which can penetrate and lodge deep inside the lungs. Chronic exposure to particles contributes to the risk of developing cardiovascular and respiratory diseases, as well as of lung cancer. Small particulate pollution have health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed. The effects of PM on health occur at levels of exposure currently being experienced by many people both in urban and rural areas.
- Ozone (O₃) at ground level – not to be confused with the ozone layer in the upper atmosphere – is one of the major constituents of photochemical smog. It is formed by the reaction with sunlight (photochemical reaction) of pollutants such as nitrogen oxides (NO_x) from vehicle and industry emissions and volatile organic compounds (VOCs) emitted by vehicles, solvents and industry. Excessive ozone in the air can have a marked effect on human health. It can cause breathing problems, trigger asthma, reduce lung function and cause lung diseases. In Europe it is currently one of the air pollutants of most concern. Several European studies have reported that the daily mortality rises by 0.3% and that for heart diseases by 0.4%, per 10 µg/m³ increase in ozone exposure.
- Nitrogen dioxide (NO₂) long-term exposure is associated with symptoms of bronchitis in asthmatic children. Reduced lung function growth is also linked to NO₂ at concentrations currently measured (or observed) in cities of Europe and North America. The major sources of anthropogenic emissions of NO₂ are combustion processes (heating, power generation, and engines in vehicles and ships).
- Sulphur dioxide (SO₂) can affect the respiratory system and the functions of the lungs, and causes irritation of the eyes. Inflammation of the respiratory tract causes coughing, mucus secretion, aggravation of asthma and chronic bronchitis and makes people more prone to infections of the respiratory tract. Hospital admissions for cardiac disease and mortality increase on days with higher SO₂ levels. When SO₂ combines with water, it forms sulphuric acid; this is the main component of acid rain which is a cause of deforestation. Studies indicate that a proportion of people with asthma experience changes in pulmonary function and respiratory symptoms after periods of exposure to



SO₂ as short as 10 minutes. The main anthropogenic source of SO₂ is the burning of sulphur-containing fossil fuels for domestic heating, power generation and motor vehicles.

- 7.1.3 The recent REVIHAAP report by the World Health Organization (WHO) on health aspects of air pollution concluded that exposure to air pollutants is largely beyond the control of individuals and requires action by public authorities at the national, regional and international levels (59). A multi-sectoral approach, engaging such relevant sectors as transport, housing, energy production and industry, is needed to develop and effectively implement long-term policies that reduce the risks of air pollution to health.
- 7.1.4 The REVIHAAP report went on to note that the adverse effects on health of particulate matter (PM) are especially well documented. There is no evidence of a safe level of exposure or a threshold below which no adverse health effects occur.
- 7.1.5 The Committee on the Medical Effects of Air Pollutants (COMEAP)'s report on particulate air pollution concluded that in quantitative terms a pollution reduction of 1 µg/m³ of PM_{2.5} would lead to on average 20 days increased life expectancy from birth per person (the extent to which individuals are affected is likely to be highly variable) (68).
- 7.1.6 In 2011 in Warwick District 5.3% of annual all-cause adult mortality (deaths) was attributable to anthropogenic (human-made) particulate air pollution (measured as fine particulate matter, PM_{2.5}) (69). The comparable value for Warwickshire was 5.2% and the value for England was 5.4% (70).
- 7.1.7 2014 estimates by Public Health England for mortality caused by anthropogenic PM_{2.5} in Warwickshire are presented in Table 7-1. The outcome measures are shown in columns E, F and G. These are not records of actual deaths but are ways of calculating the effect of anthropogenic particulate air pollution:
- Attributable fraction: Column E shows the proportion of deaths estimated as due to long-term exposure to anthropogenic particulate air pollution.
 - Attributable deaths: Air pollution is not solely responsible for the number of deaths in column F. Rather, anthropogenic particulate air pollution contributes a small amount to the deaths of a large number of exposed individuals. Thus, column F in Table 7-1 indicates that air pollution has an effect on mortality risk that is equivalent to the number of deaths in this column.
 - Associated life-years lost: It is also of interest to know the years of life lost to the population due to increased mortality risk attributable to long-term exposure to particulate air-pollution. This shown in column G.



Table 7-1: Mortality burden estimates for Warwickshire from anthropogenic particulate air pollution (2010)

A	B	C	D	E	F	G
Area	Population age 25+ (x10 ³)	Deaths age 25+	Mean anthropogenic PM _{2.5} (µg m ⁻³)	Attributable fraction (%)	Attributable deaths aged 25+	Associated life-years lost
Warwickshire CC	378.9	4861	9.8	5.5	269	2782
North Warwickshire	44.5	599	10.1	5.7	34	343
Nuneaton and Bedworth	84.6	1116	10.1	5.7	64	676
Rugby	64.8	852	9.7	5.5	47	481
Stratford-on-Avon	87.5	1160	9.1	5.2	60	588
Warwick	97.5	1134	10.0	5.7	64	694

From Public Health England (71)

- 7.1.8 Although particulate matter is a key air pollutant affecting health, there are other air pollutants that are also important, notably in proximity to roads.
- 7.1.9 With regard to transport the REVIHAAP report found that adverse effects on health due to proximity to roads were observed after adjusting for socioeconomic status and after adjusting for noise. However elevated health risks associated with living in close proximity to roads are unlikely to be explained by PM_{2.5} mass alone since this is only slightly elevated near roads. In contrast, levels of such pollutants as ultrafine particles, carbon monoxide, NO₂, black carbon, polycyclic aromatic hydrocarbons, and some metals are more elevated near roads. Individually or in combination, these are likely to be responsible for the observed adverse effects on health. Current available evidence does not allow discernment of the pollutants or pollutant combinations that are related to different health outcomes, although association with tailpipe primary PM is identified increasingly.
- 7.1.10 Exhaust emissions are an important source of traffic-related pollution, and several epidemiological and toxicological studies have linked such emissions to adverse effects on health. Road abrasion, tyre wear and brake wear are non-exhaust traffic emissions that become relatively more important with progressive reductions in exhaust emissions. Toxicological research increasingly indicates that such non-exhaust pollutants could be responsible for some of the observed adverse effects on health.
- 7.1.11 These findings, (which will inform updates to both WHO and EU air quality guidelines and thresholds) point to important transport related air quality health impacts that may occur in areas below current thresholds for air quality management areas (AQMA). Local policies to address air pollution from transport should therefore aim to go beyond the current emission targets. Consideration should also be given to addressing both exhaust and non-exhaust emissions.

Air Quality Management Areas

- 7.1.12 The 2008 ambient air quality directive sets legally binding limits for concentrations in outdoor air of major air pollutants that impact public health such as particulate matter (PM₁₀ and PM_{2.5}) and nitrogen dioxide (NO₂) (72). The 2008 directive was made law in England through the Air Quality Standards Regulations 2010 (58). The European Commission has tabled a proposal for The Clean Air Policy Package, which would update the 2008 directive with revised limit and target values (73).



- 7.1.13 Part IV of the Environment Act 1995 requires local authorities in the UK to review air quality in their area and designate air quality management areas if improvements are necessary (74). Where an air quality management area is designated, local authorities are also required to work towards the Strategy's objectives prescribed in regulations for that purpose. An air quality action plan describing the pollution reduction measures must then be put in place. These plans contribute to the achievement of air quality limit values at local level.
- 7.1.14 The Air Quality Standards Regulations 2010 sets out target and limit values for England (58). The UK Air Quality Strategy sets out air quality objectives and policy options to improve air quality in the UK (60). It should be noted that some of the values in Table 7-2 are still to enter into force: e.g. PM_{2.5} annual mean limit values of 25µg.m⁻³ (58).

Table 7-2: National Air Quality Objectives and European Directive limit and target values for the protection of human health

Pollutant	Applies	Objective	Concentration measured as
Particles (PM₁₀)	UK	50µg.m ⁻³ not to be exceeded more than 35 times a year	24 hour mean
	UK	40µg.m ⁻³	annual mean
Particles (PM_{2.5}) Exposure Reduction	UK	25µg.m ⁻³	annual mean
	UK urban areas	Target of 15% reduction in concentrations at urban background	annual mean
Nitrogen dioxide	UK	200µg.m ⁻³ not to be exceeded more than 18 times a year	1 hour mean
	UK	40µg.m ⁻³	annual mean
Ozone	UK	100µg.m ⁻³ not to be exceeded more than 10 times a year	8 hour mean
Sulphur dioxide	UK	266µg.m ⁻³ not to be exceeded more than 35 times a year	15 minute mean
	UK	350µg.m ⁻³ not to be exceeded more than 24 times a year	1 hour mean
	UK	125µg.m ⁻³ not to be exceeded more than 3 times a year	24 hour mean
Polycyclic aromatic hydrocarbons	UK	0.25ng.m ⁻³ B[a]P	as annual average
Benzene	UK	16.25µg.m ⁻³	running annual mean
	England and Wales	5µg.m ⁻³	annual average
1,3- butadiene	UK	2.25µg.m ⁻³	running annual mean
Carbon monoxide	UK	10mg.m ⁻³	maximum daily running 8 hour mean
Lead	UK	0.5µg.m ⁻³	annual mean
	UK	0.25µg.m ⁻³	annual mean

WHO Guideline Limit Values

- 7.1.15 The World Health Organization has guideline limit values for air pollutants (57). It should be noted that by 2015 there are expected to be revisions to these values in line with the recent REVIHAAP project findings (59).
- 7.1.16 Where direct comparisons are possible between the WHO guide values and the UK Air Quality Strategy levels it is clear that further health benefits may be achieved by reducing air pollutant levels lower than the statutory requirements.



Table 7-3: Comparison of UK Air Quality Objectives and WHO Guide Values

Pollutant	UK Air Quality Standards	WHO Guide Values
Particulates (PM₁₀)	50 µg/m ³ 24 hour mean	50 µg/m ³ 24 hour mean
	40 µg/m ³ annual mean	20 µg/m ³ annual mean
Particulates (PM_{2.5})	25 µg/m ³ annual mean	10 µg/m ³ annual mean
Nitrogen dioxide	200 µg/m ³ 1 hour mean	200 µg/m ³ 1 hour mean
	40 µg/m ³ annual mean	40 µg/m ³ annual mean
Ozone	100 µg/m ³ 8 hour mean	100 µg/m ³ 8 hour mean
Sulphur dioxide	125 µg/m ³ 24 hour mean	20 µg/m ³ 24 hour mean

Air Quality Index

- 7.1.17 COMEAP's Review of the UK Air Quality Index recommended an air quality index to translate air pollutant concentrations into bands against which public health advice could be given (75). The index was updated by Defra in 2014 (76).
- 7.1.18 Figure 7-1 sets out the bands (Low – Very High on the y-axis) against the pollutants (x-axis). Figure 7-2 sets out general health advice for each band.
- 7.1.19 The index links to published daily air quality forecasting (77) but also provides a useful estimate for considering how local levels of air pollution may affect physical activity and use of outdoor space .

Figure 7-1: COMEAP UK Air Quality Index, as updated by Defra 2013

Band	Index	Ozone	Nitrogen Dioxide	Sulphur Dioxide	PM _{2.5} Particles	PM ₁₀ Particles
		Running 8 hourly mean	hourly mean	15 minute mean	24 hour mean	24 hour mean
		µgm ⁻³	µgm ⁻³	µgm ⁻³	µgm ⁻³	µgm ⁻³
LOW						
	1	0-33	0-67	0-88	0-11	0-16
	2	34-66	68-134	89-177	12-23	17-33
	3	67-100	135-200	178-266	24-35	34-50
MODERATE						
	4	101-120	201-267	267-354	36-41	51-58
	5	121-140	268-334	355-443	42-47	59-66
	6	141-160	335-400	444-532	48-53	67-75
HIGH						
	7	161-187	401-467	533-710	54-58	76-83
	8	188-213	468-534	711-887	59-64	84-91
	9	214-240	535-600	888-1064	65-70	92-100
VERY HIGH						
	10	241 or more	601 or more	1065 or more	71 or more	101 or more



Figure 7-2: COMEAP UK Air Quality Index, accompanying health messages

Air pollution banding	Value	Accompanying health messages for at-risk groups and the general population	
		At-risk individuals*	General population
Low	1–3	Enjoy your usual outdoor activities	Enjoy your usual outdoor activities
Moderate	4–6	Adults and children with lung problems, and adults with heart problems, who experience symptoms , should consider reducing strenuous physical activity, particularly outdoors	Enjoy your usual outdoor activities
High	7–9	Adults and children with lung problems, and adults with heart problems, should reduce strenuous physical exertion, particularly outdoors, and particularly if they experience symptoms. People with asthma may find they need to use their reliever inhaler more often. Older people should also reduce physical exertion	Anyone experiencing discomfort such as sore eyes, cough or sore throat should consider reducing activity, particularly outdoors
Very High	10	Adults and children with lung problems, adults with heart problems, and older people, should avoid strenuous physical activity. People with asthma may find they need to use their reliever inhaler more often	Reduce physical exertion, particularly outdoors, especially if you experience symptoms such as cough or sore throat

* Adults and children with heart or lung problems are at greater risk of symptoms. Such individuals should follow their doctor's usual advice about exercising and managing their condition.

7.2 Evidence to support active travel

7.2.1 Public Health England (PHE) and the National Institute for Health and Care Excellence (NICE) provide good evidence to justify prioritisation of walking and cycling in the Plan.

PHE Guidance on Active Travel

7.2.2 Public Health England (PHE) has recently released a briefing specifically addressing increasing physical activity and active travel (78). Whilst it is recommended that this source is reviewed in detail, key points are listed below:

- Obesity is a complex problem that requires action from individuals and society across multiple sectors. One important action is to modify the environment so that it does not promote sedentary behaviour. The aim is to help make the healthy choice the easy choice via environmental change and action at population and individual levels.
- Planning authorities can influence the built environment to improve health and reduce the extent to which it promotes obesity.
- Creating an environment where people actively choose to walk and cycle as part of everyday life can have a significant impact on public health and may reduce inequalities in health. It is an essential component of a strategic approach to



increasing physical activity and may be more cost-effective than other initiatives that promote exercise, sport and active leisure pursuits.

- Local authorities have important influence over whether planning applications for new developments prioritise the need for people to be physically active as part of their daily life. People are more likely to walk and cycle if there are destinations (such as shops and employment) within walking and cycling distance. This is a key element of the National Planning Policy Framework. Similarly safe, accessible and pleasant outdoor spaces can enhance children's active outdoor play.

7.2.3 The PHE guidance recommends:

- Checking local policies for their impact on physical activity, including those relating to: air quality; community safety; disability; education; environment (including sustainability and carbon reduction); health and wellbeing; housing; land use, planning and development control; regeneration and economic development and transport.
- Reviewing proposed schemes to see how they could be enhanced from a pedestrian or cyclist perspective at little cost by, for example, making pavements wider.
- Providing a safer, more appealing environment for walking and cycling wherever possible. This should support all groups, including people from deprived communities and people with current low levels of walking and cycling.

NICE Guidance on Active Travel

7.2.4 In addition to The National Institute for Health and Care Excellence (NICE) recommendations set in Appendix A: NICE Recommendations (page 85), NICE 'Walking and cycling' guidance recommends that Local Authorities (24):

- Ensure local, high-level strategic policies and plans support and encourage both walking and cycling. This includes a commitment to invest sufficient resources to ensure more walking and cycling – and a recognition that this will benefit individuals and the wider community.
- Ensure the walking and cycling aspects of these plans are developed in conjunction with relevant voluntary and community organisations.
- Ensure strategies to promote walking and cycling address factors which influence activity at various levels – from policy down to the individual. This includes ensuring NICE's recommendations on physical activity and the environment are implemented.
- Assess the impact of relevant policies and decisions on people's ability to walk and cycle. Where necessary, amend them to ensure support for walking and cycling.
- Where appropriate, ensure walking and cycling are treated as separate activities which may require different approaches.

7.3 Evidence supporting healthy housing

7.3.1 This section makes reference to the strength of evidence reported using a simplified version of the Cochrane GRADE approach (79). This scoring reflects how complete the scientific literature is in relation to an issue, not the quality of the reporting review study. There are four ratings: 'high', 'moderate', 'low' and 'very low'. 'High' signifies the strongest evidence and 'very low' the weakest. Scorings for strength of evidence used professional judgement based on an assessment of the overall quality and weight of evidence reported in the selected systematic reviews or evidence summaries. This review has not exhaustively examined the primary sources for each population, intervention or outcome subcategory within each topic. Scorings are therefore indicative rather than definitive.



- 7.3.2 This section provides a review of good quality evidence (systematic reviews) on healthy housing design and policy considerations to support the Plans objectives in relation to new housing allocations.
- 7.3.3 In a recent review Thompson et al (51) suggest that housing improvements that deliver tangible improvements in housing conditions can lead to improved health, even a few months after the intervention. Provision of adequate and affordable space and warmth are key determinants of subsequent health and health impacts, in particular respiratory health. The extent of health improvement reported will depend on the extent of improvement in actual housing conditions experienced by householders. Health improvement is most likely if the housing improvements are targeted at those in most need, that is, those living in poor housing and with existing poor health.
- 7.3.4 Thompson et al (51) go on to state that increased usable space can promote improvements in diet, privacy, household and family relationships, as well as opportunities for leisure and studying. Improvements in health following warmth improvements may also lead to reduced absences from school or work. However the health impacts of housing improvements delivered across a whole area or neighbourhood, rather than targeted according to individual household need, are less clear.
- 7.3.5 In the WHO publication 'Environmental Burden of Disease associated with inadequate housing' Braubach et al (19) provide a review of the health impacts associated with housing. Braubach et al note that the link between poor housing and poor health is well established. Many cross-sectional studies have reported consistent and statistically significant associations between poor housing conditions and poor health.
- 7.3.6 Braubach et al identify that there is 'high' strength evidence that improved warmth in the home may produce long-term positive socioeconomic health benefits, such as less time off work/school, and increased social and educational opportunities. Sauni et al (50) identify mould infestation as a problem in houses, apartment buildings, office buildings and schools. Sauni et al found 'moderate' strength evidence that remediation of mould in houses decreases asthma-related symptoms and decreases respiratory infections. The evidence suggest that mould damaged houses should be remediated to decrease asthma-related symptoms. Such remediation methods may vary from complete rebuilding to improving heating and ventilation. Fisk et al (49) support this view with 'high' strength evidence that residential dampness and mould are associated with increases in both respiratory infections and bronchitis. The review also notes that dampness and mould in buildings is consistently associated with asthma exacerbation. The study concludes that preventing or remediating dampness and mould in residences may substantially reduce the burden of respiratory infections on healthcare services. Gibson et al (80) and Thomson et al (81) also find strong evidence that warmth and energy efficiency interventions have positive impacts on health, although they note that the evidence on other improvements to housing conditions remains unclear.
- 7.3.7 Beyond the fabric of houses themselves, the community context can also be an important determinant of health. Miller et al (18) and Anderson et al (17) report that the physical, social, and economic environments of local communities affect residents' health and exacerbate health disparities. These reviews note that lack of affordable housing has been linked to:
- delays in seeking preventive and routine medical care;
 - medication non-adherence; and
 - increased emergency department utilisation.



- 7.3.8 The reviews also finds that higher utility bills (e.g. following redevelopment) can place an additional burden on lower-income families, forcing trade-offs among housing, heating, food, medical care, and other basic needs. Lack of affordable housing can also undermine the benefits of a stable family home, as families are forced to move frequently, live with other families in overcrowded conditions, or experience periods of homelessness. Such disruption may affect schooling, health care, and social networks.
- 7.3.9 Addressing housing problems that affect whole communities can be problematic. Gibson et al (80) find that there is 'low' strength evidence to support the use of area effects interventions designed to improve high poverty areas. The review notes that whilst focusing investment on deprived areas to improve area characteristics or internal housing conditions may assist all of the residents and thus be more cost-effective than identifying and targeting individuals, any positive effects may be hard to detect as they are diluted by benefiting many who were not disadvantaged. Gibson et al recommend that multiple level housing interventions (i.e. those that simultaneously target individuals, households, housing and neighbourhoods) are most likely to be successful.
- 7.3.10 The Plan aims to facilitate an increase in tenure mix, social diversity and affordable housing. However Gibson et al (80) note that there is a significant evidence gap in the scientific literature with regards to housing interventions that alter housing tenure. Consequently the health implications of changing the mix of tenure types (e.g. from state leases to private ownership) on a housing development are unknown. Some potential for positive effects is hinted at in Anderson et al (17), where there was 'moderate' strength evidence that the use of tenant-based rental assistance programs (which subsidize the cost of housing secured by low-income households within the private rental market through the use of vouchers or direct cash subsidies) are effective in improving household safety (reduced exposure to crime and neighbourhood social disorder). However Anderson et al note that there was only 'very low' strength evidence on the effectiveness of mixed-income housing (publicly subsidized multifamily rental housing developments) in improving family health and safety while providing affordable housing.
- 7.3.11 In the WHO review, the conclusion drawn by Braubach et al for general health impacts associated with housing is that although poor housing, poverty, and poor health are inextricably linked, housing improvements alone may be insufficient to lead to measurable health improvements, especially in the short term (19). Furthermore, although a possibility, there is very limited evidenced that improved housing has long-term health impacts or prevents poor health in future generations.

Mental health

- 7.3.12 In terms of specific impacts on mental health that are associated with housing improvements, Truong et al (82) found 'moderate' strength evidence of an overall association between mental health and neighbourhood characteristics, after adjusting for individual factors. More specifically Braubach et al (19) provide 'moderate' strength evidence that although it is unlikely that housing itself will precipitate serious mental disorder, there are two ways in which housing may contribute to mental health:
- One, it can directly affect chronic stress which is known to affect non-clinical symptoms of anxiety, depression, and hostility and frustration.
 - Two, poor quality housing may be an additional risk factor that often co-varies with poverty and thus is associated with other physical (e.g. pollution or toxins) and social (e.g. family instability or violence) risk factors. The review notes that exposure to multiple risk factors dramatically escalates the probability of psychological distress.



- 7.3.13 There is limited causal evidence that particular types of housing give rise to mental health problems; however Braubach et al identify that living in multiple family housing or on the upper floors of high rise buildings is associated with greater mental health problems. Whilst the review identifies that such effects are likely to be larger for women with young children, the review is clear that there are methodological problems with quantification of mental health impacts at population level.
- 7.3.14 Other community attributes may also act to mediate mental health. McCormack (37) et al found 'moderate' strength evidence that access to nearby parks and natural settings is associated with improved mental health and reduced anxiety. Whilst Kim et al (83) found 'moderate' strength evidence for an association between high levels of neighbourhood social disorder and depression. Although specific remediating interventions were not apparent in the literature, Kim et al found 'low' strength evidence that higher neighbourhood-level socio-economic status may protect against depression. Supporting this association between mental health and socio-economic position, Rehkopf et al (84) found 'moderate' strength evidence that suicide rates increase as socio-economic levels in an area decrease. Furthermore results did not vary significantly by gender and the highest area suicide rates were associated with the residents living below the poverty level (or similar measures of economic deprivation). Rehkopf et al conclude that these findings are consistent with a contextual explanation where area suicide rates are driven by social and economic isolation of neighbourhoods with higher levels of deprivation. The findings suggest that in order to alleviate depression and reduce suicide rates, regeneration should target the most deprived areas with interventions that bolster, not only housing quality, but also socio-economic drivers (such as employment).
- 7.3.15 In the WHO review, Braubach et al conclude that although mental health outcomes are often hard to quantify in practice, mental health should be included as a separate outcome in assessing the health impacts of housing.

Social cohesion

- 7.3.16 The literature on social cohesion is complex. The term itself has different definitions and there is debate surrounding ways to measure its outcomes.
- 7.3.17 However Carter et al (85) find 'moderate' strength evidence that high social capital (as measured by 'low social disorder' or a 'high level of belief in the capabilities of the community to collectively achieve social and political outcomes') protect against increased obesity. As obesity is a major and still growing public health challenge, residential development that optimise opportunities to reduce social disorder (e.g. through street lighting and layout) and promote community participation (e.g. through successful engagement and consultation events) could make an important contribution to wider strategies aimed at tackling obesity.
- 7.3.18 Although there is mixed evidence to support the view that favourable psychosocial environments are linked to better health, Egan et al (21) found 'moderate' strength evidence that some favourable psychosocial environments are associated with better health outcomes. In particular the review notes that effective social support or large social networks are associated with lower risk of coronary heart disease and cancer (particularly breast cancer). Egan et al also found that poor psychosocial environments (including exposure to community violence, anti-social behaviour, or discrimination) may reduce health outcomes and contribute to health inequalities.
- 7.3.19 In conclusion, health improvements from residential planning can be achieved not only from aspects of build quality, but also by designing community layouts and land use mixes that promote positive social interactions.



Access to services

7.3.20 Residential developments should not be considered in isolation, Miller et al (18) provide ‘moderate’ strength evidence that access to goods and services within one’s community can promote and sustain health. Specifically the review reports that:

- The presence of sidewalks and crosswalks, bike paths, playing fields, parks, shopping accessible on foot, and public transportation, along with the perception that it is safe to be outside, contribute substantially to the average amount of regular physical activity that residents of a neighbourhood achieve.
- Education and employment opportunities influence health by providing the means to achieve an adequate standard of living now and in the future.
- Neighbourhoods with better access to supermarkets and other retail outlets with minimally processed foods tend to eat a healthier diet than their counterparts in neighbourhoods with less access to these goods.
- The density of fast food outlets and preponderance of energy-dense foods in convenience stores and other small markets has been linked with higher prevalence of obesity and higher BMI. Similarly, liquor stores are more likely to be located in low-income and more heavily minority communities and their greater density is associated with adverse community-level consequences.

7.3.21 Miller et al conclude that parks, green spaces and recreational facilities, high-quality schools, competitively priced supermarkets and other commercial services, and zoning that keeps industrial sites and pollutants at a distance from residential areas contribute to an environment that is conducive to the achievement and maintenance of good health. These local assets reduce adverse environmental exposures, promote opportunities for self-development, and allow individuals and families to engage in health-promoting activities.

Access to good quality space/urban design

7.3.22 The quality of housing design and surrounding space is a key issue that will be relevant to all the previous areas of discussion. However in terms of specific spatial or design characteristics of housing that improve health outcomes the literature is unable to provide a robust evidence base. For example Braubach et al (19) note that with respect to noise impacts, although effective measures to reduce noise may reduce disturbance and annoyance, there is little evidence of health impacts associated with such changes in exposure in a housing context.

7.3.23 With respect to broader design interventions in the surrounding use of space and integration with other land uses, there is more support from the literature. McCormack (37) et al note that physical activity participation provides mental and physical health benefits and can also reduce the risk of many chronic diseases. The review finds ‘moderate’ strength evidence that the built environment can both enable and limit physical activity participation. Specifically, neighbourhood characteristics such as the proximity and mix of land uses, pedestrian connectivity, aesthetics and interesting scenery, and traffic and personal safety are important correlates of physical activity. Physical activity opportunities are not however confined to green space, Renalds et al (86) found ‘moderate’ strength evidence that neighbourhoods that are characterized as more walkable, either leisure-oriented or destination-driven, are associated with increased physical activity, increased social capital, fewer overweight people, lower reports of depression, and less reported alcohol abuse. This evidence suggests that designing the layout of residential developments to incorporate a mix of desirable leisure, retail and employment opportunities may improve residents’ health.



- 7.3.24 Despite some evidence that the wider setting of a residential development can affect health outcomes, the overall conclusion from Braubach et al in the WHO review is that there is little evidence of improvements or deteriorations in health (physical or mental) associated with major improvements to housing and the outdoor housing environment as a result of programmes of housing-led renewal. Thompson et al (51) however find that housing investment (e.g. increased usable indoor space that can be affordably heated) can lead to health improvements, where the improvements are targeted. The evidence for untargeted area wide housing improvement programs is inconclusive.

7.4 Evidence supporting assisted living and care homes

- 7.4.1 The review aims to provide a summary of good quality literature (predominantly systematic reviews, meta-analyses and randomised control trials) on the issues around design and capacity needs of assisted living and care homes. The review has a focus on dementia. This reflects both the growing levels of this condition in the population and the emphasis of the scientific literature on this group of supported care and care home users.
- 7.4.2 Long term care for older people in England is provided almost exclusively by the independent sector. The majority of care homes are owned by private organisations or charities, with large chains taking an ever increasing share of the market. In England the Care Quality Commission defines care homes by the type of care residents receive, i.e. care homes with nursing services or those without (sometimes described as residential care). The care of around one half of residents is paid for by the state through their local authority (subject to a means test). The total value of the market in England has been estimated at £22 billion, £16 billion of which is state funded. A small proportion of residents in care homes (with high medical needs) is funded by the National Health Service (NHS) (87).
- 7.4.3 Preventing falls is a major challenge for care of the elderly. A Cochrane review of interventions for preventing falls in older people living in the community found that group and home-based exercise programmes reduce rate of falls and risk of falling. Interventions to improve home safety also appear to be effective, especially in people at higher risk of falling and when carried out by occupational therapists (88). In care facilities, vitamin D supplementation is effective in reducing the rate of falls. However the evidence for exercise or multifactorial interventions as an intervention in care homes remains uncertain (89). The evidence to support providing facilities for such interventions in care homes is thereof currently lacking.
- 7.4.4 A US systematic review noted that, although there is insufficient data to draw strong conclusions, moderate strength evidence suggests better quality of care and better self-reported quality of life for residents in non-profit nursing home facilities than in for-profit facilities. Weaker associations were also found, including that: rural facilities and facilities with a higher percentage of private rooms had better self-reported quality of life; staffing generally had no significant relationship with quality of life; and a small house model with more personal care may offer better quality of life outcomes than conventional nursing homes (90).
- 7.4.5 Dementia affects an increasing number of people each year. It is estimated that in Europe the number of people with dementia will increase to reach 13 million in 2040. This is important because these people are heavy consumers of health care. As there is currently no cure for the syndrome, dementia care should focus on contributing to maximizing quality of life (QoL). QoL is a complex, multidimensional construct and is defined by the World Health Organization as 'individuals' perceptions of their position in life in the context



of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns' (91). The systematic review found that depressive symptoms and agitation are related to lower quality of life for people with dementia in long-term care facilities (92).

- 7.4.6 Clinically significant depression is very common among residents of care homes and is associated with poor outcomes, including frailty and increased mortality. Although physical activity is potentially a useful intervention to reduce depression, a randomised controlled trial found that a moderately intense exercise programme did not reduce depressive symptoms in residents of care homes. In this frail population, alternative strategies to manage psychological symptoms are required (93).
- 7.4.7 Effectively supporting older people with complex and multiple needs in the community could reduce the district's care home capacity needs. Health and social care policy in the UK advocates inter-professional working to support older people with complex and multiple needs in the community. Although overall there is weak evidence of effectiveness and cost-effectiveness for inter-professional working; well-integrated and shared care of community dwelling older people has the potential to reduce hospital or nursing/care home use (94).
- 7.4.8 Gage et al provide evidence from a national survey of the state of working between care homes and primary health care services in England. The findings suggest care homes are a hub for a wide range of NHS activity, but this is ad hoc with no recognised way to support working together. Integration between care homes and local health services is mainly evident at the level of individual working relationships and reflects patterns of collaborative working rather than integration. The review notes the need for care homes to receive more support from local primary health care services. Furthermore, by organising this through integrated care mechanisms, there is the potential to generate maximum enhancements to service quality for residents (87).
- 7.4.9 Although family members provide the majority of care for people with dementia, increasing needs over time often lead to placement in a long-term care setting; dementia is the most common reason for entry into nursing homes and residential care or assisted living. Zimmerman et al found that there is limited evidence for the best settings and characteristics of settings for residential long-term care of people with dementia. However the systematic review found moderate strength evidence indicating that pleasant sensory stimulation reduces agitation for people with dementia. Functional skills training and encouraging activities were also linked to better outcomes (95). Design and location of care homes that support these processes of care may therefore be beneficial.
- 7.4.10 There has been a substantial amount of empirical research into those aspects of the physical environment that can assist people with dementia by reducing confusion, agitation and depression while improving social interaction and engagement with the activities of everyday living. This research has been used to develop a set of principles that inform the design of residential aged care facilities for people with dementia (96;97). An Australian review of evidence-based health facilities design found that many facilities for people with dementia have been built with little reference to the available evidence. A key element in the adoption of evidence-based principles of dementia design was the input of managers who were fully aware of dementia design principles. The review concludes that if the next generation of residential aged care facilities is to be suitable for people with dementia, the facility managers must be made aware of the available design principles, architects encouraged to be more active in sharing their knowledge and ways found to improve the exchange of knowledge between these two parties (98).



- 7.4.11 The behavioural problems of people with dementia are often considered as one of the most challenging issues in caring. Special Care Units (SCUs) have flourished since the 1980s with the aim of taking care of dementia patients, usually those with Alzheimer's disease, and in particular for those with behavioural problems. Although lacking a standard definition, SCUs are usually situated within nursing homes and commonly include the features of trained staffing, special programming, a modified physical environment, and family involvement. The costs of SCUs are commonly higher than for 'standard' nursing home care. There is limited evidence to support the assumption that the care of people with dementia in special care units (SCUs) is superior to care in traditional nursing units. It is probably more important to implement best practice than to provide a specialized care environment (99).
- 7.4.12 Moving into a care home involves life changes that significantly impacts on an individual's quality of life. These include substantial alterations in social interactions and adapting to issues involving privacy, dignity and independence. Negative aspects of care home life are often highlighted; however positive experiences do occur in care homes and are important for residents' quality of life. In a systematic thematic review Bradshaw et al found four key themes that affect good quality of life in care homes: acceptance and adaptation; connectedness; homelike environment; and caring practices. The review finds that a homelike environment can reduce the impact of 'institutionalisation'. A homely physical environment allowed a smoother transition from home to care home. Having one's own room and bathroom, enough storage and a quiet place facilitated residents' abilities to exercise control. When a homelike environment was absent a sense of institutionalised living occurred, with the home described as regimented and restricted, and daily life as routine or boring (100).
- 7.4.13 Calkins finds there is solid evidence that the built environment impacts the psycho-social-emotional well-being and probably physical health of individuals with dementia. Calkins recommends that it is time to stop buildings in the style of traditional institutional setting, with multi-bed rooms, long corridors, and multi-purpose dining activity rooms. There is growing evidence that the design of the built environment, by itself and in combination with organisational policies and procedures, has a direct and measurable impact on the physical and psycho-social functioning of residents with dementia, which may translate into higher quality of life. The strongest evidence supports the positive benefits of private bedrooms on outcomes such as satisfaction of residents, families and staff, quality of life, preference and reduced infections. There is similar strong evidence from multiple studies that smaller groupings of residents are associated with higher assessments on satisfaction, measures of quality of life. There is also some evidence from studies on lighting to suggest that significantly increased ambient light has a positive impact on behaviour, agitation, and sleep (101).
- 7.4.14 Consistent with the influence of the physical environment Chaudhury et al find that a range of dining room design characteristics, such as: small dining rooms; homelike atmosphere; appropriate lighting and colour contrast; minimised noise; music; orientation cues; and furniture grouping to promote social interactions can foster positive outcomes for residents with dementia (102).
- 7.4.15 Marquardt et al consider spatial disorientation as a prime reason for institutionalisation. The study finds that autonomy of the residents and their quality of life is strongly linked with their ability to reach certain places within their nursing home. The study sets out recommendations for architectural design (103).
- A smaller number of residents per living area facilitate orientation and wayfinding.



- People with moderate to severe stages of dementia need well-defined, geometrically simple structures to orient themselves and to succeed in wayfinding.
 - Guiding elements, such as a straight wall running through the whole living area, can be supportive features.
 - Memorable reference points which can support a resident's allocentric orientation strategy are thus needed (e.g. architectural elements, fixtures, fittings or furniture).
 - Clearly visible endings of corridors provide a good orientation.
 - Cul-de-sacs have to be avoided, and provision of enough safe space for activities and exercise around is advisable.
 - Spatial situations and places should not be repeated. The live-in kitchen, in particular, should be designed in such a way that it becomes a unique and memorable feature of the living area.
 - The access to the outdoor area or balcony should be located in a central area within the living area. A sun-protected sitting area with enough tables and chairs for all the residents should be placed in the balcony or on the terrace.
 - all places within the home need to be designed in such a way that they are architecturally legible—meaning that their function is evident through their size, proportion, materiality, and furnishing.
- 7.4.16 Outside of the care home, there are numerous environmental interventions such as home modifications, assistive devices, object modifications and task simplification that serve as facilitators for people with dementia in their desire to remain living in the community and help support both informal and formal caregivers. van Hoof et al set out an overview of existing design principles and design goals, and environmental interventions that can be implemented at home for older adults with dementia (97).
- 7.4.17 Another set of guidelines is provided by Fleming and Purandare who consider the design of long term environments for people with dementia. Their review finds that there is sufficient evidence available to come to a consensus on guiding principles. The available research suggests that designers and architects may be confident about: using unobtrusive safety measures; varying the ambience, size and shape of spaces; providing single rooms; maximizing visual access to important features; and providing for stimulus control with the periodic availability of high levels of illumination. There is less agreement on: the usefulness of signage; home likeness; provision for engagement in ordinary activities; small facility size; and the provision of outside space (96).
- 7.4.18 The guidelines by Marquardt (103) van Hoof (97) and Fleming (96) could be reviewed by developers in designing new homes and could also provide a resource for the local authority to assist older people with dementia who wish to remain at home, thereby reducing capacity needs for care homes. As noted by Fleming (98) care home managers must also be made aware of the available design principles.
- 7.4.19 We note also, in the context of a changing climate, that patients of care homes are vulnerable to heat-related illness. We suggest that care homes should meet criteria for the thermal indoor environment to prevent heat-related illness in both patients and staff (104).



7.5 Buffer zones between residential and employment areas

- 7.5.1 Buffer zones intended to separate residential areas from commercial/industrial zones have the potential to be eroded by un-regulated changes of use.
- 7.5.2 Buffer zones could be either B1 use class or green infrastructure⁸. B1 includes offices, research and development of products and processes, and light industry appropriate in a residential area.
- 7.5.3 The Town and Country Planning (Use Classes) Order 1987 (as amended) (2) sets out a number of routes by which B1 uses can change without the need for planning permission, these include:
- B1 (a) (offices) can change to C3 (residential use) without planning permission (subject to prior approval covering flooding, highways and transport issues and contamination);
 - B1 can change to a state-funded school (subject to prior approval covering highways and transport impacts and noise);
 - B1 can change to B8 (storage and distribution);
 - B1 are permitted to change use for a single period of up to two years to A1 (shops), A2 (financial and professional services - including betting shops and payday loan shops), and A3 (restaurants and cafes);
 - B2 (general industry can also change to B1 use without planning permission; A transition over time from B2 (general industry) via B1 (offices) to C3 (residential use) is therefore possible without planning permission.
- 7.5.4 The implication of these permitted development rights are that areas intended to protect both residents from disturbance and local employers from commercial constraints on operating hours or use of noisy machinery are lost. The loss of buffer zones could affect people's health through, for example, increased exposure to noise and poor air quality and by creating tensions between residential accommodation, family and community life and the needs of business. It could also threaten local jobs. As children are particularly vulnerable the potential for schools to locate within the buffer zone is concerning.
- 7.5.5 One option could be for Warwick district to consider using an Article 4 Direction to prevent changes of use without planning permission in buffer zones. This would require planning applications to be submitted. The subsequent planning applications would be determined in accordance with the development plan.
- 7.5.6 It is noted that Article 4 Directions are likely to attract scrutiny and potentially challenge. Their use should therefore be selective, well evidenced and subjected to legal review.
- 7.5.7 The National Planning Policy Framework (NPPF) advises that the use of Article 4 Directions to remove permitted development rights should be limited to situations where it is necessary to protect local amenity or the wellbeing of the area (25, paragraph 200). Further guidance on the use of Article 4 Directions is set out in *Replacement Appendix D to DoE Circular 9/95: General Development Consolidation Order 1995* (105). This states that an Article 4 direction would be appropriate only in those exceptional circumstances where evidence suggests that the exercise of permitted development rights would harm local amenity or the proper planning of the area. This includes consideration of whether permitted development rights undermine local objectives to create or maintain mixed

⁸ Department for Communities and Local Government (25) defines green infrastructure as: a network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.



communities. Paragraph 2.2 requires that local planning authorities clearly identify the potential harm that the direction is intended to address.

- 7.5.8 To support the use of Article 4 directions the Plan could make specific reference to the importance of the buffer zones in avoiding harm to local amenity, wellbeing and the proper planning of the area. Health effects may arise from disturbance (e.g. noise and vibration); nuisance (e.g. odour and dust); and reduced air quality (e.g. plant and HGV emissions).
- 7.5.9 To support this approach the Plan could also make specific reference to local objectives to create or maintain mixed communities that would be undermined by exercise of permitted development rights in buffer zones.
- 7.5.10 Consideration could also be given to buffer zones where future or existing employment zones boards residential or amenity spaces. A buffer zone could include a band of B1 use class or an area of open/green space.

7.6 Evidence to support obligations to fund obesity prevention, particularly for 6-12 year olds

- 7.6.1 A 2011 Cochrane systematic review of effective interventions to prevent obesity in children concluded that (62):
- The strongest evidence of effective obesity prevention interventions is in 6-12 year olds, with interventions predominantly based on behaviour change theories and implemented in education settings.
 - There is limited evidence relating to the effectiveness of interventions to prevent obesity in children aged 0-5 years (particularly 0-3 years).
- 7.6.2 Although the evidence for prevention of obesity in younger children (under 6) is poor, there is better evidence for interventions to tackle existing obesity in this age group.
- 7.6.3 The latest systematic review evidence (May 2014) (106) provides evidence that Comprehensive Behavioural Family Lifestyle Interventions addressing child obesity lead to improvements in child weight outcomes. The overall effect size was small and there was no difference in effect sizes for weight outcomes at post treatment relative to long-term follow-up. The review found that greater duration and intensity of treatment, as well as greater child age, were all related to better weight outcomes. The review found only one randomised control trial for the under 4s age range (Bocca et al, source 107).
- 7.6.4 Bocca et al found that a multidisciplinary intervention programme in the Netherlands for 3-year-old to 5-year-old overweight and obese children (n=78) had beneficial effects (107). The positive effects were still present 12 months after the start of the intervention. Based on the rapid review undertaken for this HIA, this study provides the most robust evidence for an effective intervention targeting obesity in under 4s that could be replicated with funding from obligations under the Plan. Such interventions should target both children and parents in a multidisciplinary intervention program, including dietary advice, physical activity sessions and, for parents only, psychological counselling.
- 7.6.5 It is recommended that all services funded in this manner are done so in line with NICE guidelines. Key recommendations from NICE for child obesity services include:
- NICE recommend ensuring family-based, multi-component lifestyle weight management services for children and young people are available as part of a community-wide, multi-agency approach to promoting a healthy weight and preventing and managing obesity (63). Programmes should focus on: diet and healthy eating habits; physical activity; reducing the amount of time spent being



sedentary; and strategies for changing the behaviour of the child or young person and all close family members.

- NICE recommend that teachers, teaching assistants, nursery nurses, home-based child carers and those working in pre-school day care settings such as nurseries, crèches and playgroups, implement a food policy which takes a 'whole settings' approach to healthy eating, so that foods and drinks made available during the day reinforce teaching about healthy eating (108). Furthermore every opportunity should be taken to encourage children to handle and taste a wide range of foods that make up a healthy diet by:
 - providing practical classroom-based activities;
 - ensuring a variety of healthier choices are offered at mealtimes, and snacks offered between meals are low in added sugar and salt (for example, vegetables, fruit, milk, bread and sandwiches with savoury fillings); and
 - ensuring carers eat with children whenever possible.

7.6.6 Based on the findings of the rapid review undertaken for this HIA there is some evidence to support interventions for younger children (under six). However the best evidence is for interventions targeting 6-12 year olds.

7.6.7 The 2011 Cochrane systematic review (62) found strong evidence to support beneficial effects of child obesity prevention programmes on BMI, particularly for programmes targeted to children aged 6-12 years. Although the findings should be interpreted cautiously, the components that contributed most to the beneficial effects observed include:

- school curriculum that includes healthy eating, physical activity and body image;
- increased sessions for physical activity and the development of fundamental movement skills throughout the school week;
- improvements in nutritional quality of the food supply in schools;
- environments and cultural practices that support children eating healthier foods and being active throughout each day;
- support for teachers and other staff to implement health promotion strategies and activities (e.g. professional development, capacity building activities); and
- parent support and home activities that encourage children to be more active, eat more nutritious foods and spend less time in screen based activities.

7.6.8 Together with the NICE recommendations set out above and in Appendix A: NICE Recommendations (page 85) this evidence presents a robust basis for using planning obligations to fund child obesity prevention services.

7.6.9 A policy could therefore be included in the Plan to provide:

- Obligations to fund services aimed at encouraging healthy lifestyles targeting children, particularly addressing obesity prevention in 6-12 year olds.

7.7 Evidence to support a new fast food policy

7.7.1 This section provides evidence for a policy in the Plan to restrict access to fast food, particularly by school children.

7.7.2 The evidence provided here is an introduction to the topic. Further information has been provided separately by Warwickshire County Council's Public Health Team (109), who have recently completed a mapping exercise of hot food takeaways in the district.



- 7.7.3 The ruling in the case of: R. (on the application of Copeland) v Tower Hamlets LBC [2010] (26) found that healthy eating and proximity to local schools was capable of being a material consideration. The case set a precedent for local planning authorities to consider how planning decisions impact on locally-set health and wellbeing priorities (110). However in that particular case the lack of local policy on the issue contributed to the takeaway being ultimately permitted.
- 7.7.4 So although R. (on the application of Copeland) v Tower Hamlets LBC [2010] (26) establishes that social objectives (including health) can be material planning conditions, in practice some form of test must be applied to demonstrate the weight carried by such social objectives if they are to determine the planning application. Although not a legal test (being the planning inspector's views, not those of the Courts), the following points should be considered:
- a link between the social objective and the proximity of the particular 'use class' [the science];
 - a link between the social objective and the existing concentration of the particular 'use class' [the local conditions];
 - the existence of local policy explicitly seeking to control proliferation of the particular 'use class' [the local policy]; and
 - evidence that a single further instance of the particular 'use class' would affect the social objective (e.g. health), i.e. that some threshold for harm had been reached or already exceeded.
- 7.7.5 We do not recommend this final threshold test which would seek to demonstrate the effect of one additional outlet on health. We find that this would require a detailed study for each planning application and so is not considered feasible.
- 7.7.6 However the first three components of this test would make a strong case that could be presented in support of planning arguments for preserving vitality and viability.

Guidance that supports a policy to restrict hot food takeaways

- 7.7.7 Public Health England, NICE and the King's Fund provide guidance on the ways in which local authorities can use planning policies to restrict access to energy dense food. In considering potentially unhealthy food outlets this section uses a variety of terms including 'hot food', 'fast food', 'takeaways', and 'energy dense food'. Having their own use class category (2), 'hot food takeaways' (use class A5) may be the most amenable to planning restrictions. In this report we do not limit ourselves to A5 use classes, but recognise that in practical terms they may be a good starting point for policy controls.

PHE Guidance on Fast Food

- 7.7.8 Public Health England (PHE) has recently released a briefing specifically addressing the adoption of fast food policies in local plans (78). Whilst it is recommended that this source is reviewed in detail, key points are listed below:
- 7.7.9 The National Planning Policy Framework (NPPF) makes it clear that local planning authorities (LPAs) have a responsibility to promote healthy communities (25). Local plans should "take account of and support local strategies to improve health, social and cultural wellbeing for all". The National Planning Practice Guidance (NPPG) refers to promoting access to healthier food (111).



- 7.7.10 A number of local authorities⁹ have drawn up supplementary planning documents (SPDs) to restrict the development of new fast food premises near schools. However, it is recognised that due to consultation and other procedures, these can take a long time to prepare and agree. SPDs must also relate to a policy in the local plan, so the priority is to make sure the issue is addressed within the local plan in the first place.
- 7.7.11 Barking and Dagenham was nearing completion of its core strategy when it began to develop its A5 SPD, which was adopted in 2010. The council chose to develop its A5 policy as an SPD, but has reported that for local authorities developing local plans it is advisable to incorporate A5 policies within the development plan documents (DPD) rather than SPDs as they carry more policy weight. The downside of this is that DPDs face much more in the way of procedural challenges.
- 7.7.12 Proximity to schools used as a criterion St Helen's Council has implemented a wide-ranging policy including a number of restrictions, granting planning approval only "within identified centres, or beyond a 400m exclusion zone around any primary or secondary school and sixth form college either within or outside local education authority control". The council's SPD is a material consideration in determining planning applications. As well as proximity to schools and health impact, it covers issues such as over-concentration and clustering, highway safety, cooking smells, and litter.
- 7.7.13 Sandwell Council adopted an SPD for hot food takeaways in 2012, including a 400m exclusion zone around secondary schools, and tests for over-concentration, clustering and environmental impact (112). In one appeal there was little support from the school affected or secondary evidence, so the application was approved. Council officers reported they have since made efforts to work more closely with public health colleagues and to engage with schools on the issue. All subsequent appeals to the Planning Inspectorate, including one within 400m of a secondary school, have been dismissed, so the SPD appears to have been effective.
- Warwick district may wish to develop a similar SPD. Given the success reported by PHE Sandwell Council's SPD could be a useful starting point. However as the paragraph above illustrates, effectiveness is also contingent on ongoing collaboration with local communities.
- 7.7.14 In 2010 a High Court judge declared that Tower Hamlets Council in East London "acted unlawfully" when it gave the go-ahead for Fried & Fabulous to open for business close to a school. The judge said councillors had voted in favour of permission after being wrongly directed that they could not take account of the proximity of the local secondary school because it was not "a material planning consideration". However, planning permission was ultimately granted on appeal for a number of reasons, including the lack of evidence that "the location of a single take-away within walking distance of schools has a direct correlation with childhood obesity, or would undermine school healthier eating policies". This prompted Tower Hamlets to review its policies with the aim of limiting such appeals in future.
- 7.7.15 PHE note that a number of authorities have had planning decisions challenged through the appeals process. Some appeals have been allowed, but many have been dismissed. Healthy eating and proximity to a school has been a consideration in a number of planning appeals. It is not usually the sole or determining factor in the final decision, though it has been in at least one case (113). However, healthy eating and proximity to a school have been given

⁹ Within London, the following councils have been identified to have either proposed or adopted restrictive policies based around A5 usage: Barking and Dagenham; Greenwich; Hackney, Haringey; Havering; Islington, Kensington and Chelsea; Kingston-upon-Thames; Newham and Waltham Forest.



substantial weight when there is an adopted local plan policy or SPD in place, local evidence on childhood obesity and healthy eating initiatives, and representations from the relevant school.

- The Newham case was decided on the basis that the proposals (change of use of shop from A1 to A5 hot food takeaway) were clearly in conflict with the Council's Core Strategy CS Policy SP2, which recognised the role of planning in promoting healthy lifestyles and reducing health inequalities. As part of the strategy to achieve those objectives, it acknowledged the need to promote healthy eating by taking into consideration the cumulative impact of A5 uses and seeks to establish a 400m exclusion zone for them around secondary schools.

7.7.16 Most authorities have used a distance of 400m to define the boundaries of their fast food exclusion zone, as this is thought to equate to a walking time of approximately five minutes (114) (a 400m radius, equating to a five minute walk). However, in Brighton and Hove this was found to be inadequate to cover the areas actually used by pupils: an 800m radius is used as it covers significantly more lunchtime journeys.

7.7.17 PHE also note the option for using Section 106 agreements and the Community Infrastructure Levy to contribute to work on tackling the health impacts of fast food outlets.

NICE Guidance on Fast Food

7.7.18 The National Institute for Health and Care Excellence (NICE) 'Prevention of cardiovascular disease' (evidence (115) is based on a 2010 systematic review¹⁰. Systematic reviews are considered one of the most robust forms of evidence (source 118, page 7-6). The need for updated guidance was taken by NICE in March 2014 and concluded that, "new evidence suggests ways in which recommendations might be updated. No new evidence has been identified which suggests any of the existing recommendations should be reversed. The evidence strengthens and supports the current guidance" (119).

7.7.19 In reaching its decision the NICE update review decision evidence base considered the additions to the literature since the 2010 systematic review. A World Health Organization report on food policies in the UK concluded (120):

7.7.20 Diet powerfully contributes to health inequity. Low-income groups, which also suffer the highest burden of CVD and other chronic diseases, have consistently worse diet patterns.

7.7.21 The Government of the United Kingdom has spent over a decade promoting fruit and vegetable consumption, but with frustratingly small improvements. Social marketing campaigns and free fruit schemes for schools have clearly not sufficed. Energy-dense, nutrient-poor "junk food" remains cheap and is aggressively marketed, whereas fruit and vegetables remain relatively expensive. Improvements will clearly require additional structural changes.

7.7.22 The key targets are affordability, accessibility and acceptability.

7.7.23 Stricter United Kingdom food policies could substantially and rapidly reduce cardiovascular mortality. Over the past decade, the United Kingdom Government and FSA's voluntary agreements and partnership with industry have resulted in modest dietary improvements. However, the current United Kingdom dietary targets are clearly insufficient longer term.

7.7.24 Voluntary agreements with the processed food industry generally fail, much like tobacco policies in previous decades. Conversely, countries with healthier food policies (e.g.

¹⁰ For supporting evidence base see NICE (116) and specifically Garside, R. et al. (117).



Denmark, Finland, Iceland, Norway and Sweden) have seen larger drops in major CVD risk factors and correspondingly bigger mortality reductions.

- 7.7.25 Setting tougher United Kingdom dietary targets will require additional regulatory, legislative and fiscal initiatives: evidence-based policy interventions recommended by the NICE, the World Health Organization (WHO), The World Bank and the United Nations.
- 7.7.26 The following two NICE recommendations are relevant (from NICE public health guidance 25: Prevention of cardiovascular disease).

NICE Recommendation 11: Take-aways and other food outlets

- 7.7.27 Food from take-aways and other outlets (the 'informal eating out sector') comprises a significant part of many people's diet. Local planning authorities have powers to control fast food outlets.
- 7.7.28 Empower local authorities to influence planning permission for food retail outlets in relation to preventing and reducing CVD. To achieve this, the following are among the measures that should be considered.
- 7.7.29 Encourage local planning authorities to restrict planning permission for take-aways and other food retail outlets in specific areas (for example, within walking distance of schools). Help them implement existing planning policy guidance in line with public health objectives.

NICE Recommendation 23: Take-aways and other food outlets

- 7.7.30 Action should be taken by: environmental health officers; local government planning departments; public health nutritionists; and trading standards officers.
- 7.7.31 Use bye-laws to regulate the opening hours of take-aways and other food outlets, particularly those near schools that specialise in foods high in fat, salt or sugar.
- 7.7.32 Use existing powers to set limits for the number of take-aways and other food outlets in a given area. Directives should specify the distance from schools and the maximum number that can be located in certain areas.
- 7.7.33 Help owners and managers of take-aways and other food outlets to improve the nutritional quality of the food they provide. This could include monitoring the type of food for sale and advice on content and preparation techniques.

Kings Fund guidance on Fast Food

- 7.7.34 The Kings Fund provide a summary of evidence and possible actions in relation to access to fast foods (121).
- 7.7.35 Meals eaten outside the home account for a quarter and a fifth of the calorie intake of men and women respectively. Takeaways account for a quarter of this market, producing foods that are often high in saturated fat and salt and low in fibre, which contributes to poor health.
- 7.7.36 Many (but not all) research studies have found a direct link between a fast food-rich environment and poorer health and particularly obesity.
- 7.7.37 Takeaway food services cluster in town and city centres and arterial roads, in areas of high socio-economic deprivation, and where unemployment is highest. In one deprived London borough, for example, a survey of schoolchildren found that more than half purchased food or drinks from fast food or takeaway outlets twice or more a week, with about 10 per cent consuming them daily.
- 7.7.38 To support the business case for restricting fast foods The Kings Fund report notes that in 2002, the average local authority area incurred NHS costs of around £18 million to £20



million due to obesity, and a further £26 million to £30 million in lost productivity and earnings due to premature mortality.

Lessons from other Local Authorities Policies

7.7.39 The following sections provide some insights into various approaches to adopting planning policies to restrict unhealthy food.

Stockport

7.7.40 Stockport's Development Management Policy AS-3 – hot food takeaway policy (122).

7.7.41 Outside the service centres, proposals for hot food take aways and fast food restaurants (A5 use) will be required to be located over 300 metres away from schools and parks. Exceptions will be permitted where the A5 use would be more than an easy walking distance away from the school (s) or park (s) due to physical barriers such as a major road, railway line or river where such separation from the A5 use would not be overcome via a pedestrian route.

7.7.42 Although it is understood that this policy has not been challenged, it is noted that the policy extends beyond A5 uses (hot food takeaways) to A3 uses (fast food restaurants). The policy does not make this distinction and this may open it to challenge. Indeed in other areas of the Core Strategy A3 uses are actively encouraged.

Greenwich

7.7.43 Policy TC (d) Hot Food Take-aways (123): Major, District and Local Centres and Neighbourhood Parades are the preferred location for hot food take-away establishments including drive through restaurants (Use Class A5). Hot food take-aways will be permitted providing:

- i. The proposed use and the level of activity it generates is appropriate in the location proposed and would not unacceptably impact on residential or workplace amenity, nor on the environment or character of the area;
- ii. Customer visits by car would not unacceptably impact on existing or proposed public transport provision, traffic movements, road or pedestrian safety;
- iii. The proposal complies with applicable retail frontage policies and does not jeopardise the provision of an essential local service;
- iv. Proposals outside Major, District and Local Centres predicated on serving a wider than 'walk-in' catchment demonstrate that:- they serve a need not generally met by existing facilities, that there are no sequentially preferable sites available and that they are conveniently and safely accessible by public transport as well as by cycle and on foot; and
- v. It is not within 400 metres of the boundary of a primary or secondary school.

Kingston-upon-Thames

7.7.44 Policy DM21 of the Core Strategy states that the Council will (124):

- a. resist the loss of existing healthcare facilities in accordance with Policy DM24 Protection and Provision of Community Facilities;
- b. resist concentrations of hot food take-aways close to schools;
- c. require Health Impact Assessments (HIAs) for all major developments; and
- d. support proposals that promote health, safety and active living for all age groups, particularly in areas of health inequality.

Waltham Forest

7.7.45 Waltham Forest Hot Food Take Away SPD sets out a series of 11 tests, these include (125):



- When considering whether a proposed hot food takeaway would result in an over-concentration of such uses to the detriment of the vitality and viability of a town centre, neighbourhood centre or local retail parade, regard will be had to:
 - The number of existing hot food takes away establishments in the immediate area and their proximity to each other;
 - The type and characteristics of other uses, such as housing, shops and public houses;
 - The importance of the location for local shopping, and the number, function and location of shops that would remain to serve the local community;
 - The potential benefits of the proposal for the wider community; and
 - Any known unresolved amenity, traffic or safety issues arising from existing uses in the area.
- Appropriate concentrations of A5 uses will be assessed based on the following:
 - Within Primary, Secondary and Retail Parade Zones, no more than 5% of the units shall consist of A5 uses. (A primary zone consists of all the primary frontages that exist within the relevant town centre. The same applies for Secondary and Retail Parade Zones).
 - Within Tertiary Zones and outside designated centres, no more than 1 A5 unit will be allowed within 400m of an existing A5 unit. (Areas outside of designated frontages (primary, secondary or neighbourhood retail parades) but still within the designated centre).
- Planning permission will only be granted for an A5 use where the following criteria are satisfied:
 - 1. No more than two A5 units should be located adjacent to each other.
 - 2. Between individual or groups of hot food takeaways, there should be at least two non A5 units.
- With regard to proposals which fall outside designated town centre and local parade locations, hot food takeaway shops will be resisted where the proposal will:
 - 1. Fall within 400m of the boundary of an existing school or youth centred facility (e.g. YMCA, after school clubs).
 - 2. Fall within 400m of a park () boundary

7.7.46 The Waltham Forest *Local Plan Evidence Base Annual Monitoring Report 2012/13* notes that since the adoption of the Hot Food Takeaway Supplementary Planning Document, 33 planning applications for 'hot-food-takeaway' were refused and 8 were allowed under special circumstances including 3 appeals allowed by Planning Inspectors (126).

Worcester City Council

7.7.47 Worcester City Council mapped all the schools in Worcester to explore a scenario of a 400m exclusion zones being placed around each of the schools (127). The results of this were that the proportion of the city covered by the exclusion zones was so large that there would be very few places for a new takeaway to locate. The Council therefore took an alternative approach and in their SPD require:

- When applications for Takeaway Food Outlets within close proximity of schools, colleges and community centres (400m) are received, the relevant organisations should be consulted.

Barking and Dagenham

7.7.48 Barking and Dagenham SPD provides the following guidance on A5 uses (128):



- 7.7.49 Planning permission for new hot food takeaways (Use Class A5) will not be granted in the hot food takeaway exclusion zone. This is where proposals: Fall within 400m of the boundary of a primary or secondary school.
- 7.7.50 Planning permission will only be granted for a hot food takeaway outside of the hot food takeaway exclusion zone provided that:
- It is within Barking Town Centre, or Dagenham Heathway, Chadwell Heath and Green Lane District Centres or one of the Neighbourhood Centres.
 - It will lead to: no more than 5% of the units within the centre or frontage being hot food takeaways; no more than two A5 units being located adjacent to each other; and there being no less than two non-A5 units between a group of hot food takeaways.
- 7.7.51 Where hot food takeaways are deemed appropriate a fixed fee of £1,000 will be charged. This contribution will be sought through a Section 106 agreement. This fee will contribute towards initiatives to tackle childhood obesity in the Borough such as providing facilities in green spaces to encourage physical activity and improvements to the walking and cycling environment.

Lessons from recent planning appeals

- 7.7.52 A rapid review of online published recent planning appeal decisions in relation to hot food takeaways identified the following informative lessons in regard to inspectors' consideration of policies seeking to restrict A5 uses (129). Bullets points below each summary provide commentary on considerations for the new policy.
- 7.7.53 2013, Wrexham: hot food takeaway allowed subject to opening at 16:00 avoiding use by pupils at nearby local primary school (within 400m radius). [DCS Ref: 100-080-439].
- Policy could consider restricted opening times to reflect pupil access or allowing applications which voluntarily restrict their opening times to the same effect.
- 7.7.54 2012, London: takeaway was allowed despite noting that a primary school was located 130m from the site. A core strategy policy aimed to promote health and reduce health inequalities, noting that the borough had a significant diet-related health problem, including a high rate of childhood obesity. The inspector reasoned, however, that children of primary school age would be accompanied by an adult, who would be able to guide food choices, and the appellant indicated that a balanced nutritional menu was available. The inspector noted that she had been presented with no evidence or research to link diet-related health problems, and in particular childhood obesity, with the availability of takeaway food. [DCS Ref: 100-077-825].
- Policy could provide evidence linking childhood obesity to availability of takeaway food.
- 7.7.55 2012, London: permission was denied for a hot food takeaway. The inspector noted that the site was not located within a defined shopping centre and therefore failed to comply with the council's aim of concentrating food and drink uses within them. There were three other takeaway units within a short distance and the appeal proposal would lead to an over-concentration of such uses. It also lay within 400m of a secondary school and there was a risk that the scheme would fail to support the council's aim of promoting healthier lifestyles and reduce health inequalities. [DCS Ref: 100-077-474].
- Policy could include a 400m exclusion zone from secondary schools.
 - Policy could define clearly where A5 uses are and are not to be concentrated.
 - Policy could link to local evidence on concentrations.



- Policy could link to policies promoting healthier lifestyles and reduce health inequalities.
- 7.7.56 2013, London: inspector rejected claims that a takeaway would provide access to 'cheap and unhealthy food' which was accessible to local school children. In rejecting all of these claims the inspector noted that the council's reference to cheap and unhealthy food was vague. Nor was there evidence to suggest that the food sold from the premises would fall within these categories. The appellants had confirmed that sales directly to customers calling at the premises formed a minority of sales and consequently it was unlikely that local school children would seek to visit the premises on a regular basis. The council's reliance on a 400 metre exclusion zone around schools had been judged unsound and disproportionate by another inspector examining its core strategy and this restriction therefore carried little weight. [DCS Ref: 400-002-655].
- Policy could provide a sound and proportionate rationale for an exclusion zone around schools.
 - Should the policy make any statement about the quality or cost of food provided by A5 uses, this could be evidenced with clear reference to relevant healthy food standards.
- 7.7.57 2013, London, in an enforcement case a takeaway within a restaurant lay close to a high school which had adopted a healthy eating policy and a draft development management document sought to limit fast food outlets within a 10 minute walk of existing schools. It asserted that fast foods often contained high levels of sugar, fat and salt which was unhealthy and potentially dangerous if consumed over a long period of time. The problem of unhealthy eating and child obesity were important issues the inspector held but noted that the council had failed to provide cogent evidence to support its draft policy which had been submitted for independent examination but not adopted. Two take-away outlets lay within easy walking distance and restricting the ability of the restaurant to also serve food for consumption off the premises could lead to a more restricted range of food choices for children. There was no suggestion that the appeal premises served unhygienic food and in his opinion the council's objection could not be supported. The notice was quashed. [DCS Ref: 400-002-159].
- Policy could be supported by cogent evidence.
- 7.7.58 2012, Merseyside: a takeaway was refused permission with weight given to harm to retail function which would undermine primary retail function and that the site was in an area excluded from further A5 development to establish healthy eating habits to which some weight given. [DCS Ref: 100-076-454].
- Policy could sit alongside to other policies that aim to preserve the retail function of the area.
- 7.7.59 2012, South Yorkshire: Kentucky Fried Chicken restaurant and drive through was allowed. The inspector noted that the restaurant would be approximately 40m from a primary school and registered concerns that it would undermine healthy eating initiatives. She acknowledged the finding in R (on the application of Copeland) v Tower Hamlets London Borough Council in respect of a fast food outlet. She understood, however, that this related to a takeaway near a secondary school where pupils would be able to leave at lunchtime. She pointed out that primary school children were not usually permitted to leave the premises at midday, and found it unlikely that they would travel to and from school unaccompanied by an adult. On this basis, she did not consider that the presence of the restaurant and drive through would jeopardize the local healthy eating initiatives. [DCS Ref: 100-075-699].



- Policy could consider focusing on schools where pupils are allowed out during the day, this could exclude most primary schools.
- 7.7.60 2011, East Riding of Yorkshire: a hot food takeaway was approved provided the opening hours were restricted. With regard to the council's further concern about the need for people to adopt a healthy lifestyle and tackle childhood obesity, the planning system had a role to play. The government had published two documents in 2008 and 2010 setting out how local authorities could use their planning powers to control the number and location of fast food outlets. The appeal site lay close to a college and was likely to attract some students during the daytime. The college actively promoted healthy lifestyles and accordingly the students had the ability to make an informed choice on whether to use the facility on a regular basis. Consequently, this issue did not count against the scheme. [DCS Ref: 100-073-812].
- Policy could consider not including colleges, as students may be considered to have informed choices, especially if the college promotes healthy lifestyles.
- 7.7.61 2011, Northamptonshire: a hot food takeaway application discussed healthy eating as a junior school was 50m on other side of road junction. However the inspector noted that hours of operation were outside school hours and unlikely to affect healthy eating by school children. [DCS Ref: 100-073-768].
- Policy could seek to restrict A5 uses only when the opening hours could affect pupils healthy eating.
- 7.7.62 2011, Merseyside, a hot food takeaway appeal was dismissed, noting health concerns that it was sited within 400m of primary school. However there was no objection from the school or specific plan policy. [DCS Ref: 100-072-843].
- Policy could seek to involve schools within 400m in the planning decision.
- 7.7.63 2011, Northamptonshire: a hot food takeaway appeal was dismissed. The inspector was provided with figures for obesity and healthy eating policies in nearby schools which may have been undermined by proposal. Reference was also made to 'Copeland' court case; however the inspector considered that the site was beyond 'walkable' distance. Greater weight given to third party odour consultant that 'highly likely if not inevitable' that nuisance would be caused. [DCS Ref: 100-072-572].
- Policy could identify an appropriate 'walkable distance'.
 - Policy could be evidenced with figures for obesity and healthy eating policies in nearby schools.
- 7.7.64 2011, London: a hot food takeaway was permitted notwithstanding concerns that it would fail to support the government's backing for healthy eating. A previous permission had been quashed by the High Court after it was concluded that healthy eating and the proximity of the site to schools was capable of being a material consideration. Upon re-determination with an officer recommendation for approval, the council decided that the scheme would add to the proliferation of takeaways which would erode its ability to combat the effects of poor diet in the local community. It highlighted the proximity of the site to various schools and argued that the premises would encourage school children to use the facility. An inspector agreed that the council's core strategy did seek to reduce an over-concentration of uses which would detract from the ability of residents to adopt healthy lifestyles. The council's survey did not demonstrate however that such an over-concentration was prevalent within 300 metres of the appeal site. While the need to promote healthy eating was important there was no clear-cut evidence that the proposal would increase child obesity or undermine the healthy eating policies in local schools. The appeal was allowed. [DCS Ref: 100-071-821].



- Policy could acknowledge that healthy eating and the proximity of the site to schools is capable of being a material consideration.
- If the policy seeks to reduce an over-concentration of A5 uses, it could be supported with survey evidence of such over-concentration for the relevant area of the application.
- The policy could be supported with evidence of links to childhood obesity and the potential to undermine healthy eating policies in local schools.

7.7.65 2011, East Sussex: a takeaway was permitted despite an inspector accepting the council's argument regarding the potential impact on the healthy eating habits of children attending a local school. The Council highlighted the adverse levels of fat and salt within pizzas and stated that the outlet would be used by school pupils during the day. This would be inconsistent with the 'healthy school' status of the establishment which involved increasing the awareness of improved diets and the serving of well-balanced meals during lunchtimes. In accepting that there were no local plan policies seeking to restrict takeaways near to schools, the inspector nonetheless decided that the proposed development would prove attractive to pupils. As a consequence it could, by making pizzas more readily available, lead to an unbalanced diet and undermine the school's efforts to promote a healthy lifestyle for its pupils. Accordingly, this was a matter which was afforded substantial weight. The appellant's offer to prevent takeaway sales until after 4pm each weekday would ensure that school pupils would not be able to avail themselves of this facility and it would therefore protect their dietary intake while at school. The council's decision to refuse the scheme on the basis that it would adversely affect the diets of local school pupils had been justified with evidence despite the absence of any directly relevant development plan policy. [DCS Ref: 100-071-282].

- Policy could consider permitting A5 uses that restrict their sale of takeaways in the period when schools close for the day to reduce access by pupils.

7.8 Recommendations on criteria for HIA

- 7.8.1 Recent EIA Directive changes (to be transposed into national legislation by spring 2017) require that 'human health' is included in the scoping of all EIAs (130).
- 7.8.2 The changes require that EIA shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on population and human health.
- 7.8.3 Given that health will shortly be a mandatory consideration in EIA the Plan's criteria for requiring HIA could be aligned with those for EIA.
- 7.8.4 The EIA Directive (85/337/EEC) (131) is transposed into UK legislation by the Town and Country Planning (EIA) Regulations 2011 (132). The need for EIA is determined with reference to Schedules 1 and 2. Schedule 1 developments always require EIA. Schedule 2 developments require EIA if they are likely to have significant effects on the environment by virtue of factors such as its nature, size or location.
- 7.8.5 The criteria for considering whether Schedule 2 developments require EIA are set out in Annex III of the EIA Directive (85/337/EEC) (131).
- 7.8.6 Criteria similar to those set out in Annex III could be adopted to align the need for HIA with thresholds that trigger EIA. For example:
- HIA is mandatory for all developments requiring an EIA (this could be reported separately from, or as part of, the EIA).



- HIA is also mandatory for developments which are likely to have significant effects on population or human health due to factors including but not limited to: pollution; nuisances; risk of major accidents and / or disasters (including those caused by climate change); or risks to human health (e.g. due to water contamination or air pollution).

7.8.7 In addition to aligning a policy on HIA with emerging EIA approaches to the assessment of human health it is also recommended that Warwick district consider ensuring that the policy requires:

- HIA to be mandatory where the development is in an area of socioeconomic deprivation; and
- HIA to be encouraged but not mandatory for other developments, indeed there is no minimum threshold for a development to explore opportunities to improve health.

7.8.8 We suggest above that socio-economic deprivation is used to trigger requirements for an HIA. The level of deprivation will need to be stipulated. Warwick district may also wish to consider whether other characteristics of the population who live, work or access services close to a proposed development should also be included in the policy.

Recommended HIA screening tool

7.8.9 In determining the need for HIA a screening exercise should be undertaken. Screening should be a straightforward process that does not use a lot of resources. For example the screening template issued by the Department of Health (9) could be recommended. Although this was originally for policies, it could be adapted to all applications (e.g. reference to policy changed to proposal/development). The one page template could be completed by developers and submitted early in the application process to the Council for a screening opinion as to whether or not HIA is required.

Recommended assessment tool

7.8.10 The specific requirements of each HIA will depend on the nature of the development, area and local population. The Plan could recommend a standardised means of screening for HIA. For small developments this might feasibly be the main deliverable of the HIA process.

Recommended HIA review tool

7.8.11 Ben Cave Associates Ltd, working with experts from across Great Britain and Northern Ireland and Ireland, produced a review package specifically aimed at reviewing the quality of HIAs (133). The Plan could adopt these, or similar, quality standards and inform developers that HIAs will be judged against these standards.

7.8.12 The HIA review package is based on review packages for Environmental Impact Assessments. It is an integral part of the Supplementary Planning Document for HIA adopted by South Cambridgeshire District Council (134) and the draft Practice Note issued by Bristol City Council "Planning a healthier Bristol" (135). The review package is used by the Wales Health Impact Assessment Support Unit for all HIAs in Wales. After completing the review WHIASU use the observations made in the quality assurance process as the basis for their response to the proponent, the responsible authority and other regulatory bodies (136). By clearly stating the expected standard of work from the outset, the HIA process should run more smoothly for both the developer the Council.]



8 Conclusion and recommendations

- 8.1.1 Overall the Plan is considered positive for health and wellbeing. This report aims to provide constructive commentary to help further refine the Plan.
- 8.1.2 Local councils arguably can have their most important long-term effects on health through the decisions they take about spatial planning. Planning decisions on transport, housing, public spaces and service and flooding have major effects on health and well-being (14).
- 8.1.3 In line with the Marmot Review's recommended policy actions to ensure that the built environment promotes health and reduces inequalities (8), this report provides additional evidence and support to the Plan to:
- Improving active travel;
 - Improving good quality open and green spaces;
 - Improving the quality of food in local areas; and
 - Improving the energy efficiency of housing.
- 8.1.4 Furthermore, by considering the wider determinants of health this report identifies additional opportunities for the Plan to make links between planning, transport, housing, environmental and health.
- 8.1.5 It is recommended that if there is a further opportunity for public consultation prior to adoption of the Plan that the community's views on the issues raised in this report are sort. Consultation questions relating to health could include:
- What parts of the Plan need to be kept on the basis of the impacts on people's health and wellbeing? How can we increase those positive effects?
 - What parts of the Plan need to be changed because of their impacts on health and wellbeing? How can we change the Plan to reduce/avoid those negative effects?
 - What could be added to the Plan to promote health and wellbeing?
- 8.1.6 The key recommendations of the HIA are as follows:
- Review the commentary on each draft policy set out in Section 6 with the aim of taking further opportunities to enhance the potential health benefits that could be achieved through the Plan.
 - Take all reasonable measures to reduce traffic and meet (or wherever possible exceed) the UK national guidance on air quality standards. On-going air quality monitoring should be undertaken with reference to statutory health standards throughout the plan period and be responsive to any changes to the legislative requirements as set out in Section 7.1.
 - Prioritises active travel as set out in Section 7.2;
 - Provide new housing in line with the evidence for healthy housing as set out in Section 7.3;
 - Consider the planning of care homes and assisted living with reference to the evidence set out in Section 7.4;
 - Create and protect buffer zones at the boundaries between residential areas, schools or green/open spaces and areas designated for intensive employment use. An example of one option is presented in Section 7.5;
 - Include planning obligations to support child obesity goals as set out in Section 7.6;
 - Control the proliferation of hot food takeaways (and possibility other unhealthy food outlets) as discussed in Section 7.7;



- Provide clear guidelines setting out when developers should undertake HIAs. Some options are set out in Section 7.8;
- Review Appendix A: NICE Recommendations (page 85) with the aim of considering opportunities for further health policies within the Plan; and
- Finally include health impacts in the Plan's monitoring and evaluation framework. Where appropriate this should link to existing indicators (e.g. the Public Health Outcomes Framework).



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10 Appendices

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Appendix A: NICE Recommendations

A.1 The National Institute for Health and Care Excellence (NICE) provides national guidance and advice to improve health and social care. NICE is a Non Departmental Public Body (NDPB) on a statutory footing as set out in the Health and Social Care Act (137). This appendix provides summaries of NICE recommendations. These recommendations are based on comprehensive evidence reviews commissioned by NICE. The summaries are provided as robust position statements to support some of the suggested enhancements to the draft Plan policies.

Potential further health policies that could be added to the Plan, which are supported by NICE recommendations

A.2 There is scope for additional health policies to support the Plan. The following suggested policies are based on NICE recommendations (set out below):

- Obligations to fund services aimed at encouraging physically active travel.
- Promote public open spaces and public paths that are maintained to a high standard and are safe, attractive and welcoming to everyone.
- Prioritise the need for people (including those whose mobility is impaired) to be physically active as a routine part of their daily life.
- Ensure the local environment around schools and the nearby catchment area provides opportunities for all children to cycle or walk.
- Provide children and young people with places and facilities (both indoors and outdoors) where they feel safe taking part in physical activities.
- Support local provision of affordable fruit and vegetables and other food and drinks that can contribute to a healthy, balanced diet.
- Limit food outlets, particularly those near schools, which specialise in foods high in fat, salt or sugar.
- Create local environments that encourage people to be more physically active and to adopt a healthier diet.
- Reduce health inequalities.
- Promote physical activity facilities that are suitable for children and young people with different needs and their families, particularly those from lower socioeconomic groups, those from minority ethnic groups with specific cultural requirements and those who have a disability.
- Identify and enhance public parks and facilities as well as more non-traditional spaces (for example, car parks outside working hours) as places where children and young people can be physically active.
- Make provision to deliver leisure services that are affordable and acceptable e.g. provision for child care and culturally acceptable use of video and music media.
- Provide children with access to environments that stimulate their need to explore and which safely challenge them. (Examples include adventure playgrounds, parks, woodland, common land or fun trails.)
- Encourage healthier modes of transport to and from work.
- Where areas are 'saturated' with licensed premises (serving alcohol) and the evidence suggests that additional premises may affect the licensing objectives, adopt a 'cumulative impact' policy. If necessary, limit the number of new licensed premises in a given area.



- Promote employment opportunities where jobs are perceived by employees as worthwhile and offers opportunities for development and progression.
- Promote employment opportunities where employers support people with health problems returning to work including: vocational training; health condition management; financial incentives; and support before and after returning to work.

General

- A.3 NICE recommend (115) reviewing and amending 'classes of use' orders for England to address disease prevention via the concentration of outlets in a given area.
- A.4 NICE recommend (115) using HIA to assess the potential impact (positive and negative) that all local and regional policies and plans may have on rates of cardiovascular disease and related chronic diseases. Take account of any potential impact on health inequalities.
- A.5 NICE recommend (115) aligning all 'planning gain' agreements with the promotion of heart health to ensure there is funding to support physically active travel. (For example, Section 106 agreements are sometimes used to bring development in line with sustainable development objectives.)
- A.6 NICE recommend (42) encouraging local planning departments to use existing mechanisms (for example, national planning guides) to:
- prioritise the need for people (including those whose mobility is impaired) to be physically active as a routine part of their daily life (for example, when developing the local infrastructure and when dealing with planning applications for new developments).
 - provide open or green spaces to give people local opportunities for walking and cycling.
 - make sure local facilities and services are easily and safely accessible on foot, by bicycle and by other modes of transport involving physical activity (they should consider providing safe cycling routes and secure parking facilities for bikes).
 - provide for physical activities in safe locations that are accessible locally either on foot or via public transport.
 - encourage people to be physically active inside buildings, for example, by using the internal infrastructure of buildings to encourage people to take the stairs rather than the lift.
- A.7 NICE recommend new workplaces are linked to walking and cycling networks. Where possible, these links should improve the existing walking and cycling infrastructure by creating new, through routes (and not just links to the new facility) (43).
- A.8 NICE recommend ensuring the local environment around schools and the nearby catchment area provide opportunities for all children to cycle or walk (24). This should include addressing motor vehicle speed, parking and dangerous driving practices.
- A.9 NICE recommend providing children and young people with places and facilities (both indoors and outdoors) where they feel safe taking part in physical activities (39). These could be provided by the public, voluntary, community and private sectors (for example, in schools, youth clubs, local business premises and private leisure facilities). Local authorities should coordinate the availability of facilities, where appropriate.

Diet

- A.10 NICE recommend encouraging local planning authorities to restrict planning permission for take-aways and other food retail outlets in specific areas (for example, within walking



distance of schools) (115). As well as helping them implement existing planning policy guidance in line with public health objectives.

- A.11 NICE recommend identifying local resources and existing community groups that could help promote healthy eating, physical activity and weight management, particularly within local communities at high risk of developing type 2 diabetes (42).
- A.12 NICE recommend that to promote the provision of healthier food choices (42):
- Work with local food retailers, caterers and workplaces to encourage local provision of affordable fruit and vegetables and other food and drinks that can contribute to a healthy, balanced diet.
 - Work with caterers across the industry to help them reduce the amount of calories, saturated fat and salt in recipes and to use healthier cooking methods. They should also ensure healthier options are an integral part of all menus.
 - Work with food retailers to: develop pricing structures that favour healthier food and drink choices; and ensure a range of portion sizes are available and that they are priced accordingly. This is particularly important for energy-dense foods and drinks.
- A.13 NICE recommend considering the full range of factors that may influence weight, such as access to food and drinks that contribute to a healthy and balanced diet, or opportunities to use more physically active modes of travel (138).
- A.14 NICE recommend ensuring all food procured by, and provided for, people working in the public sector and all food provided for people who use public services (115): is low in salt and saturated fats; is nutritionally balanced and varied, in line with recommendations made in the 'eatwell plate'; and does not contain industrially produced trans fatty acids (IPTFAs).
- A.15 NICE recommend using bye-laws to regulate the opening hours of take-aways and other food outlets, particularly those near schools that specialise in foods high in fat, salt or sugar (115).
- A.16 NICE recommend using existing powers to set limits for the number of take-aways and other food outlets in a given area (115). Directives should specify the distance from schools and the maximum number that can be located in certain areas.
- A.17 NICE recommend helping owners and managers of take-aways and other food outlets to improve the nutritional quality of the food they provide (115). This could include monitoring the type of food for sale and advice on content and preparation techniques.

Physical activity

- A.18 NICE recommend that those developing strategic plans should consult widely with local health professionals working closely with communities at high risk of developing type 2 diabetes (42). The plan should aim to increase physical activity levels and improve people's diet and weight management by:
- creating local environments that encourage people to be more physically active and to adopt a healthier diet (for example, by ensuring local shops stock good quality, affordable fruit and vegetables).
 - targeting specific communities at high risk of developing type 2 diabetes, including people of South Asian, African-Caribbean or black African family origin, and those from lower socioeconomic groups
- A.19 NICE recommend encouraging the use of national and local planning guidance to ensure physical activity is a primary objective of transport policy, and when designing new buildings and the wider built environment (42).



- A.20 NICE recommend ensuring leisure services are affordable and acceptable to those at high risk of developing type 2 diabetes (42). This means providing affordable childcare facilities. It also means public transport links should be affordable and the environment should be culturally acceptable. For example, local authorities should consider the appropriateness of any videos and music played. They should also consider providing single-gender: facilities; exercise classes; swimming sessions; and walking groups – for both men and women.
- A.21 NICE recommend encouraging local employers to develop policies to encourage employees to be more physically active, for example, by using healthier modes of transport to and from work (42).
- A.22 NICE recommend strategic level coordination and communication between public health, transport, planning and leisure services to secure high-level commitment to long-term, integrated action on obesity (138).
- A.23 NICE recommend involving business and social enterprises in the implementation of the local obesity strategy (138). This includes, for example, caterers, leisure providers, weight management groups, the local chamber of commerce, food retailers and workplaces.
- A.24 NICE recommend ensuring family-based, multi-component lifestyle weight management services for children and young people are available as part of a community-wide, multi-agency approach to promoting a healthy weight and preventing and managing obesity. Programmes should focus on: diet and healthy eating habits; physical activity; reducing the amount of time spent being sedentary; and strategies for changing the behaviour of the child or young person and all close family members (63).

Alcohol

- A.25 NICE note that international evidence suggests that making it less easy to buy alcohol, by reducing the number of outlets selling it in a given area and the days and hours when it can be sold is an effective way of reducing alcohol-related harm (139).
- A.26 NICE recommend using local crime and related trauma data to map the extent of alcohol-related problems before developing or reviewing a licensing policy. If an area is 'saturated' with licensed premises and the evidence suggests that additional premises may affect the licensing objectives, adopt a 'cumulative impact' policy. If necessary, limit the number of new licensed premises in a given area (139).

Education

- A.27 NICE recommend that to promote mental wellbeing at work employees should have the necessary skills and support to meet the demands of a job that is worthwhile and offers opportunities for development and progression (140).
- A.28 NICE recommend that for people with health problems who are unemployed and claiming benefits there should be an integrated programme to help claimants enter or return to work (paid or unpaid), including: vocational training; health condition management; financial incentives; and support before and after returning to work (141).
- A.29 NICE recommend focusing on the social and emotional wellbeing of vulnerable children as the foundation for their healthy development and to offset the risks relating to disadvantage (142).
- A.30 NICE recommend school playgrounds are designed to encourage varied physically active play, with primary schools creating areas to promote individual and group physical activities such as hopscotch and other games (43).



Green/open space

- A.31 Health impacts associated with green/open space:
- Natural features and green spaces have considerable influence on physical, mental and perceived health. Simply having a view of a natural area through the window can facilitate healing, reduce stress and support emotional wellbeing (143).
- A.32 NICE recommend public open spaces and public paths: are maintained to a high standard; are safe, attractive and welcoming to everyone; can be reached on foot, by bicycle and using other modes of transport involving physical activity; and are accessible by public transport (43).
- A.33 NICE recommend ensuring physical activity facilities are suitable for children and young people with different needs and their families, particularly those from lower socioeconomic groups, those from minority ethnic groups with specific cultural requirements and those who have a disability (39).
- A.34 NICE recommend actively promoting public parks and facilities as well as more non-traditional spaces (for example, car parks outside working hours) as places where children and young people can be physically active (39).
- A.35 NICE recommend that planners make provision for children, young people and their families to be physically active in an urban setting (39). They should ensure open spaces and outdoor facilities encourage physical activity (including activities which are appealing to children and young people, for example, in-line skating). They should also ensure physical activity facilities are located close to walking and cycling routes.
- A.36 NICE recommend providing children with access to environments that stimulate their need to explore and which safely challenge them (39). (Examples include adventure playgrounds, parks, woodland, common land or fun trails.) Also provide them with the necessary equipment. The aim is to develop their risk awareness and an understanding of their own abilities as necessary life skills.
- A.37 NICE recommend auditing bye-laws and amend those that prohibit physical activity in public spaces (such as those that prohibit ball games) (115).

Transport [including findings from WHO]

- A.38 Health impacts associated with transport:
- Road transport is the major source of urban air pollution, emitting pollutants that damage human health and reduce life expectancy (15).
 - A number of different air-borne particulates are antagonistic to the sensitive lining of the airways and act as irritants, causing breathing difficulties and discomfort. Additionally, for those people with pre-existing respiratory disease (s) for example asthma and other chronic obstructive airways disease, these increase their risk of experiencing a respiratory exacerbation of their current condition (15).
 - There is a clear association between long-term exposure to particulate air pollution (PM_{2.5} and sulphate and sulphur dioxide) and a reduction in life-expectancy caused by cardiovascular disease (15).
 - People with respiratory or cardiovascular disease, in particular coronary heart disease, are most at risk especially if they are elderly (15).
 - Children have a heightened vulnerability to respirable dust (36).
 - Emissions and population exposure is such that most impacts will occur in urban populations and will often be worst in deprived communities (15).



- For all types of unintentional injury those in lower socioeconomic groups are at greater risk of mortality and morbidity from non-intentional injury (15).
 - If access routes are poorly conceived, difficult to access, poorly maintained or perceived as unsafe these can also act as barriers to encouraging the use of active transport (15).
 - Perceived physical danger posed by motorized traffic has been cited as one of the main barriers to engaging in walking and cycling. This has had a disproportionate effect on activity levels in both children and older adults (15).
 - The density of motorised transport can negatively affect social cohesion within a community. Both through direct community severance due to road construction or through the impact of high levels of heavy motor traffic (15).
 - Increased risk of road traffic collisions from high traffic density can contribute towards the development of long-term mental health problems in drivers, passengers and victims (15).
- A.39 NICE recommend local facilities and services are easily accessible on foot, by bicycle and by other modes of transport involving physical activity (43).
- A.40 NICE recommend pedestrians, cyclists and users of other modes of transport that involve physical activity are given the highest priority when developing or maintaining streets and roads. Including: re-allocate road space to support physically active modes of transport; restrict motor vehicle access; introduce road-user charging schemes; introduce traffic-calming schemes; and create safe routes to schools (43).
- A.41 NICE recommend ensuring local, high-level strategic policies and plans support and encourage both walking and cycling (24). This includes a commitment to invest sufficient resources to ensure more walking and cycling – and recognition that this will benefit individuals and the wider community. Considerations include:
- developing plans in conjunction with relevant voluntary and community organisations.
 - addressing the behavioural and environmental factors that encourage or discourage people from walking and cycling. These include measures to reduce road danger or the perception of danger.
 - taking account of the geography of the surrounding area (for instance, connections with neighbouring local authority areas), as well as local factors such as major road and rail routes, rivers and hills.
 - include communications strategies to publicise the available facilities (such as walking or cycle routes) and to motivate people to use them. Also link to existing national and local initiatives.
 - providing specific support for people at a 'transition point' in their lives, for instance, when they are changing job, house or school. At these times people may be open to trying a new mode of transport or new types of recreation.
 - addressing infrastructure and planning issues that may discourage people from wanting to cycle. For example, ensure local facilities and services are easily accessible by bicycle and make changes to existing roads, where necessary, to reduce traffic speeds.
 - addressing infrastructure issues that may discourage people from walking, for example, motor traffic volume and speed, lack of convenient road crossings, poorly maintained footways or lack of dropped kerbs, where needed.
 - ensuring cycle parking and residential storage issues are addressed.
 - ensuring walking and cycling routes are integrated with public transport to support longer journeys. This includes providing signage, secure cycle parking at public



transport sites as well as support to transport adapted cycles and tandems for people with disabilities.

- A.42 NICE recommend ensuring walking and cycling programmes form a core part of local transport investment planning, on a continuing basis (24). In line with the Manual for streets (144) and Manual for streets 2 (145), pedestrians and cyclists should be considered before other user groups in the design process – this helps ensure that they are not provided for as an afterthought.
- A.43 NICE recommend developing and implementing school travel plans that encourage children to walk or cycle all or part of the way to school, including children with limited mobility (24). Integrate these plans with those produced by other local schools and other travel plans available for the local community. Involve pupils in the development and implementation of plans.
- A.44 NICE recommend mapping safe routes to school and to local play and leisure facilities, taking into account the views of pupils, parents and carers (24).
- A.45 NICE recommend introducing engineering measures to reduce speed in streets that are: primarily residential; are commonly used by children and young people; or where pedestrian and cyclist movements are high (146). For example speed reduction features (such as, traffic-calming measure or speed limit changes).

Housing

- A.46 NICE note that low income and overcrowded housing conditions are factors that can lead to a higher risk of an unintentional injury to under-15s in the home (147).



Appendix B: Gypsy and Traveller health

- B.1 A review of Gypsy and Traveller health (22) found there are a number of small studies looking at the health status of Gypsies and Travellers. These studies tend to identify high levels of inequality between Gypsy and Traveller communities and the settled community: for example: high infant mortality and perinatal death rates, low birth weight, low immunisation uptake and high child accident rates.
- The 1987 national study of Travellers' health status in Ireland (148) reported a high death rate for all causes and lower life expectancy for Irish Travellers: women 11.9 years and men 9.9 years lower than the non-Traveller population.
 - The report of the Confidential Enquiries into Maternal Deaths in the UK (1997-1999) (149) found that Gypsies and Travellers have possibly the highest maternal death rate among all ethnic groups.
 - Poor access to health care services is cited by a number of commentators as a factor in poor health outcomes. Anecdotal evidence suggests that Travellers face discrimination in access to health care (150), this can arise as a result of NHS staff prejudice (151).
 - Gypsies and Travellers frequently have difficulties in registering with a GP, due to rejection by GP practices (152), Gypsies and Travellers' lack of information, or enforced mobility (153). Registration is frequently on a temporary basis, undermining holistic, preventative and continuous care (154).
 - Accounts from Health Practitioners cite a range of health issues "that are attributed partly to adverse environmental conditions: accidents, gastro-enteritis, upper respiratory infections and otitis media" (155).
- B.2 Table 10-1 shows results from a review conducted by the South West Public Health Observatory on the health status of Travellers. It shows a range of areas where Travellers have worse health than the lowest UK socioeconomic groups. There are some factors where Travellers' health was found to be better than the settled population.



Table 10-1: Review of health status of Gypsies and Travellers

Poor Health Status	Good Health Status
Increased perinatal mortality	Increased rates of breastfeeding
Low birthweight	Good maternal diet
Diarrhoea and giardia	Children generally have good diets – not fruit
Lead poisoning	Less wheeze reported in children (Kearney and Kearney 1999)
Increased Hepatitis A and B	Generally well – health scores similar to static population
Increased infectious disease	Good informal networks for advice and information
* Decreased immunisation rates	Less pain and discomfort reported than the average population
Increased alcohol usage	
* Increased accidents	
Increased domestic violence	
* Increased smoking	
* Increased heart disease	
* Decreased life expectancy – up to 10 years	
Increased genetic conditions	
* Lack of access to cervical screening	
* Lack of eyesight tests	
* Increased dental problems	
* Increased mortality due to all causes	
Worse than general population especially on nerves, and mobility	

* Evidence based

Source: Collation of data from South West Public Health Observatory 2002 (156)



Appendix C: Summary of further opportunities for integrating health

- C.1 Greater mention of residential care homes e.g. sited in residential areas away from sources of air pollution (see policies DS2 and H5).
- C.2 Addressing future as well as historic demand in making provision for gypsy and traveller site allocations (see policy DS2).
- C.3 Including 'service' needs alongside infrastructure needs. For example successful public transport requires both good infrastructure and services (see policy DS3).
- C.4 Explicitly noting that health can be a material consideration in planning decisions, particularly where vulnerable populations may be affected (see policy DS5).
- C.5 Including cumulative impacts from completed developments, committed sites, and windfall sites when considering housing allocations under the Plan (see policy DS7).
- C.6 Promoting mixed use and reduced reliance on car journeys by retaining some B1 employment use in the redevelopment of current employment land that is not well suited to its current function (see policy DS8).
- C.7 Undertaking detailed review of the potential opportunities or constraints associated with each allocated housing site. Any constraints should be addressed where possible through appropriate development design and management, with additional detailed health impacts assessment as appropriate (see policy DS11).
- C.8 Establishing high quality walking, cycling and public transport routes early as an alternative to car use for journeys to and from the ED 1 and ED2 sites (see policy DS12).
- C.9 Creating a policy hook linked to ED1 and ED2 to limit the number of hot food takeaways (A5 uses) and possibly other unhealthy food outlets within a reasonable distance of this site (e.g. 400m) (see policy DS12).
- C.10 Encouraging participation by, and representation of, ordinary citizens in decisions about creation, operation or change of use of community facilities, as mere provision of community facilities is not enough to constitute social capital (see policies DS14 and HS8).
- C.11 Early phasing of supporting infrastructure to take advantage of people being at a 'transition' point in their lives where they may be open to trying a new mode of transport or new types of recreation (see policies DS15 and TR1).
- C.12 Explicitly noting the potential role of towpaths in promoting active travel if they are attractive, well maintained, safe and link suitable destinations (see policy DS17).
- C.13 Limiting certain types of outlet in Lillington (one of the district's most deprived areas) that could perpetuate deprivation or contribute to poor health outcomes, such outlets may include: betting shops; payday loan shops; and fast food outlets (see policy DS18).
- C.14 Making alternative provision for promoting physical activity where green belt land is lost, particularly land with public rights of way or other leisure uses (see policies DS19 and MS1).
- C.15 Seeking early input from Public Health Warwickshire if additional housing allocations are required to meet need from outside the district (see policy DS20).
- C.16 Including a principle to support healthy behaviours and healthy communities. Such a policy hook could help to control the proliferation of some types of outlet that are linked to poor health outcomes (see policies PC0, TC1 and TC3).



- C.17 'Prioritising' rather than just promoting active modes of transport, such as walking and cycling as well as their integration with public transport to support longer journeys (see polices TC4, TC5 and TR1).
- C.18 Including good quality open spaces and street furniture that promotes physical activity (see polices TC4 and TC5).
- C.19 Monitoring air quality (including particulate matter) and introducing traffic reduction measures around the new Warwick Café Quarter (see policy TC8).
- C.20 Promoting the balance of foods required to maintain a healthy diet, along the lines of those provided in the Eatwell Plate (see policies TC8, TC9, TC18 and HS6). This would provide additional support and detail to the Plan's existing provisions on encouraging healthy diets (see policies SC0 and HS1).
- C.21 Including appropriate use classes, building design and traffic reduction measures in the Warwick Town Centre Mixed Use Area to reduce air pollution impacts (this area is in Warwick AQMA) (see policy TC11).
- C.22 Encouraging attractive and active window frontages to promote vibrancy and vitality and discourage opaque in-active frontages such as those associated with betting shops and payday loan shops (see policy TC16).
- C.23 Ongoing consultation with the Gypsy and Traveller community to ensure that as far as possible this marginalised group is integrated with the district's other communities (see policy H7).
- C.24 Including mention of further groups that may have additional transport service or infrastructure needs, such as the elderly and those with young families (see policy TR1).
- C.25 Requiring development applications to support school travel plans, including particular consideration of road safety and active travel (see policies TR1, TR3 and HS6).
- C.26 Making clear links between transport related greenhouse gas emissions, climate change and the co-benefits of reducing such emissions for health (see policy TR2).
- C.27 Clarifying that generally parking provision should be controlled not expanded (see policy TR4).
- C.28 Making it clear that the benefits to physical activity and improved mental health only arise if spaces, routes and facilities are of high quality, well maintained, accessible and safe (see policies HS2 and HS5).
- C.29 Encouraging communities to identify and protect locally important green space in relation to the Plan's new allocations prior to their development to ensure that any locally important pockets of green space are protected for current and new residents (see policy HS3).
- C.30 Ensuring that access to healthcare facilities includes sufficient capacity in healthcare services provided at those facilities (see policy HS6).
- C.31 Making it clear that perception of crime and safety can be as important as actual crime or safety (see policy HS7).
- C.32 Ensuring that affordable housing does not consistently adopt lower Code of Sustainable Homes standards due to financial viability issues, such that affordable homes have more expensive thermal control (see policy CC3).
- C.33 Including criteria for access by emergency services that is resilient to flooding (see policy FW1).



- C.34 Specifying measures that increase resilience to flooding, e.g. height and orientation of entrances (see policy FW1).
- C.35 Enhancing access to and within historic and natural sites that are open to the public, including links to active and public transport and 'fun trails' for children (see policies HE1 and NE2).
- C.36 Increasing green infrastructure buffer zones around protected and designated sites so that people can be encouraged to visit and learn about the sites whilst minimising disturbance (see policy NE2).
- C.37 Requiring that development proposals demonstrate that there are no significant barriers to future decommissioning activities remediating conditions created by the proposed development to safe levels for sensitive receptors (including human health) (see policy NE5).
- C.38 Encouraging development proposals to increase access to and connectivity with the district's waterways, particularly canal towpaths. Such access should be safe, high quality and well maintained (see policy NE7).