

Camden Local Plan Evidence Report

Fast food takeaways and health

February 2016

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Executive Summary

National and regional planning policy recognise the role of spatial planning in promoting health and reducing the risk of poor health, including how the environment can impact on overweight and obesity.

In common with many areas in England, there is an upward trend in the prevalence of overweight and obesity, which in turn contributes to a growing prevalence of long-term conditions such as diabetes and cardiovascular disease, as well as contributing to a reduced quality of life.

Since the introduction of the National School Measurement Programme in 2006/07, around 20% of Camden children in year 6 have been obese, and around 35% overweight or obese. Local data from general practice shows that around 40% of 12-14 year olds are overweight or obese. Data from Camden GPs show that in 2012, nearly 32,500 men and 27,500 women were overweight or obese, which, whilst a lower proportion than the national figure, still represents a significant number locally.

The causes of overweight and obesity are complex, as demonstrated by the Foresight report in 2007. This means that the solutions to reducing overweight and obesity are also complex. No one solution will tackle the problem: a range of solutions is needed. Camden's Healthy Weight Healthy Lives programme brings together a range of actions to tackle overweight and obesity across the life course starting from maternity, through childhood and into adulthood. Actions include opportunities to increase physical activity as well as improving nutrition.

The proliferation of fast food takeaways, particularly near to schools, is a concern in many areas including Camden. Overall, the evidence supports the view that, although not the only factor contributing to diet and obesity, the availability of high density, high fat, and high sugar food is a significant contributing factor that needs to be taken into consideration as part of Camden's integrated approach to managing overweight and obesity.

Camden's Local Plan Submission draft 2016 highlights that the borough has one of the largest health inequality gaps in England and people suffering from poor health are generally concentrated in some of the borough's most deprived wards. Addressing these inequalities and improving Camden's health and wellbeing, both physical and mental, goes beyond improving access to medical facilities and includes a range of measures to improve our social and physical environment. The Plan seeks to introduce policy to mitigate the over-proliferation of fast food takeaways, particularly near to secondary schools, through policy TC4 'Town centre uses'.

The Council seeks to tackle childhood obesity and encourage healthy eating habits, particularly among young people. The Council is undertaking a range of programmes aimed at improving the food environment in the borough. Resisting the proliferation of hot food takeaways close to secondary schools is one of a number of strategies to reduce child obesity and encourage healthy eating. Planning policy seeking to resist new hot food takeaways within 400 metres of school following examination in public, and planning inspectors' rationale given in a number of appeals, show that when supported by a rigorous evidence base, such policies are supported.

This report brings together the available evidence to support this policy, and a wide range of policies and programmes across the Council and National Health Service which aim to reduce the prevalence of overweight and obesity and improve dietary intake among Camden residents.

1. Introduction

A healthy community is a good place to grow up and grow old in. It is one which supports healthy behaviours and supports reductions in health inequalities. It should enhance the physical and mental health of the community.

*National Planning Policy Framework Guidance
Paragraph: 005 Reference ID: 53-005-20140306*

The Camden Local Plan Submission Draft 2016 policy TC4 'Town centre uses' states that the Council will consider whether a development will result in the proliferation of hot food takeaways, and the health impacts of development, generally resisting hot food takeaways within 400m of a secondary school.

This paper has been prepared by Camden and Islington Public Health to provide supporting evidence to the above policy. The following sets out:

- the policy context;
- the overweight and obese health picture in Camden;
- obesity and the environment;
- a review of hot food takeaways and their impact on health; and lastly
- Camden's role in tackling obesity.

2. National and Regional policy context

National Planning Policy Framework (NPPF)

The National Planning Policy Framework set out the Government's planning policies for England and how these are expected to be applied. It sets out the Government's requirements for the planning system to the extent that it is relevant, proportionate and necessary.

The purpose of the planning system is to contribute to the achievement of sustainable development, defined in the UK's Sustainable Development Strategy *Securing the Future*. This sets out five guiding principles of sustainable development:¹

- a. living within the planet's environmental limits;
- b. ensuring a strong, healthy and just society;
- c. achieving a sustainable economy;
- d. promoting good governance; and
- e. using sound science responsibly.

The planning system can play an important role in facilitating social interaction and creating healthy, inclusive communities. Local planning authorities should create a shared vision with communities of the residential environment and facilities they wish to see.²

¹ National Planning Policy Framework, 2012, page 2

Taking account of and supporting local strategies to improve health, social and cultural wellbeing for all, and delivering sufficient community and cultural facilities and services to meet local needs is one of the 12 core land-use planning principles that should underpin both plan-making and decision-taking.³ When preparing local plans, local planning authorities should work with public health officers and health organisations to understand and take account of the health status and needs of the local population and the barriers to improving health and wellbeing.⁴ Guidance on the NPPF clarifies that the local health and wellbeing strategy and other relevant health improvement strategies in the area should be considered by the local plan.

Chapter 8 of the NPPF focuses on promoting healthy communities. Paragraph 70 requires planning policies and decisions to plan positively for the provision and use of community facilities, including local shops and other local services.

National Planning Practice Guidance defines the role of health and wellbeing in planning, which is to ensure that health and wellbeing is considered in local and neighbourhood plans and decision making. The guidance includes the range of issues that should be considered through the plan making and decision making processes in respect of health, the issues of relevance are:

- the local plan promotes health, social and cultural wellbeing and supports the reduction of health inequalities;
- the local plan considers the local health and wellbeing strategy and other relevant health improvement strategies in the area; and
- opportunities for healthy lifestyles have been considered (e.g. planning for an environment that supports people of all ages in making healthy choices, helps to promote active travel and physical activity, and promotes access to healthier food, high quality open spaces and opportunities for play, sport and recreation)

The London Plan, 2015

The London Plan 2015 is the overall strategic plan for London, and it sets out a fully integrated economic, environmental, transport and social framework for the development of the capital.

The issue of persistent poverty and disadvantage in the capital is stark and it is becoming increasingly polarised. The plan reports that a quarter of working age adults and 41 per cent of children are in poverty, after housing costs are taken into account. Such polarisation is associated with a range of social problems of ill health, substance abuse and crime.

The London Plan includes important policies for improving health and addressing health inequalities which seek to address the main health issues facing the capital, including obesity, by ensuring new developments are designed, constructed and managed in ways that improve health and reduce health inequalities. The London Plan expects local planning authorities to work with key partners to identify and address significant health issues facing their area and monitor health considerations are an important part of planning policy (Policy

² National Planning Policy Framework, 2012, Paragraph 69

³ National Planning Policy Framework, 2012, Paragraph 17 bullet 12.

⁴ National Planning Policy Framework, 2012, Paragraph 171

3.2 E a). The London Plan refers to measures such as local policies to address concerns over the development of fast food outlets close to schools.

The London Plan (2015) has a range of policies to support promote more active lifestyles, and better diets, whilst recognising that over-concentrations of hot food takeaways can give rise to particular concerns. It states that as well as promoting healthy lifestyles through the detailed design of neighbourhoods, this can be complemented by other measures, such as local policies to address concerns over the development of fast food outlets close to schools.

The Greater London Authority has produced a **Takeaways Toolkit**⁵ to help local authorities develop their responses to the health impacts of fast food takeaways. The toolkit has three main recommendations for boroughs:

- making food healthier – working with takeaway businesses and the food industry to make healthier fast food.
- starting them young – schools should have strategies to reduce the amount of unhealthy food children eat at lunch and on their journey to and from school.
- planning for health – use regulatory and planning measures to address the proliferation of hot food takeaway outlets.

Recently, the London Health Commission's Better Health for London report favoured a much stronger approach to reducing the availability of fast food to London's schoolchildren, citing 73% of people asked thought the number of fast food outlets near schools should be limited.⁶

The Government's Childhood Obesity Strategy is expected to be published in March 2016. Whilst it is not possible to predict the measures that will be outlined in the strategy, evidence heard by the Inquiry referenced the complexity of the Foresight model, and written evidence from the Association of Directors of Public Health stated:

“Local factors play a role within this landscape particularly in relation to planning decisions and the proximity of schools to fast food outlets where children can buy junk food on their way to and from school.”⁷

3. Health in Camden: overweight and obesity

Diet and related health problems in Camden

Being obese or overweight increases the risk of developing a range of serious diseases including type 2 diabetes, a range of cancers (including colon, ovary and breast), gall bladder disease, female infertility, osteoarthritis, stroke, dementia, hypertension, and circulatory disease. Children who are overweight or obese are at an increased risk of overweight or obesity in adulthood. According to the Joint Strategic Needs Assessment,

⁵ Mayor of London. Takeaways Toolkit. Greater London Authority, 2012.

⁶ Better Health for London. London Health Commission, 2014

⁷ House of Commons Childhood Obesity Inquiry. Written evidence submitted by the Association of Directors of Public Health (COS0011).

<http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/health-committee/childhood-obesity-strategy/written/24746.html> [accessed 5th February 2016]

cardiovascular conditions are one of the leading causes of early death in Camden. Consequently obesity is an important factor contributing to Camden's inequality gap in life expectancy.

Overweight and obesity

The National Child Measurement Programme (NCMP) measures the weight and height of children in reception class (aged 4 to 5 years) and year 6 (aged 10 to 11 years) to assess the prevalence overweight and very overweight children within primary schools. The NCMP is widely recognised as a world-class source of public health intelligence and has UK National Statistics status. The programme has been running since 2005. It is important to note that as the programme measures weight in reception and year 6 children, each year represents a different population. Therefore, changes between the proportions of overweight and very overweight between years reflect a different cohort, and not changes in weight status among the same pupils year-on-year.

In Camden, the proportion of overweight very overweight reception year children increased from 21.2% in 2006/07 to 24.2% in 2011/12 when it peaked. The proportion of overweight and very overweight reception age children declined to 20.4% in 2014/15. This is a similar pattern to England, and the proportion of overweight and very overweight reception year children in Camden was similar to England in 2014/15.

The proportion of Camden Reception children who were very overweight peaked at 11.6% in 2008/09, before falling back to 9.4% (140 children) in 2014/15. The proportion of very overweight reception year children in Camden has been similar to England each year since 2008/09 except in 2008/09 and 2010/11, when it was significantly higher.

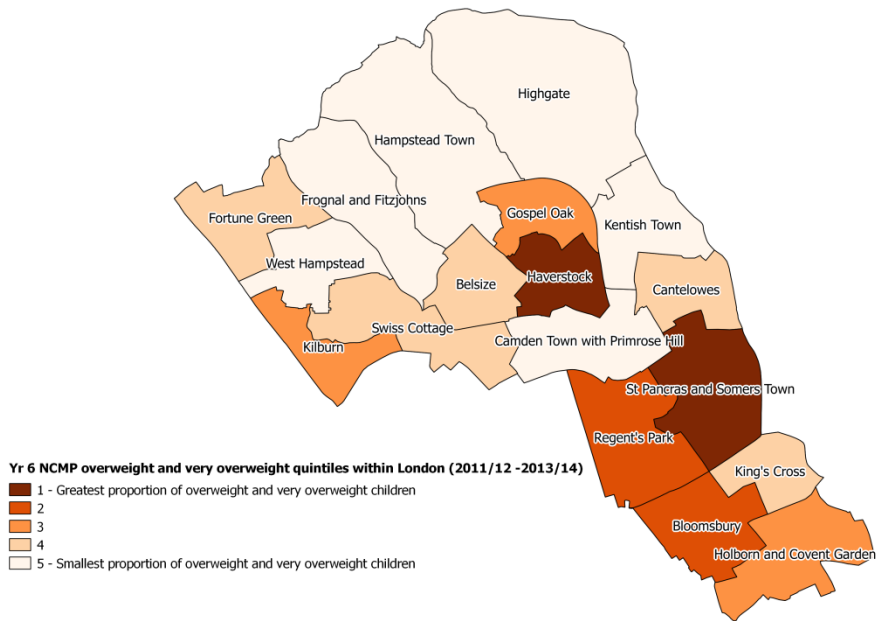
The proportion of Reception Year children who were overweight or very overweight varied from 11% in Frognal & Fitzjohns ward to 37% in Regent's Park ward over the three year period from 2012/13 to 2014/15.

Figure 1 shows the prevalence of overweight and very overweight in Year 6 children by ward, analysed by London ward quintiles (i.e. the wards in the 20% of wards in London with the greatest prevalence of overweight and obesity in London, etc.) and Figure 2 shows the Income Deprivation Affecting Children Index (IDACI, 2010), again by London Ward quintiles. Both St Pancras & Somers Town and Haverstock wards are in the 20% of London wards with the highest prevalence of overweight and very overweight Year 6 children and the 20% of London wards with the greatest income deprivation affecting children. Regent's Park ward is within the 40% of London wards with the highest prevalence of overweight and obese Year 6 children and income deprivation affecting children. The ward within the 20% of London wards with the lowest prevalence of overweight and very overweight Year 6 children and the lowest income deprivation affecting children is Frognal & Fitzjohns.

The National Obesity Observatory, now part of Public Health England, has previously demonstrated the association between fast food takeaway density and the index of multiple deprivation (IMD2010) in England.⁸

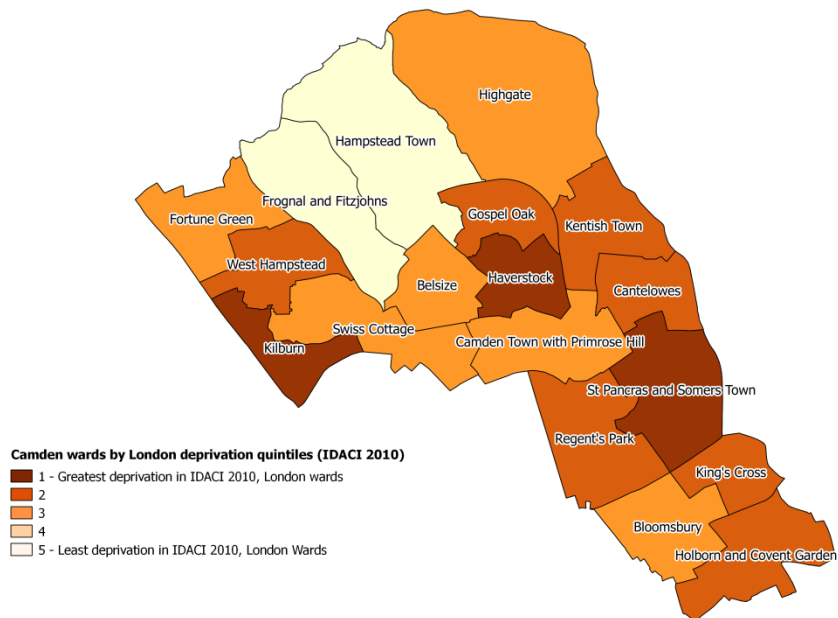
⁸ National Obesity Observatory. Relationship between density of fast food outlets and deprivation by local authority. http://www.noo.org.uk/securefiles/160204_1336//FastFoodOutletsJan13_v2-2.pdf [accessed 4th February 2016]

Figure 1: Prevalence of overweight and very overweight in Year 6 children, 2011/13 to 2013/14, by ward (London ward quintiles),



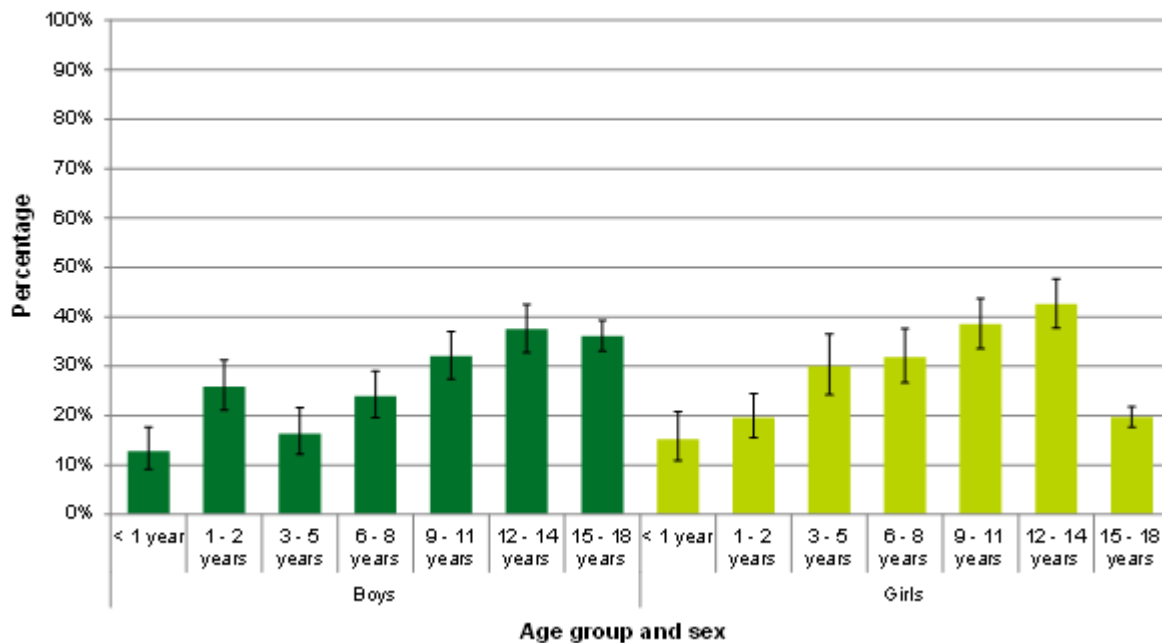
Source: NCMP, 2015

Figure 2 Income Deprivation Affecting Children Index 2010 by ward (London ward quintiles)



Source: NCMP, 2015

Figure 3: Percentage of children and young people (aged 0-18) who are overweight or obese, by age and sex, Camden's GP registered Population, September 2012

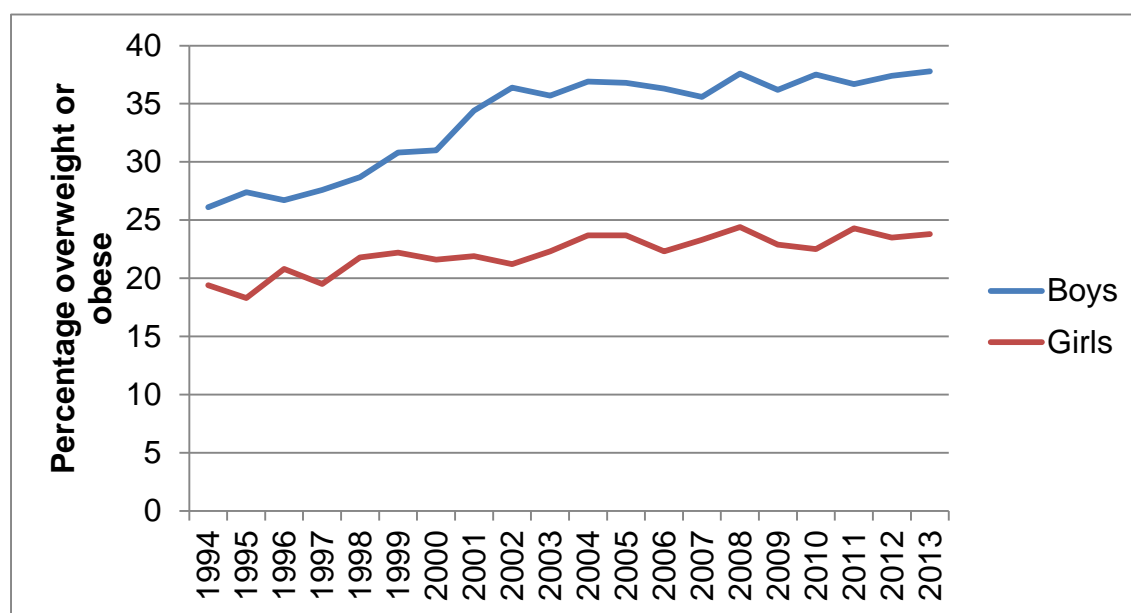


Source: Camden and Islington GP Dataset, 2012

Whilst local trend data for older age children are not available, an analysis of 20 years of child BMI data from 375 English general practices found that whilst the prevalence of overweight and very overweight in children may have stabilised between 2004 and 2013, the upward trend was still evident in the 11 to 15 year age group. The authors found that between 1994 and 2013, the proportion of overweight or very overweight boys rose from 26.1% to 37.8%, whilst the proportion of overweight or obese girls rose from 19.4% to 23.8% over the same period.⁹

⁹ van Jaarsveld CHM and Gulliford MC. Childhood obesity trends from primary care electronic health records in England between 1994 and 2013: population-based cohort study. Arch Dis Child 2015;0:1-6

Figure 4: Trend in body mass index across 375 English general practices, children aged 11 to 15, by sex, 1994 to 2013



Source: van Jaarsveld CHM and Gulliford MC, 2015

Modelled prevalence of obesity in people aged 16 and over in Camden is 14%, which is significantly lower than both London (20%) and England (24%).¹⁰ According to the GP dataset (2012), obesity prevalence in adults aged 18 and over (who had their BMI recorded) was 10%. The difference may be due to the recording of BMI on GP practice registers and/or the modelling technique used by the Public Health Observatories in England, as the difference in age grouping it is unlikely to account for the discrepancy.¹¹

In numerical terms, data from Camden GPs in 2012 shows that there were 24,000 overweight men and 17,000 overweight women in Camden, and approximately 8,500 men and 10,500 women who are obese. Although estimates show that a smaller proportion of Camden adults are overweight or obese compared to the national average, around 46% of Camden adults are overweight or obese.

Poor diet and health inequalities in Camden

Adults living in the most deprived areas of Camden are more likely to be obese compared to the Camden average. For example, people residing in the most deprived quintile of Camden were 26% more likely to be obese than those in the least deprived quintile. The number of obese adults increases with the level of deprivation from approximately 2,800 obese people living in the least deprived quintile to 4,700 in the most deprived quintile. However this was not the case for overweight, where people in the least deprived quintile of the borough were more likely to be overweight. The maps in Figure 5, Figure 6, and Figure 7 show

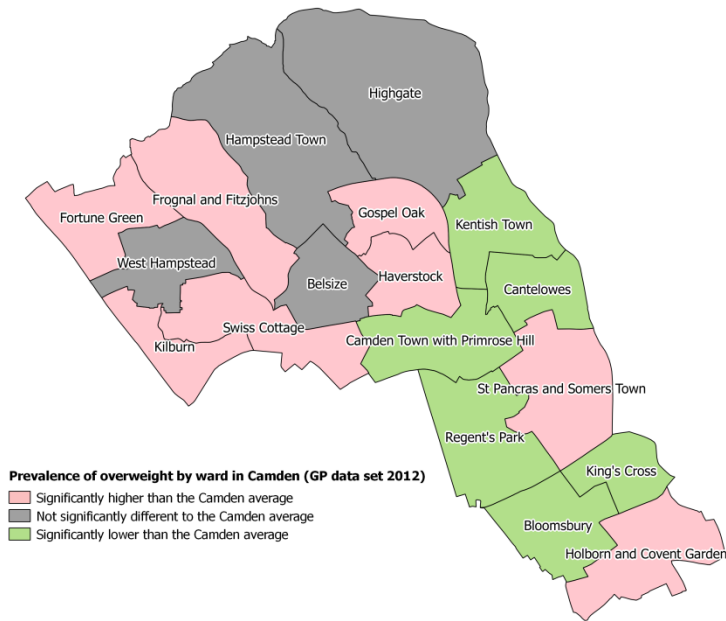
¹⁰ Public Health England. Prevalence of underweight, healthy weight, overweight, obesity, and excess weight among adults at local authority level for England, 2012-14. https://www.noo.org.uk/securefiles/160202_1018//BMI_categories_2012-2014.xlsx [accessed 2nd February 2016]

¹¹ Camden and Islington Public Health Intelligence. Adult Obesity and Overweight Profile, 2013.

particularly that Kilburn, Gospel Oak, Haverstock, St Pancras & Somers Town, and Holborn & Covent Garden, areas with high prevalence of adult overweight and obesity, coincide with high levels of multiple deprivation.

According to local GP data, nine wards in Camden have a higher than expected level of overweight adults, with adults in Kilburn, Fortune Green and West Hampstead being about 20% more likely to be overweight compared to the Camden average (Figure 5).

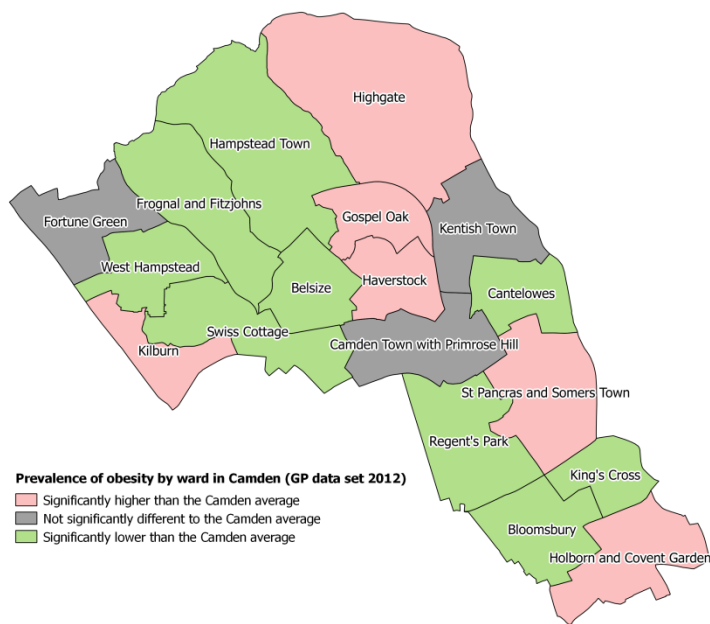
Figure 5: Overweight adults in Camden Wards, 2012



Source: Camden and Islington Public Health GP Dataset, 2012

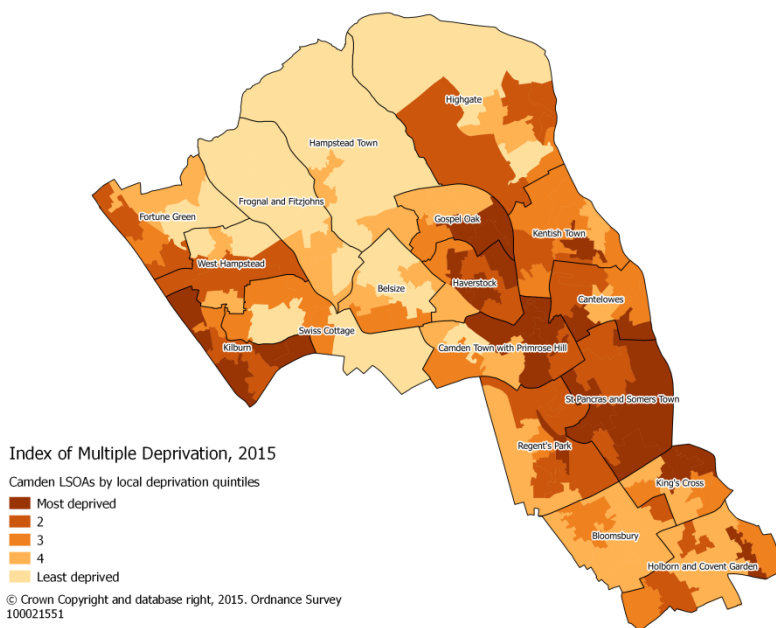
Data from Camden GPs show that, in 2012, six wards had a prevalence of obesity that was significantly higher than the Camden average

Figure 6: Obese adults in Camden wards, 2012



Source: Camden and Islington Public Health GP Dataset, 2012

Figure 7: Deprivation in Camden by LSOA, Local Quintiles



Source: IMD 2015

Costs of obesity

In 2007, the total annual cost to the NHS of diseases for which elevated BMI is a risk factor is estimated at £17.4 billion, of which overweight and obesity is estimated to account for £4.2 billion. This was predicted to increase to £6.3 billion for NHS costs attributable to overweight

and obesity.¹² The estimated costs to the NHS in Camden for treating overweight and obesity and related diseases has been estimated at £82.8 million in 2015¹³

4. Obesity and health

The causes of obesity are complex, it is now generally accepted that the current prevalence of obesity in the UK population is primarily caused by people's biological susceptibility interacting with a changing environment that includes more sedentary lifestyles and increased dietary abundance.¹² The complexity is captured in the report's full obesity system map (Figure 3). The map's "food consumption cluster" includes many characteristics of the food market such as abundance and variety, nutritional quality, energy density, and portion size of food, whilst pressure for growth and profitability, the cost of ingredients and efforts to increase efficiency of production are characteristics of the map's "food production cluster", both clusters being relevant to the availability of fast food. Although representing just two aspects of this complex map, the report states that it is important to remember that the system is highly interconnected, for example intervening in 'food consumption' will have an impact on physical activity and individual psychology.

Childhood obesity can have a harmful effect on the body in a variety of ways. Obese children are more likely to have high blood pressure and high cholesterol, which are risk factors for cardiovascular disease, an increased risk of impaired glucose tolerance, insulin resistance and type 2 diabetes, breathing problems such as sleep apnoea and asthma, joint problems and musculoskeletal discomfort, and fatty liver disease, gallstones, and gastro-oesophageal reflux (i.e., heartburn). Obese children and adolescents have a greater risk of social and psychological problems, such as discrimination and poor self-esteem, which can continue into adulthood.¹⁴

There has been consistent strong evidence that childhood overweight and obesity are maintained into adulthood.¹⁵ Adult obesity is associated with a number of serious health conditions including heart disease, diabetes, and some cancers.¹⁴

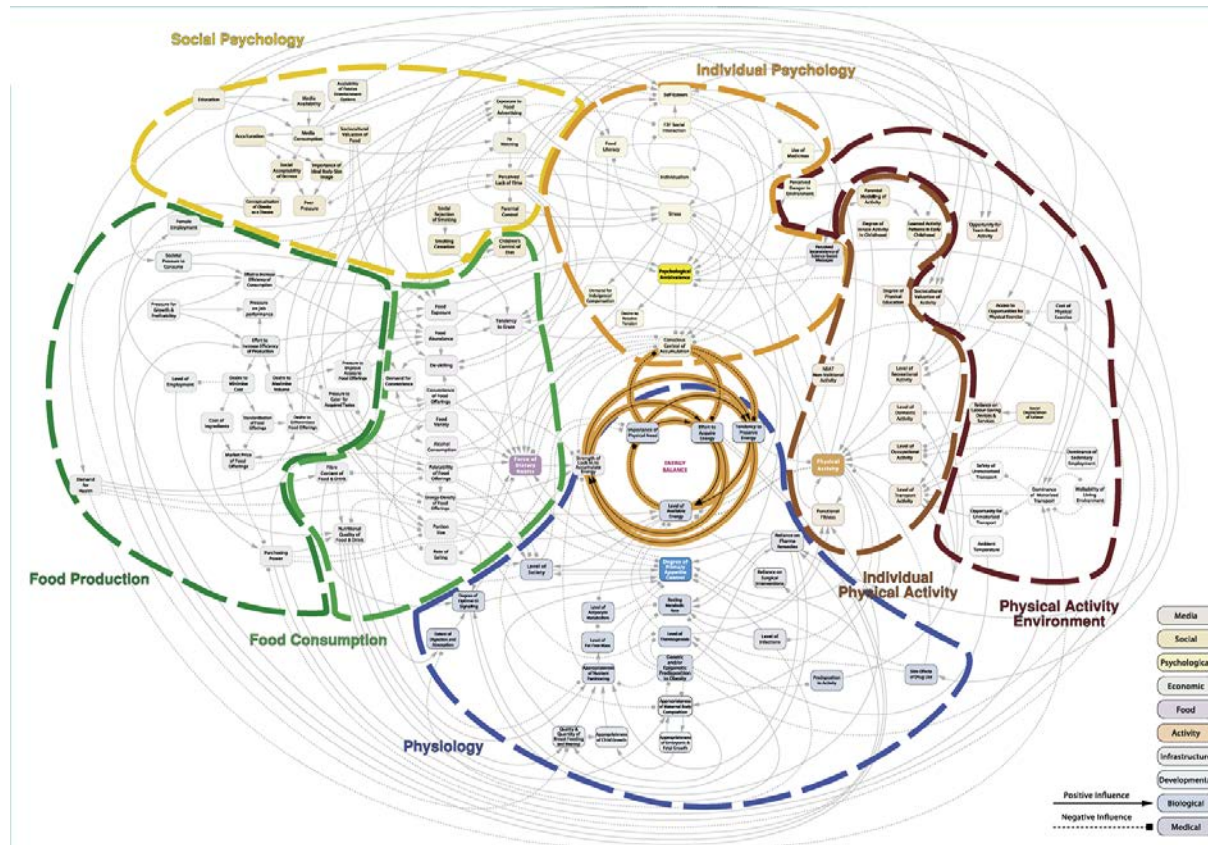
¹² Foresight. Tackling Obesity: Future Choices – Project Report 2nd Edition. Government Office for Science, 2007

¹³ Department of Health. Healthy weight, healthy lives: A toolkit for developing local strategies. DH, 2008 http://www.fph.org.uk/uploads/full_obesity_toolkit-1.pdf Accessed 19th June 2015

¹⁴ US Centers for disease control and prevention. <http://www.cdc.gov/obesity/childhood/basics.html>. (Accessed 17th June 2015)

¹⁵ Singh AS, Mulder C, Twisk JWR, van Mechelen W, and Chinapaw MJM. Tracking of childhood overweight into adulthood: a systematic review of the literature. *Obesity Reviews* (2008) 9, 474–488

Figure 8: The Foresight Obesity Map



Source: Foresight. Tackling Obesities: Future Choices, 2007

Overweight, obesity and the environment

The *Marmot Review*,¹⁶ a government-commissioned strategic review of health inequalities in England, identified that a lack of attention paid to health and health inequalities in the planning process can lead to unintended and negative consequences, and that if no action were taken, the cost of treating the various illnesses that result from inequalities in the level of obesity alone will rise from £2 billion per year to nearly £5 billion per year in 2025. The report recommended prioritising policies and interventions that reduce health inequalities by improving the food environment in local areas across the social gradient.

The National Institute for Health and Care Excellence issued its evidence-based public health guidelines on preventing cardiovascular disease¹⁷ in 2010. It recommended that local authorities should be encouraged to restrict planning permission for fast food takeaways and other food retail outlets in specific areas (for example, within walking distance of schools), and should be supported to implement existing planning policy guidance in line with public health objectives. The approach taken in the Camden Local Plan is consistent with this recommendation.

Healthy Lives, Healthy People is the government’s response to the Marmot review. It recognises that the quality of the environment around us also affects the community. It

¹⁶ Fair Society, Health Lives. Strategic review of health inequalities in England post-2010. The Marmot Review, 2010.

¹⁷ NICE public health guidance 25. Prevention of cardiovascular disease. June 2010.

recognises that access to good-quality food is one of many factors that influence the health and wellbeing of the local population. The strategy recognises that “health considerations are an important part of planning policy”.

A 2014 Public Health England briefing¹⁸ written in conjunction with the Local Government Association and the Chartered Institute of Environmental Health highlighted that:

“One of the dietary trends in recent years has been an increase in the proportion of food eaten outside the home, which is more likely to be high in calories. Of particular concern are hot food takeaways, which tend to sell food that is high in fat and salt, and low in fibre, fruit and vegetables.”

Physical activity and weight

The “energy balance equation”, in which to maintain body weight the amount of energy (calories) consumed must equal the amount of energy expended is an important concept in preventing overweight and obesity. As an example, the energy expenditure required by a 50kg teenager (the average weight for a 14-year old) to burn off 500 calories (roughly a burger and small chips), would be 60 minutes of competitive football or running at 6mph, 70 minutes of BMX biking, 90 minutes of dancing, or 120 minutes of skateboarding.

The role of physical activity on health and wellbeing has been well documented, but its role as the key strategy in tackling obesity is less clear. Most studies that have researched physical activity and diet in relation to obesity have been based on self-reporting of both measures, which can be limited by recall bias (where people may not recall past events) or response bias (where people often are more likely to under-report behaviours perceived as undesirable or unhealthy, and more likely to over-report behaviours seen as desirable or healthy).

Recently, published literature has questioned the role of physical activity in tackling obesity. One review highlighted that trials provide generally consistent evidence that intake will rise to match expenditure making weight loss from increased exercise difficult, if not impossible, for many people, and that numerous trials have indicated that exercise plus calorie restriction achieves virtually the same result in weight loss as calorie restriction alone.¹⁹ Malhotra and colleagues²⁰ take a similar view, and point out that up to 40% of people with normal body mass index will harbour metabolic abnormalities usually associated with obesity, including high blood pressure, dyslipidaemia, non-alcoholic fatty liver disease and cardiovascular disease, as a result of poor diet.

¹⁸ Healthy people, healthy places briefing Obesity and the environment: regulating the growth of fast food outlets. Public Health England, March 2014

¹⁹ Luke A and Cooper RS. Physical activity does not influence obesity risk: time to clarify the public health message. *International Journal of Epidemiology* 2013;42:1831–1836

²⁰ Malhotra A, Noakes T, and Phinney S. It is time to bust the myth of physical activity and obesity: you cannot outrun a bad diet.

5. Schools in Camden

The Department for Education's *Edubase2* database²¹ lists eleven state secondary schools and nine independent secondary schools in Camden, with a total capacity of over 12,000 children and young people. Where roll numbers were not listed on Edubase2, Ofsted and Independent Schools Inspectorate reports were used to determine school pupil numbers in the age range 11-18. Table 1 below shows the number of secondary schools, their roll numbers, and the number of A5 takeaways within 400 metres of the school.

The highest density of hot food takeaways around schools is around the Camden Centre for Learning, although this is a small school with 30 pupils on its roll. A number of independent schools had high densities of hot food takeaways within 400 metres, two in the central London area and one in Kentish Town (although it is noted that two of these schools had compulsory dining for pupils/students).

State secondary schools tended to be larger in terms of pupil numbers, with one school of over 1,000 pupils having nine hot food takeaways within 400 metres, and a further two, also with over 1,000 pupils each, having eight hot food takeaways within 400 metres.

²¹ <http://www.education.gov.uk/edubase/search.xhtml?clear=true>

Table 1: Camden secondary schools, with the number of hot food takeaways within 400 metres and the school size, January 2016

Name of school	Postcode	Type	No. of A5 Takeaways within 400m of school	Number of pupils
Hampstead	NW2 3RT	State secondary	0	1242
Haverstock School	NW3 2BQ	State secondary	9	1237
Parliament Hill	NW5 1RL	State secondary	0	1168
La Sante Union	NW5 1RP	State secondary	0	1155
Acland Burley	NW5 1UJ	State secondary	8	1044
Camden School for Girls	NW5 2DB	State secondary	8	1012
William Ellis	NW5 1RN	State secondary	0	835
Maria Fidelis	NW1 1TA	State secondary	1	605
South Hampstead High School	NW3 5SS	Independent secondary	6	573
UCL Academy	NW3 3AQ	State secondary	2	560
University College School Seniors	NW3 6XH	Independent secondary	0	538
Regent High School	NW1 1RG	State secondary	5	400
Maria Fidelis Lower	NW1 2LY	State secondary	5	400
College Francais Bilingue De Londres	NW5 3AX	Independent secondary	11	353
North Bridge House Senior School	NW3 5UD	Independent secondary	0	321
CATS London	WC1A 2RA	Independent secondary	11	261
Fine Arts College, London	NW3 4YD	Independent secondary	1	152
St Margaret's High School	NW3 7SR	Independent secondary	2	81
The Abbey College in London	WC1A 2PJ	Independent secondary	10	63
Camden Centre for Learning	NW1 8DP	State secondary	17	30
WAC Arts College	NW3 4QP	Free School	2	25
Ecole Jeannine Manuel	WC1B 3DN	Independent secondary	5	Not known; opened in Sept. 2015

Source: Edubase2, Ofsted, Independent Schools Inspectorate

6. Review of the evidence on takeaway hot food outlets – and their impact on health

Fast food typically incorporates all of the potentially adverse dietary factors, including saturated and trans fat, high glycaemic index, high energy density, and, increasingly, large portion size. Additionally, these foods tend to be low in fibre, micronutrients, and antioxidants.²²

Systematic reviews are considered the most reliable source of evidence. The purpose of a systematic review is to sum up the best available research on a specific question. Systematic reviews are particularly useful in bringing together a number of separately conducted studies, sometimes with conflicting findings, and synthesising their results.

Two systematic reviews^{23,24} and one semi-systematic review²⁵ that assessed access to fast food takeaways and their proximity to schools were found. The reviews identified a number of limitations in the evidence:

- The majority of studies included in all three reviews were cross-sectional, a type of study that can find an association between a risk factor and an outcome, but which cannot establish whether the outcome was caused by the risk factor.
- The reviews found considerable differences in how access and proximity were defined and measured between studies, which made it difficult to draw any firm conclusions.
- A third area of concern was the definition of a fast food takeaway. Studies tended to use either a broad measure that included all “limited service restaurants”, or use trade names to identify fast-food chains derived from various sources. Both are problematic: the former cannot distinguish adequately between fast food outlets and other food outlets that may serve healthier food, whilst the second omits independent outlets which, in 2009, formed 47% of the market in the UK.²⁶

Findings from a 2011 systematic review of 40 studies on access to fast food demonstrated that fast food restaurants were prevalent in low-income and ethnic minority areas and around schools.²⁷ Findings relating to body mass index (BMI) were too uncertain to draw solid conclusions on the relationship between fast food access and BMI. The lack of individual BMI data based on measured values was a significant limitation.

²² Ebbeling CB, Pawlak DB, and Ludwig DS. Childhood obesity: public-health crisis, common sense cure. *Lancet* 2002, 360: 473–82

²³ Fleischhacker SE, Evenson KR, Rodriguez DA, and Ammerman AS. A systematic review of fast food access studies. *Obesity Reviews* 2011;12(5):e460–e471.

²⁴ Williams J, Scarborough P, Matthews A, Cowburn G, Foster C, Roberts N, and Rayner M. A systematic review of the influence of the retail food environment around schools on obesity-related outcomes. *Obesity Reviews* (2014) 15, 359–374.

²⁵ Fraser LK, Edwards KL, Cade J, and Clarke GP. The Geography of Fast Food Outlets: A Review, *Int. J. Environ. Res. Public Health* 2010, 7(5), 2290–2308.

²⁶ LDC (2009). Food for thought! A review of fast food outlets. The Local Data Company. London. In Bagwell S, The Role of Independent Fast-Food Outlets in Obesogenic Environments: A Case Study of East London in the UK. *Environment and Planning A*, 2013;45:142–158

²⁷ Fleischhacker SE, Evenson KR, Rodriguez DA, and Ammerman AS. A systematic review of fast food access studies. *Obesity Reviews* 2011;12(5):e460–e471.

In a systematic review conducted by Williams et al., focused specifically on the food retailing environment around schools, there was little reported evidence for an effect of the school food environment on food consumption patterns and limited evidence of an effect on food purchases. However, a major limitation of the study was that where various analyses of proximity of fast food outlets to schools were reported in the same study, the authors only included a buffer of 800m from schools, whereas other studies suggest an increasing effect as proximity to school increases.^{28,29} In another study, Seliske et al found that measuring proximity using road networks rather than circular buffers more accurately reflected behaviours.³⁰

In their semi-systematic review, Fraser et al. found that 14 of 16 studies reported a positive correlation between fast food outlet density and area deprivation. The authors found mixed results for the association between fast food availability and weight status, but some evidence that greater exposure to fast food is associated with a lower fruit and vegetable intake. In the review, six out of nine studies which looked at food consumption in relation to the availability/location of fast food outlets found a significant association in the expected direction.

There have been a number of studies published subsequently that were not included in the reviews above.

Seliske et al. found that by using a focused measure of where students eat their lunch, they were able to demonstrate that the food retail environment surrounding schools is strongly related to student's eating behaviours during the school day. However, whilst they measured where students typically ate their lunch during the school day, they did not consider students' use of fast-food takeaways after school, which is a major limitation.³⁰

A study of 3,620 children aged 13 in a UK birth cohort study showed that increased exposure to fast food increased the frequency of visits to fast food outlets, which in turn was associated with higher body mass index standard deviation score (BMISDS, the recommended measure of body mass for children). Deprivation was the largest contributing variable to the exposure.³¹ A subsequent analysis of the 4,827 participants aged 13 to 15 years from the birth cohort confirmed that the consumption of fast food was associated with a higher BMISDS, higher body fat percentage, and increased odds of being obese, although this was not consistent across geographical areas.³²

A Canadian cohort study found that residing in neighbourhoods with poorer access to fast-food restaurants and convenience stores was associated with a lower likelihood of eating and snacking out, and that children attending schools in neighbourhoods with a higher

²⁸ Currie J, DellaVigna S, Moretti E, Pathania V. The effect of fast food restaurants on obesity and weight gain. *Am Econ J-Econ Policy* 2010; 2: 32–6

²⁹ Davis B and Carpenter C. Proximity of Fast-Food Restaurants to Schools and Adolescent Obesity. *Am J Public Health*. 2009;99(3):505–510.

³⁰ Seliske L, Pickett W, Rosu A, and Janssen I. The number and type of food retailers surrounding schools and their association with lunchtime eating behaviours in students. *International Journal of Behavioral Nutrition and Physical Activity* 2013, 10:19

³¹ Fraser LK, Edwards KL, Cade JE and Clarke GP. Fast food, other food choices and body mass index in teenagers in the United Kingdom (ALSPAC): a structural equation modelling approach. *International Journal of Obesity* (2011) 35, 1325–1330

³² Fraser LK, Clarke GP, Cade JE and Edwards KL. Fast Food and Obesity. A Spatial Analysis in a Large United Kingdom Population of Children Aged 13–15. *Am J Prev Med* 2012;42(5):e77–e85

number of unhealthy relative to healthy food establishments scored most poorly on dietary outcomes.³³

A study of over 9,000 children and adolescents found that fast-food was associated with a net increase in daily total energy intake of 126.29 kcal for children and 309.53 kcal for adolescents and with higher intake of regular soda (73.77 g for children and 163.67 g for adolescents) and sugar-sweetened beverages generally. Fast-food consumption increased intake of total fat (7.03g; 14.36 g), saturated fat (1.99g; 4.64 g), and sugar (5.71g; 16.24 g) for both children and adolescents respectively, and sodium (396.28 mg) and protein (7.94 g) for adolescents. Additional key findings were that adverse effects on diet were larger for lower-income children and adolescents and among adolescents, and increased soda intake was twice as large when fast food was consumed away from home than at home.³⁴

In Newcastle, Gallo et al. found that there were more total food outlets in school fringe areas which had obesity prevalence rates above the national and local average compared to those areas which had lower prevalence rates.³⁵

In their report “The School Fringe”, Sinclair and Winkler found that local independent shops offered child-size portions at child-size prices. They organised fast service in busy periods, and even took on extra staff. Their food was fattier, on average 45% of calories from fat, versus 32% from other fringe shops. The most popular type of food retail shop in the urban setting was the supermarket, with more visits than all takeaways put together, although the proportion of food bought in supermarkets compared with fast food takeaways was not clear.³⁶ A report on fast food outlets in Tower Hamlets, London, found that school pupils formed a large proportion of customers of fast food, and that fast food outlets were offering special deals for children which were often made and stacked up in advance to ensure schoolchildren are served quickly during lunchtime or on their way home from school. The report also found that small business advisors often encouraged prospective owners to either open or purchase fast food outlets near schools and colleges because of the significant sales potential offered by schoolchildren and young adults.³⁷ This latter report also noted that competition from overprovision was problematic for many business owners, who felt that they had to sell cheaper unhealthier products because of the higher profit margins on this type of food.

A study on the consumption of takeaway and fast food in Tower Hamlets showed that children frequently purchased chips on their own or with other fried items like fried chicken or pizzas. In addition, 70% preferred sweetened soft drinks over other drinks when purchasing fast food. The products that were purchased were calorie dense, high in sugar, salt and fat as well as saturated fat. The study concluded that actions need to be taken to either limit the

³³ Van Hulst A, Barnett TA, Gauvin L, Daniel M, Kestens Y, Bird M, Gray-Donald K and Lambert M. Associations Between Children’s Diets and Features of Their Residential and School Neighbourhood Food Environments. *Can J Public Health* 2012;103(Suppl. 3):S48-S54.

³⁴ Powell LM and Nguyen BT. Fast-Food and Full-Service Restaurant Consumption Among Children and Adolescents. Effect on Energy, Beverage, and Nutrient Intake. *JAMA Pediatr.* 2013;167(1):14-20.

³⁵ Gallo RG, Barrett L, and Lake AA. The food environment within the primary school fringe. *British Food Journal* 2014;116(8):1259-1275.

³⁶ Sinclair S and Winkler J (2008) *The School Fringe: What pupils buy and eat from shops surrounding secondary schools.* Nutrition Policy Unit. London Metropolitan University

³⁷ Bagwell, S and Doff, S. (2009) *Fast Food Outlets in Tower Hamlets and the Provision of Healthier Food Choices,* London Metropolitan University

ability of children to access fast food outlets or to substitute healthier foods and drinks available at fast food outlets. One limitation of the study, however, was that it was unable to differentiate between the impact of proximity to schools and proximity to homes.³⁸

Also in Tower Hamlets London, Caraher et al. found that there were concentrations of fast-food outlets near schools and that students reported using these, including reports of skipping lunch in order to save money and eat after school at these outlets. Food from fast-food outlets was high in fat, saturated fat, and salt, but these were not the only source of such foods, and many of the students reporting buying from shops near the school or on the way to or from school. At lunchtime food outlets were less likely to be used by school students in areas near schools that had a closed gate policy.³⁹

There is far less published evidence regarding fast food outlets' proximity to primary schools. However, industry data show that 29% of family visits to fast food outlets are influenced by children's choices in what the company describes as its "Dine out pester power scorecard".⁴⁰ Whilst a large proportion of these visits are promoted through television and other advertising, they are often supported by promotions such as free toys, sold in packaging attractive to young children, or branded with names appealing to young children. No research on how this links with proximity to schools was found.

7. Experiences of policies in other local authorities

Many local authorities in England have introduced policies aimed at resisting new hot food takeaways within 400 metres of schools. The distance is widely used as it equates to a five to ten minute walk, and is based on evidence from London Metropolitan University research.³⁶ In addition, a 400 metre buffer is considered to strike a reasonable balance between control, impact, and economic development considerations

As noted earlier there are a number of measures that can be used to tackle the issue of overweight and obesity in children, one of these has been to adopt a more restrictive approach in planning policy to new hot food takeaways in close proximity to schools. Authorities that have used this approach include Waltham Forest (2009), Barking and Dagenham (2010), St Helen's (2011), Central Lancashire, Sandwell, and Islington (2012), Bolton (2013), Bradford, Salford, and Warrington (2014), and Gateshead (2015). All set a 400 metre radius around schools, within which new hot food takeaways will be resisted, except for Islington which sets a 200 metre radius. All but four include primary schools as well as secondary schools. Two seek to set a condition that hot food takeaways within the 400 metre radius are not open to the public before 5pm on weekdays.

Other local authorities, including Newham and Wandsworth, take proximity to schools into account within an overall concentration of uses policy.

³⁸ Patterson R, Risby A, and Chan M-Y. Consumption of takeaway and fast food in a deprived inner London Borough: are they associated with childhood obesity? *BMJ Open* 2012 ;2:e000402. doi:10.1136/bmjopen-2011-000402

³⁹ Caraher, M., Lloyd, S. & Madelin, T. (2014). The "School Foodshed": schools and fast-food outlets in a London borough. *British Food Journal*, 116(3), pp. 472-493

⁴⁰ NDC Group (December 2014). Pester power drives 763 million family eat-out visits per year in Britain. <https://www.npdgroup.co.uk/wps/portal/npd/uk/news/press-releases/pester-power-drives-763-million-family-eat-out-visits-per-year-in-britain/> (accessed 16th June 2015)

There have been a number of cases (planning appeals) where planning inspectors considered the negative impacts of hot food takeaways on health important in the dismissal of an appeal, a couple of examples are noted below.

In Newham, a decision to turn down an application to grant planning permission for a new fast food takeaway was upheld by the Planning Inspectorate, who gave four reasons for the decision to reject the appeal, of which two were over concentration and healthy lifestyles.⁴¹

In Warrington, the Planning Inspector dismissed an appeal against refusal of planning permission for a hot food takeaway, noting that in light of the increasing problems with health and obesity, the Supplementary planning Document suggested that Hot Food Takeaways located within 400m of a secondary school should not be open to the public before 17:00 hours. The proposed A5 unit would have been open from 11:00 hours and that gave weight to the Planning Inspector's decision to dismiss the appeal.⁴²

It should be noted that planning appeals for new A5 hot food takeaways are usually decided on the outcome of a number of considerations, and not solely on the proximity to schools. However, the adoption of policies restricting new A5 hot food takeaways near schools by an increasing number of local planning authorities following examination in public, and evidence from planning appeals, demonstrates that the Planning Inspectorate supports such policies where the appropriate evidence has been provided to support those policies.

8. Tackling obesity in Camden

Tackling obesity is a priority for the Health and Wellbeing Board in Camden, and action to tackle childhood obesity incorporates a number of strands coordinated through the Healthy Weight, Healthy Lives Task Force.⁴³ The task force brings together representatives from leisure services, environment, school improvement, planning, local NHS commissioners and providers, third sector organisations and public health to oversee the delivery of Camden's Healthy Weight, Healthy Lives Action Plan.

The Healthy Weight Healthy Lives work seeks to improve the food and physical activity environment and support and promote healthy lifestyle opportunities at every stage of the life course, from maternity and early years, through primary and secondary school, and on to building healthy lifestyles among adults and particularly parents.

Improving the food environment

The Good Food for London local authority league table⁴⁴ shows Camden achieving a high number of benchmarks in terms of creating the conditions of a 'good food' borough. The table recognises the wide number of dimensions on which action is necessary including living wage policies, healthy catering and food in schools. Camden ranks fifth among London local authorities, with notable gaps being the absence of UNICEF baby friendly accreditation, and the lack of a broader strategic partnership focused on improving food

⁴¹ Planning Inspectorate appeal ref APP /G5750/A/11/2162904, May 2012

⁴² Planning Inspectorate appeal ref. APP/M0655/A/14/2215776, May 2014

⁴³ Health Weight Healthy Lives Strategy & Action Plan (2013) is online at:
<http://www.camdendata.info/AddDocuments1/Forms/DispForm.aspx?ID=730>

⁴⁴ London Foodlink. Good Food for London 2014
<http://www.sustainweb.org/londonfoodlink/goodfoodforlondon2014/#top> Accessed 19th June 2015

across the borough. These are both areas being developed. A range of programmes in improving the food environment are ongoing, for example:

- Camden's Baby Feeding Service supports parents with the skills needed to initiate breast feeding and/or to start solids.
- Through the Healthy Schools programme, Camden works closely with its schools to support healthy food environments, policies and provision.
- A key part of the Healthy Schools programme is to improve the quality and increase uptake of school meals, particularly among eligible children to ensure every child has a healthy, nutritious meal every day. Building on this, since 2014 Camden has been working with national charity, Magic Breakfast, to support all Primary Schools in the borough to develop healthy breakfast clubs that are free at the point of access, which reach those children most in need, and which aim to be financially self-sustaining within two years. This year existing breakfast clubs will be extended to include peer-led reading schemes to improve literacy as well as nutrition.
- Among older children and young people in particular, we know that fast food with high levels of fat and salt and minimal nutrients is becoming easier to access, cheaper and more acceptable. The Healthier Catering Commitment is a pan-London scheme to encourage businesses to make small changes to the way in which they prepare and serve food to make it healthier. Camden is nearing the end of its two year Healthier Catering Commitment pilot, which is focused in Kilburn and Kentish Town wards and delivered by the Food Safety Team. To date, 25 businesses have achieved the award.
- Camden has also been successful in piloting a "Change 2 Water" policy in secondary school. This addresses the role of fizzy, carbonated, sugary drinks in weight gain through the promotion of drinking water.
- Camden is piloting 'Little Steps to Healthy Lives' in Children's Centres and private, voluntary and independent nurseries. This programme ensures the food environment within these settings conforms to the standards recommended by NICE (2006).

Supporting physical activity

A wide range of actions are being taken forward in response to the recommendations of Camden's children and young people's physical activity needs assessment. For example:-

- Apples & Pears is an 8-week weight management service for adults, children and young people offered by the Council.
- Camden Active Spaces is a three year, £1m programme to transform outdoor areas in seven local schools, introducing unique designed structures to inspire children and young people to move more.
- Play streets have been recognised for building community cohesion as well as giving children an opportunity to play actively, outdoors. Launched in November 2014, Camden's Play Streets scheme supports local residents to have their street closed to cars at set intervals to allow local children to play together.
- In Somers Town, a Cycle to School Partnership was formed in 2014 between Camden Transport services, local schools and UCL. The project aims to support children to integrate exercise into their daily routine.

- Increasing activity in children's free time is also a vital part of embedding positive health behaviour from an early age. Camden Active All Areas is a collaborative project led by Pro-Active Camden in partnership with four community centres.

The Local Plan policy to resist new A5 hot food takeaways in proximity to secondary schools is intended to be part of and support a wide range of programmes to reduce the prevalence of overweight and obesity and improve diet.

9. Conclusions and recommendations

This document reviews the national and regional policy context, levels of overweight and obesity in Camden, the links between obesity and poor health, the links between physical activity and weight, and reviews the evidence base on takeaway hot food outlets and their impact on health.

The national and regional policy supports tackling overweight and obesity through planning policy. Levels of overweight and obesity among Camden's children are similar to levels in England, levels which nationally are considered to be too high. There is evidence that overweight and obesity in childhood increases the risk of overweight and obesity in adulthood. There is also evidence that overweight and obesity are detrimental to health and wellbeing.

The evidence highlights the need for local planning authorities to manage the proliferation of fast food outlets as a means of combating their adverse impact on public health. In particular, such management should be scaled up around schools as evidence shows that an increasing number of hot food takeaway shops are operating within easy walking distance to schools. Overall there is evidence that, although availability of high density, high fat and high sugar food is not the only factor that influences diet and obesity, it is a significant contributing factor which needs to be taken into consideration as part of an integrated approach to managing overweight and obesity.

Whilst issues around pricing and competition are not planning considerations, the proximity of hot food takeaways, which may be considered inappropriately sited near to youth establishments, is a planning consideration.

Based on then evidence, a policy that restricts the opening of new Hot Food Takeaways within 400m of secondary schools, a distance considered to be equivalent to a five- to ten-minute walk would be helpful in supporting the wide range of programmes that aim to tackle overweight and obesity among residents.