

Public Health Evidence in relation to the use of the planning system to control hot food takeaways (April 2018)



**Public Health evidence in relation to
the use of the planning system to
control hot food takeaways**

**Public Health
Sunderland City Council
May 2018**

1. Purpose

This report summarises the policy context and evidence which has informed the council's decision to regulate takeaways through the planning system.

2. Introduction

The health of people in Sunderland is varied compared with the England average. Sunderland is one of the 20% most deprived local authorities in England and about 26% (12,600) of children live in low income families. Life expectancy for both men and women is lower than the England average.ⁱ

Obesity is one of our most significant and complex challenges, undermining individual and family health and wellbeing, impacting on business and education, and contributing to significant costs across health, social care and a wide range of services.

Failing to address the challenge posed by the obesity epidemic will place an even greater burden on NHS resources. It is estimated that the NHS in England spent £6.1 billion on overweight and obesity related ill-health in 2014 to 2015.ⁱⁱ

Annual spend on the treatment of obesity and diabetes is greater than the amount spent on the police, the fire service and the judicial system combined. The UK-wide NHS costs attributable to overweight and obesity are projected to reach £9.7 billion by 2050, with wider costs to society estimated to reach £49.9 billion per year.ⁱⁱ

There is a strong relationship between deprivation and childhood obesity.ⁱⁱ Analysis of data from the National Child Measurement Programme (NCMP) shows that obesity prevalence among children in both Reception and Year 6 increases with increased socioeconomic deprivation (measured, for example, by the 2010 Index of Multiple Deprivation (IMD) score). Obesity prevalence in the most deprived 10% of children is approximately twice that of the least deprived 10%.ⁱⁱ

The increasing consumption of out-of-home meals – that are often cheap and readily available at all times of the day - has been identified as an important factor contributing to rising levels of obesity. Public Health England estimated in 2014 that there were over 50,000 fast food and takeaway outlets, fast food delivery services, and fish and chip shops in England. More than one quarter (27.1%) of adults and one fifth of children eat food from out-of-home food outlets at least once a week. These meals tend to be associated with higher energy intake; higher levels of fat, saturated fats, sugar, and salt, and lower levels of micronutrients.ⁱⁱ A recent studies show that the exposure to takeaway food outlets was positively associated with consumption of takeaway food.ⁱⁱⁱ

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

“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**

In Sunderland, in common with many areas in England, there is an upward trend in the prevalence of overweight and obesity in adults and children, 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.

The Foresight Report^{iv} on Tackling Obesities demonstrated that obesity is the result of a very large number of determinants with many of the drivers beyond the scope of individuals to influence. There is broad consensus that preventing and tackling obesity effectively requires the development of a sustained 'whole systems approach', with co-ordinated policies and actions across individual, environmental and societal levels involving multiple sectors (including planning, housing, transport, children's and adult's services, business and health).

It has been recognised that local authorities, through a wide range of their functions, are well placed to take action to combat obesity. A number of important publications have already drawn attention to the potential for local government to use its powers in a variety of ways to combat obesity and try to dilute some of the effects of the obesogenic environment. The planning system is one area in which local government can act.

One of the ways in which planning can have the greatest impact on health, and in particular obesity levels, is to restrict hot food takeaways. A diet which is high in saturated fat and salt and/or which includes trans-fat contributes to the risk of developing cardiovascular disease (CVD), cancers and obesity which in turn increases the risk for type 2 diabetes.

3. Background

The National Planning Policy Framework makes it clear that the planning system can play an important role in creating healthy, inclusive communities.

There is evidence that there are elevated levels of obesity in communities with high concentrations of fast food outlets and further evidence that such concentrations are highest in areas of greatest deprivation.ⁱⁱ

There is also evidence that the type of food on sale nearest to schools may influence the diet of schoolchildren.ⁱⁱ

Local authorities in England are beginning to use the planning system to restrict hot food takeaways with the aim of restricting access to unhealthy food to address concerns about population health in relation to cardiovascular disease (CVD) and obesity. Sunderland City Council's Local Plan has identified health and improving health outcomes and reducing health inequalities as a key objective to be addressed in the city.

The over concentration and clustering of A5 uses in an area can have an adverse impact on the amenity of surrounding properties and neighbouring uses. The levels of disturbance from noise, odour and possible anti-social behaviour may be increased when A5 uses are cluster together.

4. National guidance

National Institute for Health and Care Excellence (NICE) (2010) Guidance^v on prevention of cardiovascular disease outlines that reducing salt and saturated fat intakes for the population will reduce morbidity and mortality rates from cardiovascular disease. Furthermore it states that trans fats (industrial-produced trans fatty acids (IPTFAs)) are a significant health hazard and that sections of the population who regularly eat fried fast-food may be consuming substantially higher amounts of trans fats.

NICE (2010) Guidance^v on prevention of cardiovascular disease outlines that food from takeaways and the ‘informal eating out sector’ comprises a significant part of many people’s diet and indicates that local planning authorities have powers to control fast-food outlets. It recommends that local planning authorities should be encouraged to restrict planning permission for takeaways and other food retail outlets in specific areas (for example, within walking distance of schools) as well as consider the concentration of fast-food outlets in specific areas to address disease prevention. It further recommends that existing planning policy guidance should be implemented in line with public health objectives.

Healthy Lives, Healthy People^{vi} is the government’s response to the Marmot review^{vii}. It recognises that the quality of the environment around us also affects the community. It recognises that access to good quality food is one of many factors that influence the health and wellbeing of the local population and highlights that income, social deprivation and ethnicity have an important impact on the likelihood of becoming obese. The strategy recognises that “health considerations are an important part of planning policy”.

In 2014 Public Health England (PHE), the Local Government Association (LGA) and the Chartered Institute of Environmental Health^{viii} 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.”

It outlines the obesity epidemic in England and the links between obesity and type 2 diabetes, raised blood pressure and colorectal cancer. It acknowledges the complexity of the way in which the environment promotes obesity and explains that actions can be taken by local authorities to reduce the extent of obesity promotion locally. It identifies that controlling the proliferation of fastfood outlets has a role to play; it acknowledges that a causal link between fastfood outlets and obesity cannot be established but identifies that there is some evidence of associations between obesity and fastfood.

The document ‘Tipping the Scales’^{ix} details case studies of where planning powers have been used to limit hot food takeaways in local areas (LGA 2016). This document outlines the local evidence and policy drivers used to support adoption of the policy.

5. Planning policy context

5.1 National Planning Policy Framework (NPPF)

The NPPF was originally published on 27 March 2012 and provides the framework within which local planning authorities must prepare their Local Plan. With regard to health, the framework states that planning should:

- Take account of and support local strategies to improve health, social and cultural wellbeing for all, and deliver sufficient community and cultural facilities and services to meet local needs
- Local planning authorities should work with public health leads and health organisations to understand and take account of the health status and needs of the local population (such as for sports, recreation and places of worship), including expected future changes, and any information about relevant barriers to improving health and wellbeing

At the heart of the NPPF is a presumption in favour of sustainable development, with three dimensions to the concept: economic; social; and environmental.

The social role comprises *“supporting strong, vibrant and healthy communities, by creating a high quality built environment, with accessible local services that reflect the community’s needs and supporting health, social and cultural wellbeing”*.

NPPF paragraph 23 highlights the importance of promoting competitive town centre environments and paragraph 69 sets out that *“the planning system can play an important role in creating healthy, inclusive communities”*.

5.2 Planning Practice Guidance (PPG) – (Health & Wellbeing)

The PPG is statutory guidance published by the Government, which builds upon the NPPF. In relation to health and wellbeing it states that;

“The built and natural environments are major determinants of health and wellbeing”

The range of issues that could be considered through the plan-making and decision-making processes, in respect of health and healthcare infrastructure, include how: 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 considers opportunities for healthy lifestyles (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).

5.4 Draft revised NPPF

In March 2018 the Government published its draft revised NPPF for consultation. This reaffirmed the Government’s commitment to ensuring that Local Plan’s seek to provide healthy and safe communities. In particular, Paragraph 92 of the draft Framework indicates that planning policies and decisions should aim to achieve healthy, inclusive and safe places which [amongst other things] enable and support healthy lifestyles, especially where this would address identified health and wellbeing needs for example through.....access to healthier food.

5.3 Sunderland local plan policies

The existing adopted development plan for the city comprises of the Unitary Development Plan (UDP) and UDP Alteration No.2, however the Council is in the process of preparing a new Local Plan which, when adopted, will replace the existing UDP documents.

The emerging Sunderland Local Plan is being prepared in three parts:

Part one – Core Strategy and Development Plan, which will set out an overarching strategy for future change and growth in the city and include detailed development management policies.

Work on the Core Strategy and Development Plan is well advanced, with a draft of the plan published for consultation in August 2017. It is anticipated that a Publication version of the plan will be published for a further round of consultation in summer 2018, with Submission to the Secretary of State expected in the autumn.

Part two - Allocations and Designations Plan, which will set out site-specific policies for the development, protection and conservation of land in the city in order to deliver the overall strategy set out within the Core Strategy and Development Plan.

Part three – International Advanced Manufacturing Park (IAMP) Area Action Plan (AAP) 2017-2032, which sets out site specific policies for the delivery of a large advanced manufacturing park on land to the north of the Nissan car manufacturing plant. Sunderland City Council worked jointly on the preparation of the AAP, as the cross-boundary site is located within the administrative boundaries of both authorities. The AAP was adopted by both authorities in November 2017.

5.4 Sunderland Local Plan policies

There are two specific Local Plan policies proposed within the draft Core Strategy and Development Plan which cover hot food takeaways. Policy HWS1 indicates that the Council will seek to improve health and wellbeing within the city by managing the location/number of, and access to, unhealthy eating outlets. Policy EP12 seeks to restrict the number and concentration of hot food takeaways within designated centres in order to protect their vitality and viability.

Following the recommendations of the Health Impact Assessment for the Plan, representations received during the consultation on the draft Core Strategy and Development Plan, and discussions with Public Health partners, it has been deemed appropriate to include further guidance within the Plan on how the Council will seek to restrict access to hot food takeaways in order to promote positive health outcomes. Policy VC4 of the Publication draft Core Strategy and Development Plan provides this updated policy approach.

6. Sunderland health profile

The health of people in Sunderland is varied compared with the England average. Sunderland is one of the 20% most deprived local authorities in England and about 26% (12,600) of children live in low income families. ⁱ

Life expectancy for both men and women is lower than the England average. Life expectancy is 10.1 years lower for men and 8.2 years lower for women in the most deprived areas of Sunderland than in the least deprived areas. ⁱ

Sunderland is a city with high levels of deprivation. It is ranked 38th out of 326 local authority districts according to the 2015 Indices of Multiple Deprivation rank. It is among the 20% most deprived local authorities in England. Across all ages of children and young people in Sunderland, a range of indicators show that health outcomes are poorer than national comparators. For example, in 2014 the proportion of children and young people in Sunderland under 16 years living in poverty was 26% (12,615 children and young people). Nationally this figure is 20.1%.ⁱ

Being overweight or obese can lead to increasingly adverse effects on health and wellbeing. Potential problems include respiratory difficulties, chronic musculoskeletal problems, depression, relationship problems and infertility. The more life-threatening problems fall into four main areas: cardiovascular disease problems; conditions associated with insulin resistance such as type 2 diabetes; certain types of cancers, especially the hormonally-related and large bowel cancers; and gallbladder disease. ^x

Both being obese and being overweight increase the risk of a range of diseases that can have a significant health impact on individuals, although the risks rise with BMI* and so are greater for the obese:

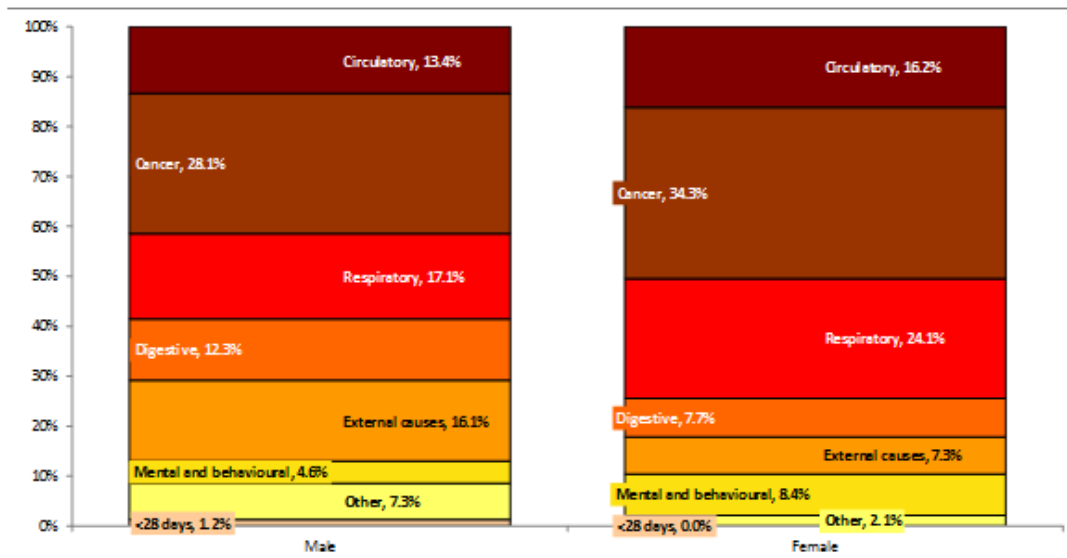
- 10 per cent of all cancer deaths among non-smokers are related to obesity^{xi}

- the risk of Coronary Artery Disease increased 3.6 times for each unit increase in BMI^{xi}
- 85 per cent of hypertension is associated with a BMI greater than 25. The risk of developing type 2 diabetes is about 20 times greater for people who are very obese (BMI over 35), compared to individuals with a BMI of between 18 and 25^{xii}

6.1 Cardiovascular disease and health inequality

Public Health England assesses the likely causes which contribute to health inequalities (avoidable differences in health) between local authority areas and England and within local authority area between more and less deprived areas.

Graph One - Scarf chart showing breakdown of life expectancy gap between Sunderland and England by cause of death for males and females

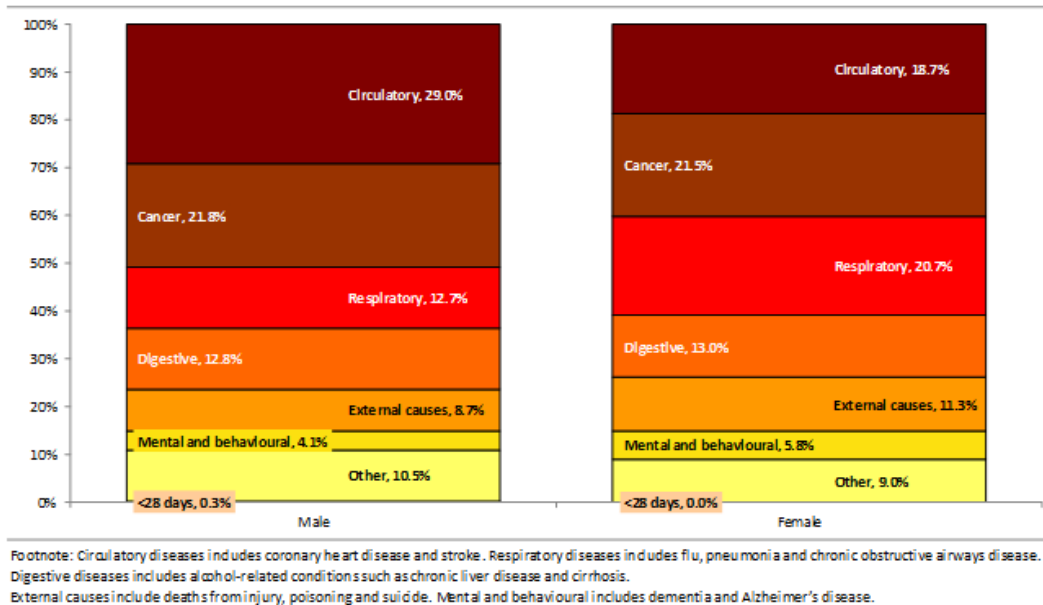


Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, poisoning and suicide. Mental and behavioural includes dementia and Alzheimer's disease.

Source: The segment Tool; Segmenting Life Expectancy Gaps By Cause of death; July 2016

Graph one is a scarf chart, for broad cause of death and the percentage contribution that it makes to overall life expectancy gap between Sunderland and England as a whole. It shows that 28.1% of male and 34.3% of female mortality is attributed to CVD. When you break down the life expectancy gap by the most deprived quintile group and the least deprived (Graph two), mortality attributed to CVD rises to 29% for males and females 18.7%, thus showing a rise in CVD mortality due to deprivation. Graph two shows that CVD is the single biggest contributor to inequalities in life expectancy within the city in males.

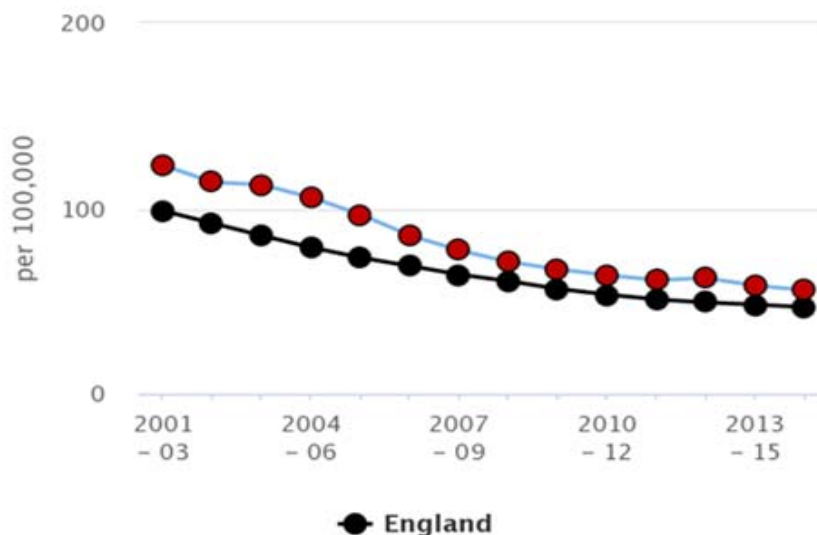
Graph two - Scarf chart showing breakdown of life expectancy gap between Sunderland most deprived quintiles and Sunderland least deprived quintiles by cause of death for males and females



Source: The segment Tool; Segmenting Life Expectancy Gaps By Cause of death; July 2016
Cardiovascular disease mortality in those aged under 75 years is an important health indicator, used in the Public Health Outcomes Framework for England.

Coronary heart disease is a major cause of death for men and women across England. In Sunderland the under 75 mortality rate from cardiovascular disease considered preventable is statistically significant worse than the England average; however this rate is falling in line with the England trend (graph three).

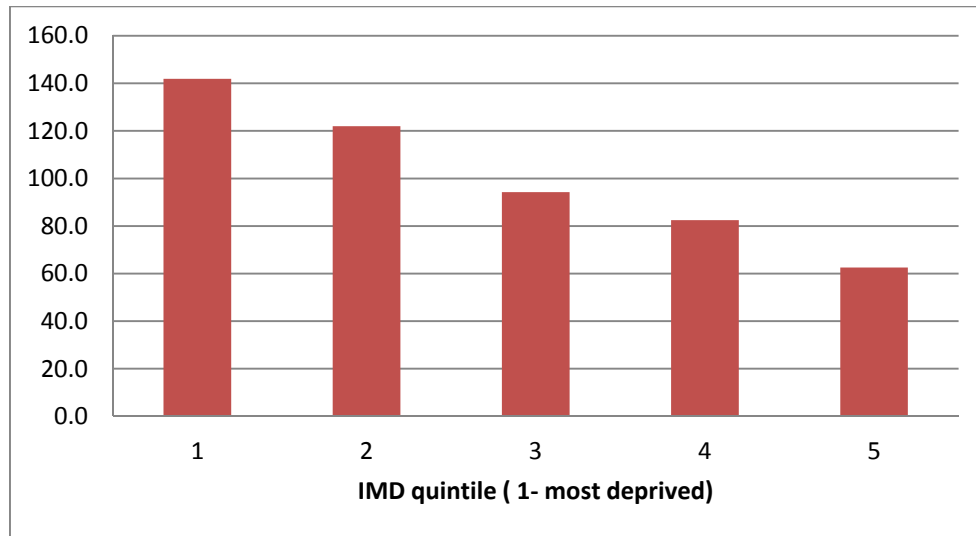
Graph three – Under 75 Mortality Rate from Cardiovascular Disease Considered Preventable - Sunderland



Source: Public Health Outcome Framework from Public Health England (based on ONS source data)

At IMD quintile level there is a strong correlation between cardiovascular mortality in the under 75 years and those who live in the most deprived quintiles in Sunderland (graph four).

Graph four - CVD Mortality (DASR) per 100,000 in Sunderland by IMD quintile, persons under 75 (2004-2008)



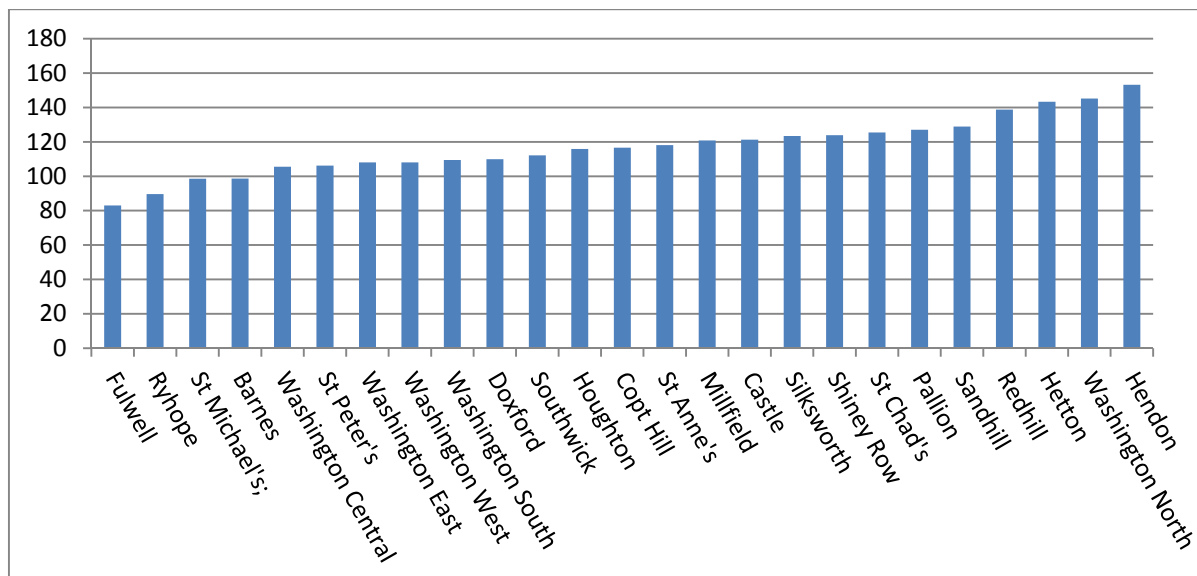
Source: Public Health England (based on ONS source data)

Diet and disease morbidity - The population who have a disease (morbidity) is measured by using data from GP practices disease registers and from hospital data or admissions related episodes of illness.

Prevalence of CVD in Sunderland practices varies from 4.98% in quintile 1 (most deprived) to 5.14 in quintile 4 (least deprived) however there is only one practice in quintile 1 (Fulwell) and no practices based within quintile 5.

Emergency hospital admissions for CVD by ward vary from the highest in Hendon to the lowest in Fulwell (graph five).

Graph five - Emergency Hospital Admissions for CVD by ward in Sunderland



Source: QOF Emergency Hospital Admissions for CVD – NHS Sunderland CCG

6.2 Diabetes and health inequalities

Diabetes prevalence (those people recorded as living with diabetes) in Sunderland is higher than the England average (7.0%), the same as the regional average and marginally higher than the England average (6.7%). The trend is rising year on year in line with the England trend.^{xiii}

Diabetes prevalence (those people living with diabetes) is higher in the most deprived groups of GP practices in Sunderland compared to the least deprived quintile.^{xiii}

6.3 Cancer and health inequalities

Graph one breaks down the life expectancy of gap between Sunderland and England as a whole. It shows that 13.4% of male and 16.2% of female mortality is attributed to cancer. When you break down the life expectancy gap by quintile group (Graph two), mortality attributed to cancer rises to 21.5% for males and females 21.5%, thus showing a rise in cancer mortality due to deprivation. Graph two shows that cancer is the single biggest contributor to inequalities in life expectancy within the city in females.

Cancer and premature Mortality in those aged under 75 years is an important health indicator, used in the Public Health Outcomes Framework for England.

Cancer is a major cause of death for men and women across England. Sunderland is in the worst 20% Local Authorities in England for deaths that are considered preventable from all cancers in people aged under 75, however this rate is falling in line with the England trend but the gap between England and Sunderland remains significantly worse.

6.4 Obesity

There are a number of reports that have highlighted the role of hot food takeaways in contributing to the obesity problem, this includes the 'Obesity and Environment: regulating the growth of Fast Food Outlets '(LGA & CIEH, 2014)^{xiv}. The National Institute for Health and Clinical Excellence (NICE)^{xv} in their guidance "Prevention of Cardiovascular Disease" (2010) recommend using planning to restrict access to unhealthy foods and hot food takeaways in specific areas (for example within walking distance of schools).

Although it is difficult to demonstrate a direct relationship between hot food takeaways and obesity rates there is more evidence for links between obesity and hot food takeaways than no link. Whilst it may be difficult to demonstrate a direct relationship, particularly the relationship between the proximity of takeaways to schools and childhood obesity, the density of hot food takeaways, particularly in a deprived area, is a factor which influences eating habits and so in turn levels of obesity.^{xvi} This is supported by studies undertaken in Leeds and Cambridge which have demonstrated a link between the density of hot food takeaways per area to obesity. The studies show this is the case for adults and particularly significant for children.^{xvii}

There is also evidence that the type of food on sale nearest to schools influences the diet of school children, and that the availability of "unhealthy" foodstuffs makes healthier choices more difficult to make.^{xviii}

Nearly two-thirds of adults (63%) in England were classed as being overweight (a body mass index of over 25) or obese (a BMI of over 30) in 2015.^{xix}

In England, the proportion who were categorised as obese increased from 13.2% of men in 1993 to 26.9% in 2015 and from 16.4% of women in 1993 to 26.8% in 2015. The rate of increase has slowed down since 2001, although the trend is still upwards. ii

The prevalence of obesity is similar among men and women, but men are more likely to be overweight. ⁱⁱ

It is estimated that obesity is responsible for more than 30,000 deaths each year. On average, obesity deprives an individual of an extra 9 years of life, preventing many individuals from reaching retirement age. In the future, obesity could overtake tobacco smoking as the biggest cause of preventable death. ⁱⁱ

Obesity increases the risk of developing a whole host of diseases. Obese people are:

- at increased risk of certain cancers, including being three times more likely to develop colon cancer ⁱⁱ
- more than 2.5 times more likely to develop high blood pressure - a risk factor for heart disease ⁱⁱ
- five times more likely to develop type 2 diabetes ⁱⁱ

6.4.1 Adult obesity in Sunderland

In Sunderland, 64.8%% of adults were classed as overweight/ obese; this is significantly worse than England prevalence at 61.3%. ^{xix}

Results from the Sunderland adult lifestyle survey in 2017 showed that 58.4%% of the population self-reported as overweight/ obese. ^{xx}

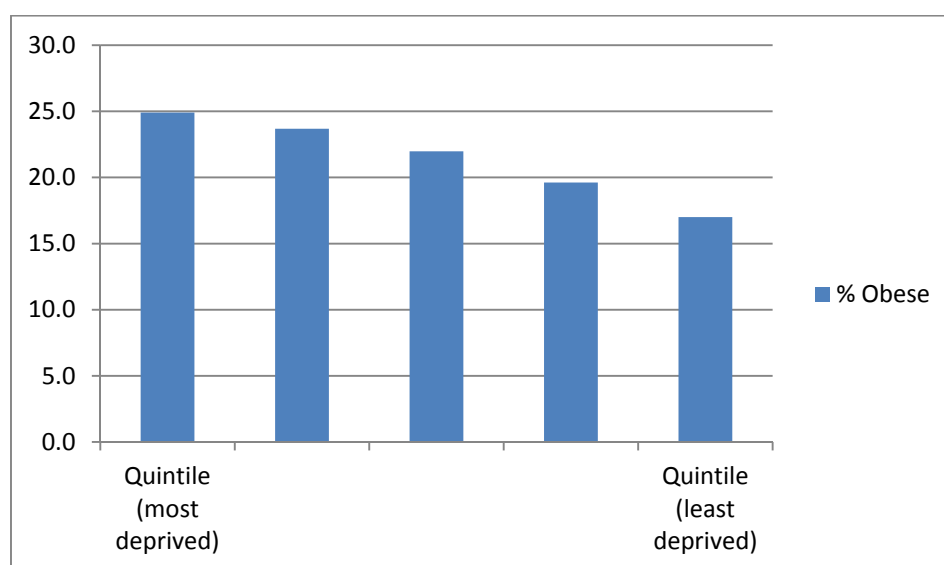
The wards with the highest overweight/ obese percentages were Castle (66%), Houghton (63.3%), Redhill (63.7%) and Ryhope (62.2%). ^{xx}

Graph six shows the percentage obese in the most deprived quintile was 24.9%, compared with 17.0% in the least deprived quintile. ^{xx}

Sunderland's adult population is similar to England in the proportion of the population meeting the 5 a day for fruit and vegetables, with the average number of fruit consumed per day at 2.6 and average portions of vegetables at 2.7, however the percentage meeting the recommended "five-a-day" at age 15 is significantly worse at 44.4% compared to 54.4% for England. ^{xix}

Results from the Sunderland Adult Lifestyle Survey 2017 showed that respondents from the least deprived quintile were more likely to report eating five portions of fruit and vegetables a day (56.8%), and those in the most deprived quintile (42.4%). Doxford ward reported the highest percentage of people eating at least five portions of fruit or vegetables a day (58.2%) and Millfield the least (36.8%). ^{xx}

Graph six - Percentage Obese Adults by IMD quintile



Source: Sunderland Lifestyle Survey 2017

6.4.2 Childhood obesity

The risk of obesity in adulthood and the risk of future obesity-related ill health are greater as children get older. The National Child Measurement Programme (NCMP) measures the height and weight of around one million school children in England every year, providing a detailed picture of the prevalence of child obesity. There is a strong relationship between deprivation and childhood obesity.ⁱⁱ Analysis of data from the National Child Measurement Programme (NCMP) shows that obesity prevalence among children in both Reception and Year 6 increases with increased socioeconomic deprivation (measured, for example, by the 2010 Index of Multiple Deprivation (IMD) score).ⁱⁱ

The latest figures for England in 2016/17 show that 20% of children in Year 6 (aged 10 to 11) were obese and a further 14.3% were overweight.^{xxi} Of children in Reception (aged 4 to 5), 9.6% were obese and further 13% were overweight.^{xxi} This means a third of 10 to 11 year olds and over a fifth of 4-5 year olds were overweight or obese.

However some sectors of the population are more at risk of developing obesity or its complications and should be considered as priorities. They are:

- **Children from low-income families** - Sunderland's Child Poverty Needs Assessment identifies that there is many children in Sunderland from low income families. There is a correlation between low income and a greater risk of obesity in childhood as well as adulthood.ⁱⁱ
- **Children from families where at least one parent is obese** – Sunderland has significantly worse adult obesity prevalence than England prevalence. The increased risk may be due to genetic and/or environmental reasons.ⁱⁱ
- **Deprivation and childhood obesity** - analysis of data from the NCMP shows that obesity prevalence among children in both Reception and Year 6 increases with increased socioeconomic deprivation (measured, for example, by the 2010 Index of Multiple Deprivation (IMD) score). Obesity prevalence of the most deprived 10% of the population is approximately twice that of the least deprived

10%.ⁱⁱ Several studies show that the greater concentration of fast food outlets and takeaways in deprived areas encourages increased consumption among children living there.ⁱⁱⁱ

The latest data from the National Childhood Measurement Programme (NCMP) in Sunderland for the school year 2016/ 17 shows that:

- 10% of Reception class children were recorded as obese ^{xxi}
- 13.1% of Reception class children were recorded as overweight ^{xxi}
- 24.1% of Year 6 children were recorded as obese ^{xxi}
- 14.6% of Year 6 children were recorded as overweight ^{xxi}

Table one shows the 10 wards out of 25 with the highest obesity prevalence in Reception children in Sunderland, however we have ten wards which are above the North East average but nineteen wards above the England average of 9.6% (map one).

Table two shows the 10 wards out of 25 with the highest obesity prevalence in year six children Sunderland, however we have 13 wards which are above the North East average but 22 wards above the England average of 20% (map two).

Table one: Top 10 worse wards in Sunderland for prevalence of obesity among children in Reception (age 4 to 5 years) 2013/14 to 2015/16

Ward	%	Ward	%
England	9.6	Ryhope	12.3
North East	10.7	Castle	12.1
Hendon	14.3	St Anne's	12.0
Sandhill	14.0	Pallion	11.8
Southwick	14.0	Barnes	11.6
Redhill	12.5	Washington Central	11.6

Source: <https://fingertips.phe.org.uk/profile/national-child-measurement-programme> - Accessed 27th March 2018

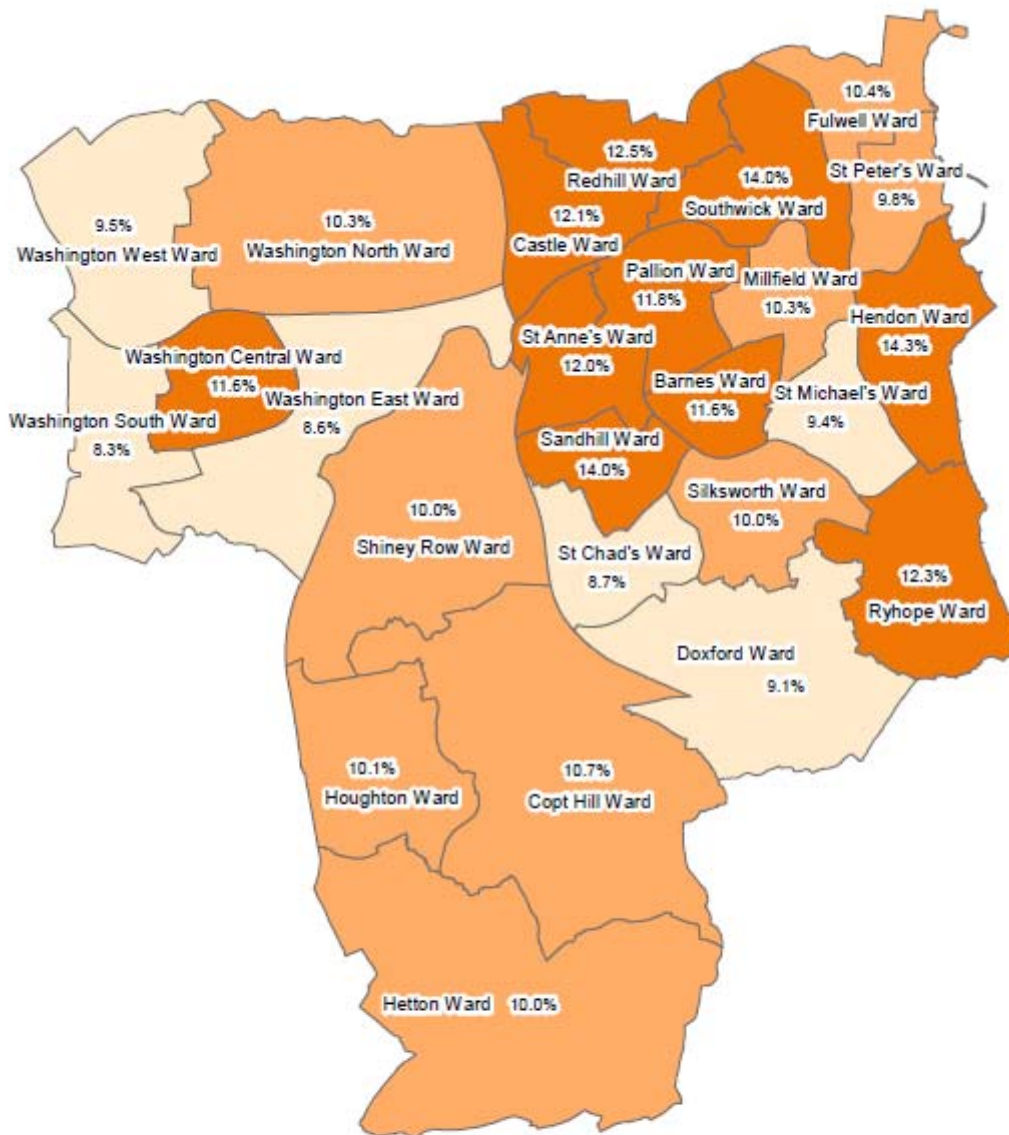
Table two: Top 10 worse wards in Sunderland for prevalence of obesity among children in Year 6 (age 10 to 11 years) 2013/14 to 2015/16

Ward	%	Ward	%
England	20	Castle	26.3
North East	22.5	St Anne's	25.8
Pallion	28.9	Hetton	25.0
Redhill	28.5	Washington East	24.6
Sandhill	28.1	Hendon	23.9
Millfield	26.5	Doxford	23.8

Source: <https://fingertips.phe.org.uk/profile/national-child-measurement-programme> - Accessed 27th March 2018

The prevalence of obesity in reception is not statistically significantly different to England. The prevalence of obesity in year 6 is statistically significantly worse to England.

**Map one – Prevalence of obesity in Reception (4 and 5 years) 2013/ 15 – 2015/ 16.
Comparison against England average**



% Obese in Reception

Wards

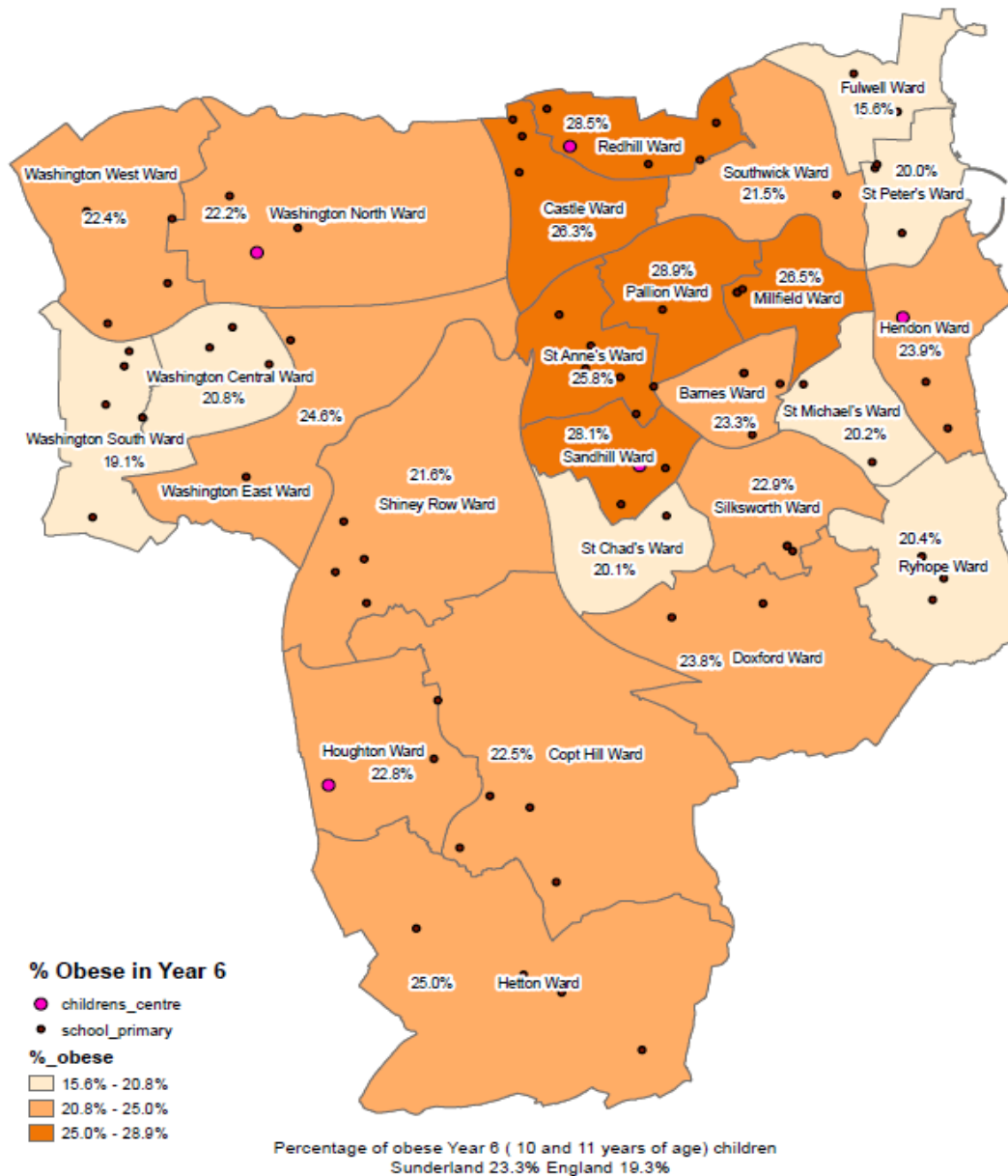
% Reception Obese

- 8.30 - 9.50
- 9.51 - 10.70
- 10.71 - 14.30

Source: PHE NCMP Prevalence of overweight and obesity by area of child residence (modelled) Electoral Ward (2015)

Source: PHE NCMP Prevalence of overweight and obesity by area of child residence (modelled) Electoral Ward (2015)

Map two – Prevalence of obesity in year 6 (10 and 11 years) 2013/ 15 – 2015/ 16. Comparison against England average

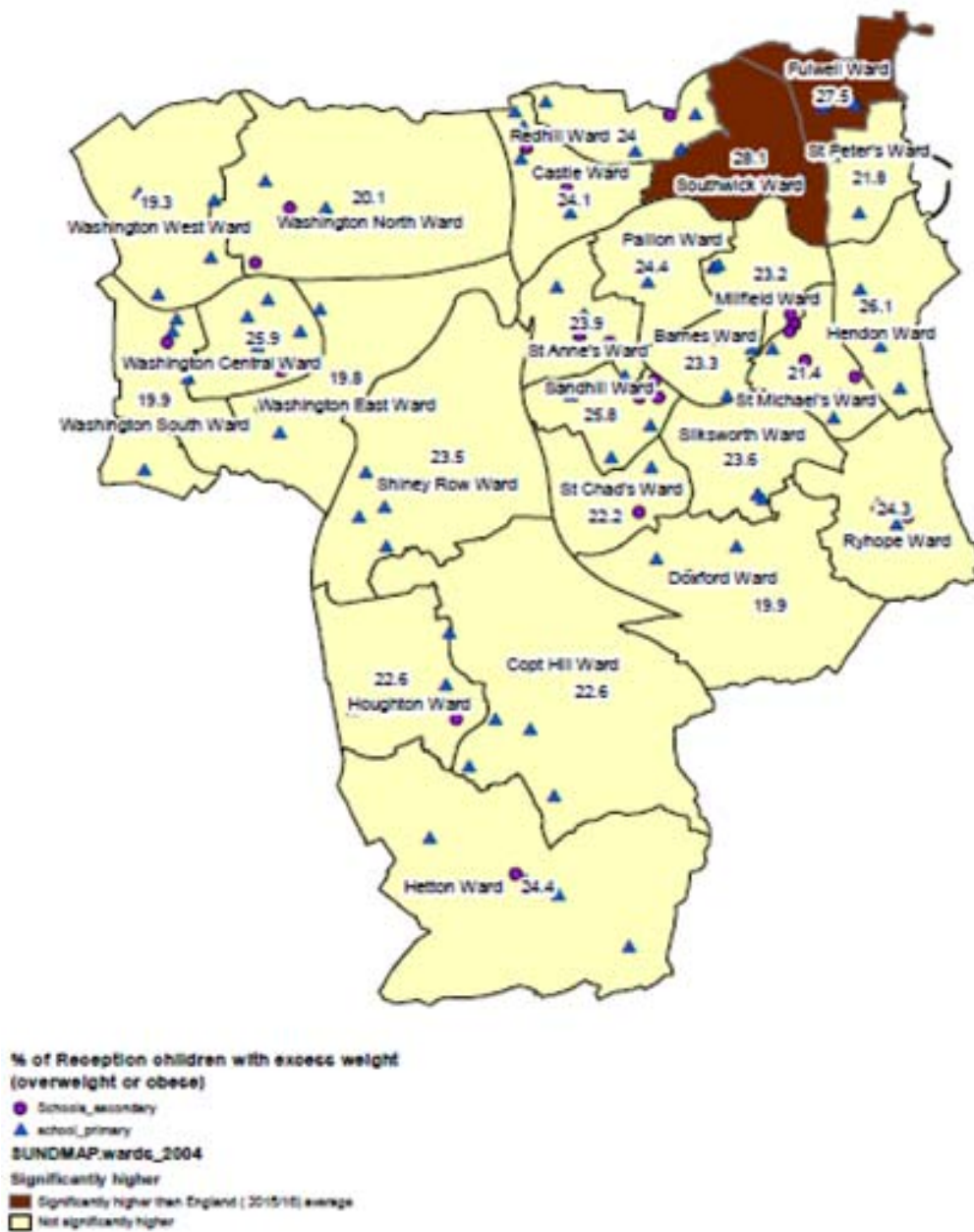


Source: PHE NCMP Prevalence of overweight and obesity by area of child residence (modelled) Electoral Ward (2015)

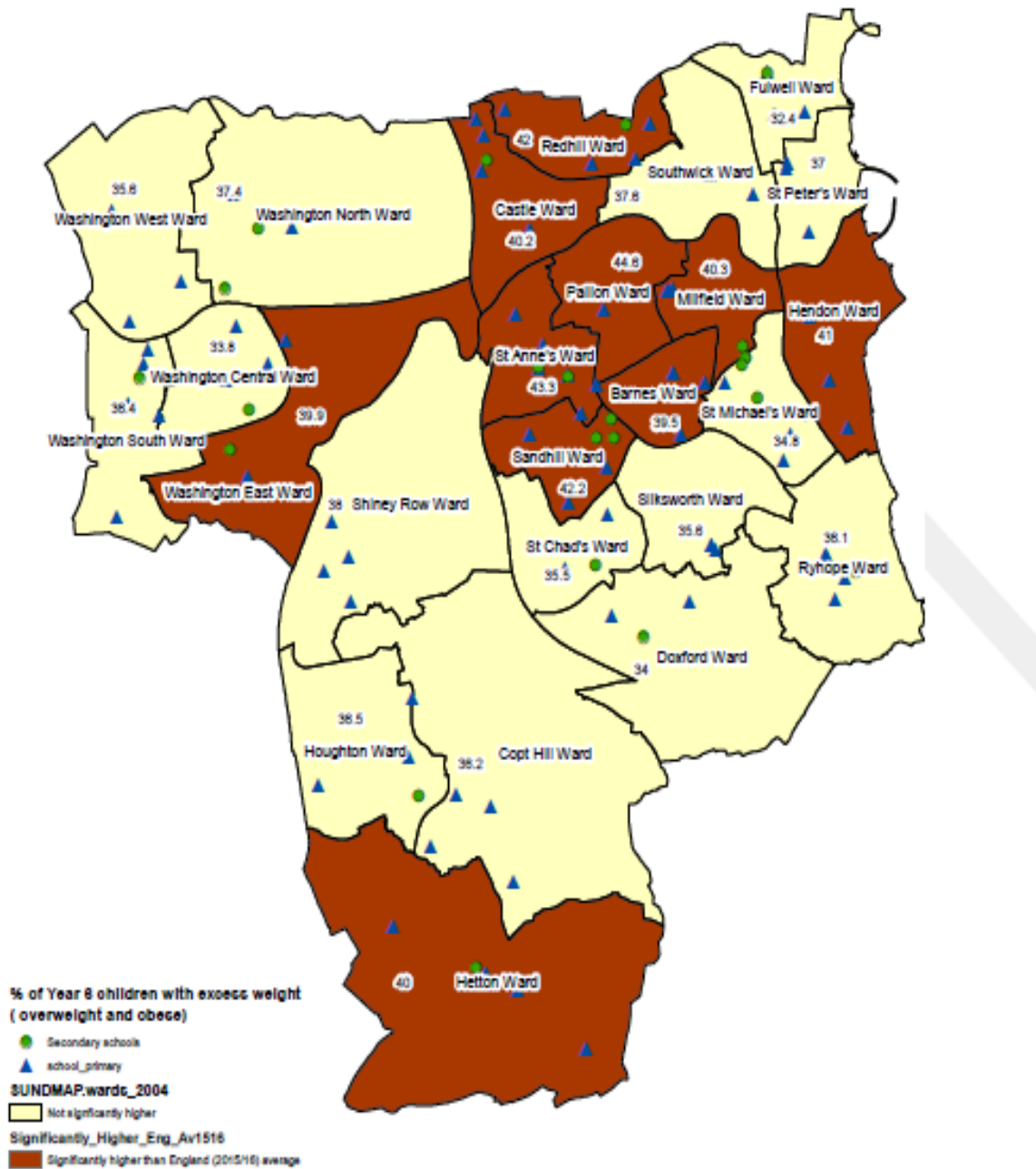
Excess weight (Overweight and obese) – Among Reception class children, Fulwell and Southwick wards are of particular concern as they both have a measured excess weight prevalence (overweight and obese) of over 27%, which is significantly higher than the Sunderland average as shown on map three.

Among Year 6 children, Redhill, Castle, Washington East, St Annes, Pallion, Millfield, Sandhill, Barnes, Hetton and Hendon wards are of particular concern as they have a measured excess weight prevalence (overweight and obese) prevalence of over 39% which is significantly higher than the Sunderland average as shown on map four.

Map three – Prevalence of excess weight (overweight and obese) in Reception (4 and 5 years) 2013/ 15 – 2015/ 16. Comparison against England average



Map four – Prevalence of excess weight (overweight and obese) in Year 6 (10 and 11 years) 2013/ 15 – 2015/ 16. Comparison against England average

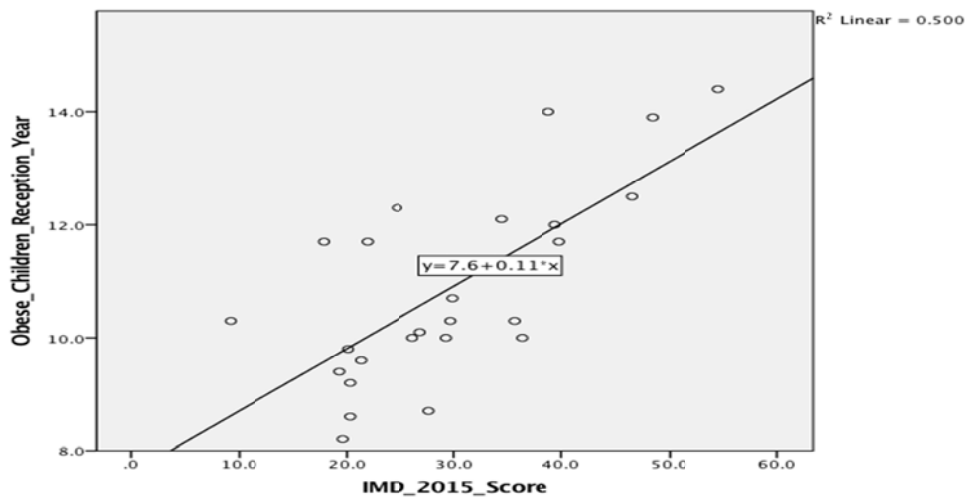


Source: PHE NCMP Prevalence of overweight and obesity by area of child residence (modelled) Electoral Ward (2015)

Appendix one shows the relationship between excess weight and obesity in children against deprivation (IMD score). Graph seven shows strongest correlation ($r=0.500$) which was between obese children in Reception and IMD score.

The prevalence of excess weight (overweight and obese) in reception is not statistically significantly different to England. The prevalence of excess weight (overweight and obese) in year 6 is statistically significantly worse to England.

Graph seven - Child Obesity and IMD Score Source: National Childhood Measurement Programme



7. Hot food takeaways by nutrition, ward, prevalence and location.

Nutritional data on hot food takeaways

The increasing consumption of out-of-home meals has been identified as an important factors contributing to rising levels of obesity.

NICE guidance outlines that the nutritional content of food from hot food takeaways are poor because it contains high levels of trans fat, saturated fat, and salt. ^v

The Gateshead Independent Takeaway Study Analysis of Nutrient Data, 2013^{xxii} (appendix two) has been recognised via the National Obesity Observatory (NOO). Gateshead Council's Health and Public Protection service undertook a detailed nutritional study across the borough to address levels of overweight and obesity. The study sampled foods from all 187 independent takeaways in Gateshead and reported on the nutrient content of these samples. It was found that a large proportion of takeaway food contained more calories; fat and saturated fat in one portion that 66% of the recommended daily intake for a female, and in many cases nearly 100% of the recommended daily intake as demonstrated in the table below. The findings of the research were presented to the Department of Health in 2013 who recommended that Public Health England take up an advocacy for change.

The work has supported the introduction of a robust evidenced based Development Planning Document (DPD) to support the council's Local Development Strategy that prohibits the proliferation of hot food takeaways in specific areas. Findings from this research are to be detailed in appendix three.

The national and local pictures in terms of nutritional data for this food are in accord and further specific research within Sunderland is not required.

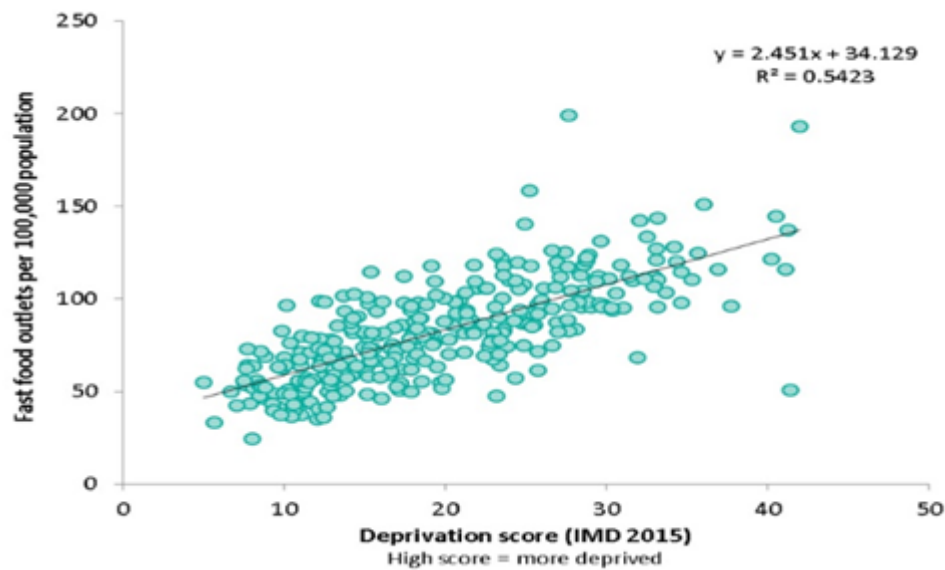
	Calories		Fat		Saturated Fat	
	Over 66% female RDA	Over 100% female RDA	Over 66% female RDA	Over 100% female RDA	Over 66% female RDA	Over 100% female RDA
Chicken chow mein	2.0%	0.0%	6.1%	0.0%	2.0%	0.0%
Sweet and sour chicken	84.6%	19.2%	82.7%	34.6%	9.6%	5.8%
Chicken madras with naan	22.0%	0.0%	53.7%	4.9%	4.9%	0.0%
Chicken tikka masala with rice	65.9%	0.0%	65.9%	9.8%	61.0%	36.6%
Fish and chips	82.0%	8.0%	96.0%	80.0%	98.0%	96.0%
Pie and chips	74.0%	0.0%	96.0%	36.0%	92.0%	92.0%
12" Margherita pizza	91.1%	13.3%	91.1%	68.9%	100.0%	100.0%
12" Pepperoni pizza	97.7%	29.5%	100.0%	88.6%	100.0%	100.0%

Source: The Gateshead Independent Takeaway Study Analysis of Nutrient Data, 2013

The national and local pictures in terms of nutritional data for this food are in accord and further specific research within Sunderland is not required.

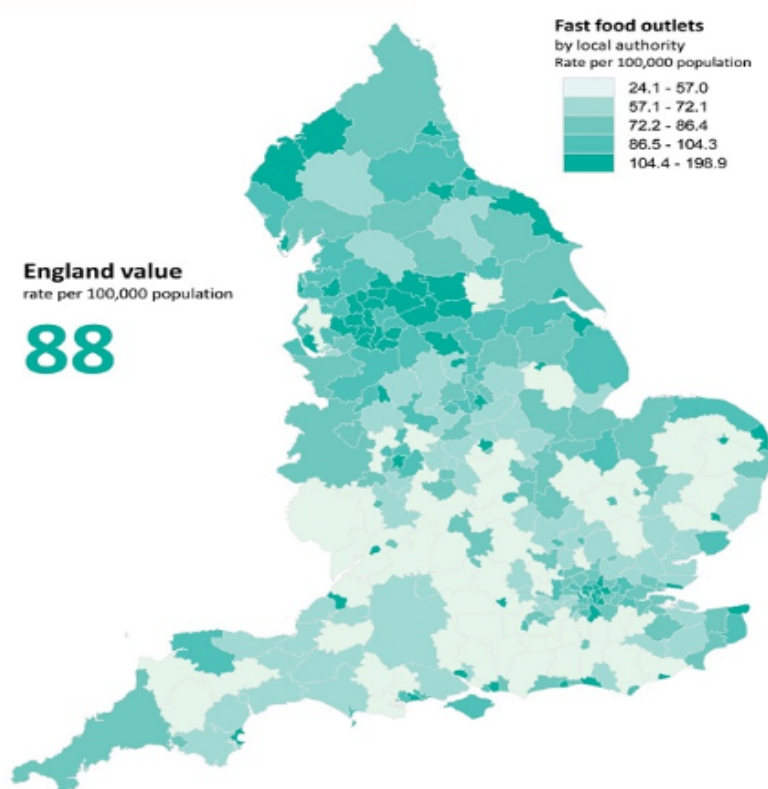
Public Health England estimated in 2014 that there were over 50,000 fastfood and takeaway outlets, fastfood delivery services, and fish and chip shops in England. More than one quarter (27.1%) of adults and one fifth of children eat food from out-of-home food outlets at least once a week. These meals tend to be associated with higher energy intake; higher levels of fat, saturated fats, sugar, and salt, and lower levels of micronutrients. ⁱⁱ

Graph eight – Relationship between density of fastfood outlets and deprivation by local authority



Source: National Obesity Observatory; National Obesity Observatory, Mapping of Hot food outlets. https://www.noo.org.uk/securefiles/161026_1042/FastFoodmap_FINAL.pdf

The National Obesity Observatory has calculated the prevalence of hot food takeaways nationally and the relationship between density of fast food outlets and deprivation (graph eight). The mean number of hot food takeaways in 2014 for England was 88/100,000 population. On average, there are more fast food outlets in deprived areas than in more affluent areas.



Source: National Obesity Observatory; National Obesity Observatory, Mapping of Hot food outlets. https://www.noo.org.uk/securefiles/161026_1042/FastFoodmap_FINAL.pdf

An analysis of the concentration of the hot food takeaways in the city by ward, including the rate per 100,000 populations has been undertaken to facilitate a comparison with the national rate of 88/100,000 as shown in the table three.

There are 17 wards out of 25 where the concentration of hot food takeaways exceeds the national average rate of 88 per 100,000 populations.

Table three: IMD score, obesity percentage in reception and year 6 and proportion of takeaways by ward 2017 (Please note that the data only includes 335 of 340 Hot Food Takeaways in the city)

Ward	IMD Score 2015	Obesity % in reception 13-14 to 15-16	Obesity % in Year 6 13-14 to 15-16	Fast Food Premises / Ward	Populat-ion (2016 Midyear pop. est.)	Rate per Ward per 100,000 pop. ©* 100,000
Barnes	17.9	11.6	23.3	15	10,825	138.6
Castle*	34.4	12.1	26.3	9	11,004	81.8
Copt Hill	29.9	10.7	22.5	11	11,449	96.1
Doxford	20.3	9.1	23.8	3	9,637	31.1
Fulwell	9.2	10.4	15.6	13	11,321	114.8
Hendon*	54.6	14.3	23.9	22	13,069	168.3
Hetton*	36.3	10.0	25.0	17	11,426	148.8
Houghton	26.9	10.1	22.8	17	11,490	148.0
Millfield	29.7	10.3	26.5	25	12,982	192.6

Pallion*	39.8	11.8	28.9	22	10,437	210.8
Redhill*	46.5	12.5	28.5	4	11,225	35.6
Ryhope	24.7	12.3	20.4	11	10,732	102.5
St Anne's*	39.4	12.0	25.8	9	11,059	81.4
St Chad's	27.7	8.7	20.1	4	9,366	42.7
St Michael's	19.3	9.4	20.2	18	10,703	168.2
St Peter's	20.1	9.8	20.0	19	10,698	177.6
Sandhill*	38.8	14.0	28.1	14	11,003	127.2
Shiney Row	26.2	10.0	21.6	14	12,981	107.8
Silksworth	29.3	10.0	22.9	14	10,625	131.8
Southwick*	48.4	14.0	21.5	22	10,909	201.7
Washington Central	21.9	11.6	20.8	9	10,869	82.8
Washington East	20.3	8.6	24.6	13	11,142	116.7
Washington North*	35.6	10.3	22.2	20	11,152	179.3
Washington South	19.6	8.3	19.1	2	10,141	19.7
Washington West	21.3	9.5	22.4	8	11,717	68.3

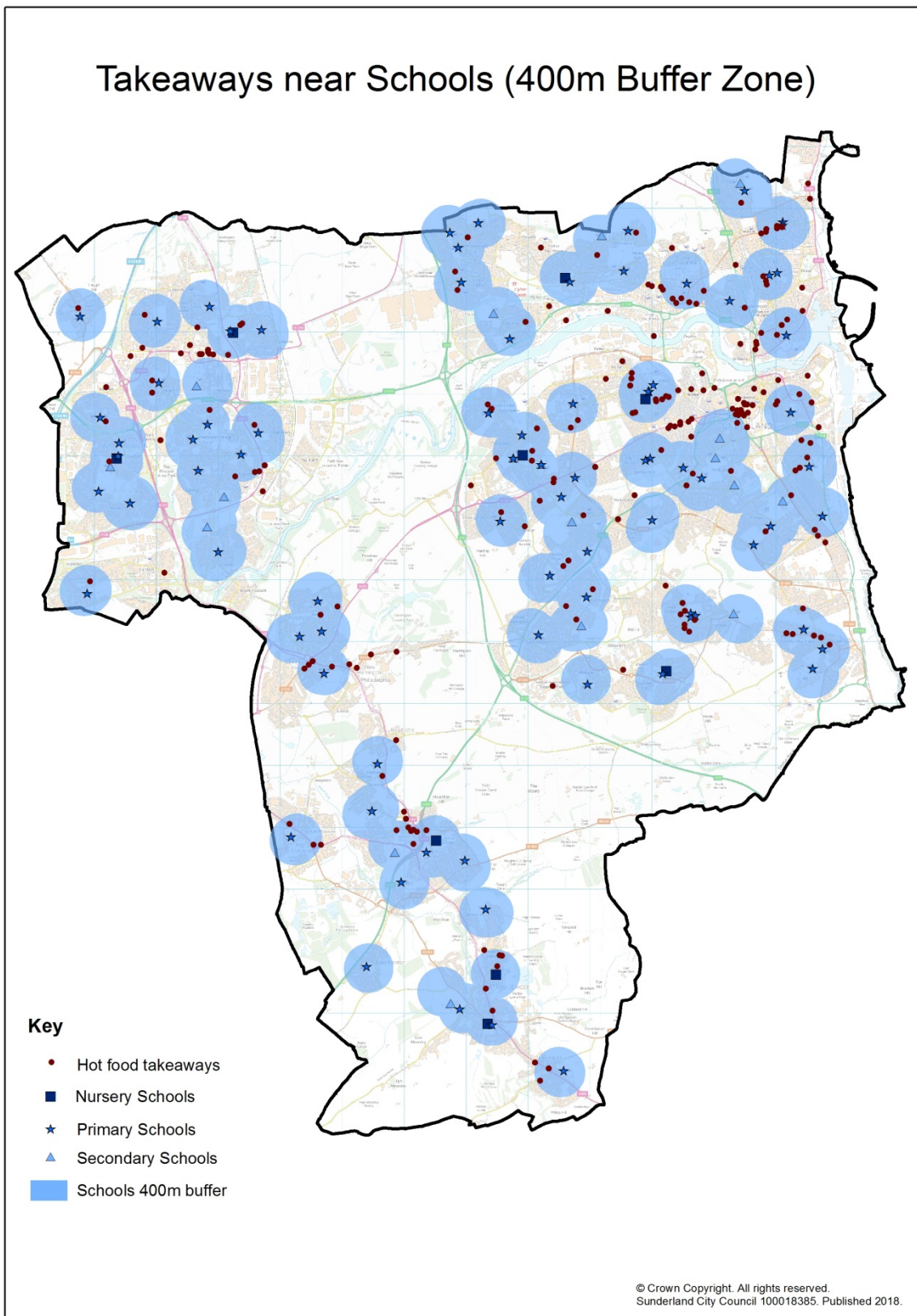
* Wards in the top 20% most deprived wards in England

Sunderland City Council has 18 state secondary schools and 83 state primary schools with an estimated 45,500 children and young people who attend.

Restricting the development of hot food takeaways within a reasonable walking distance of the school (i.e. 400m radius) will limit children's exposure to poor food choices.

Hot food takeaways near parks map in appendix four.

Map Three - Hot food takeaways in the city have been mapped in relation to schools.



8. Prevalence and location of hot food takeaways within Sunderland retail centres

An important contributing factor to poor diet and health in certain parts of the city is the distribution and access to unhealthy eating outlets. In certain locations there is an issue where such uses cluster together, reinforcing the ease of access to unhealthy foods.

The hot food takeaway policies have been implemented in order to help control the proliferation of and therefore access to, such uses. There are 320 hot food takeaways in total within Sunderland, 141 of which are located within designated retail centres based on the information in the Retail Needs Assessment October 2016 (table four).

The over-concentration and clustering of A5 uses, particularly those that are open during the evening and night, can lead to “dead “frontages during the day. This can undermine the retail function of any neighbourhood retail premises and impact on the vitality and viability of the area.

The council is committed to developing vibrant retail centres. A key aim is to attract new visitors. When one use dominates an area it may have a detrimental effect on the image of that area and the way it is perceived by potential visitors.

Table four: Proportion of takeaways by town Centre 2016

Name of Centre	Number of takeaway unites	Number of Fast food restaurants	Proportion of total units (%)
City Centre			
Sunderland City Centre	17	2	4.5
Town Centres			
Washington	0	2	1.5
Houghton-le-Spring	8	0	8.2
District Centres			
Concord	14	0	15.4
Sea Road	5	0	4.7
Hetton	2	0	4.5
Southwick	10	0	11.9
Chester Road	6	0	7.1
Doxford Park	3	0	20.0
Local Centres			
Hylton Road	15	0	12.2
Pallion	8	0	12.5
Grangetown	6	0	10.3
Ryhope	6	0	15.3
Hendon	5	0	13.5
Pennywell	2	0	11.7
Silksworth	5	0	13.5
Thorndale Road	3	0	27.3
Shiney Row	4	0	14.8
Easington Lane	6	0	20.5
Fencehouses	5	0	19.2
Monkwearmouth	9	0	11.0
Castletown	2	0	11.8

9. 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.^{xxiii}

In addition, a 400 metre buffer is considered to strike a reasonable balance between control, impact, and economic development considerations.

Authorities who have used planning policy to adopt a more restrictive approach to new hot food takeaways in close proximity to schools 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), Gateshead and North Tyneside (2015). All set a 400 metre radius around schools, within which new hot food takeaways will be resisted, except for Islington which set 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. 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.^{xxiv}

10. Summary

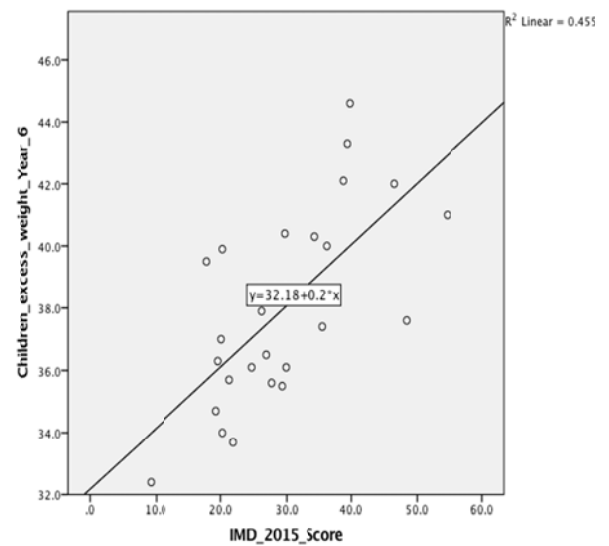
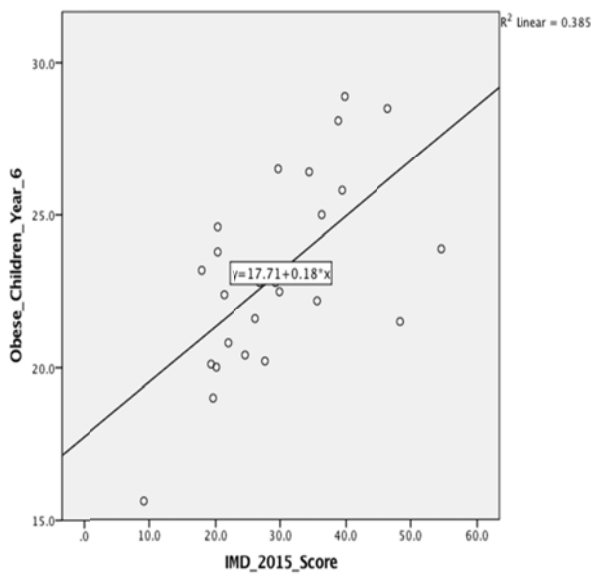
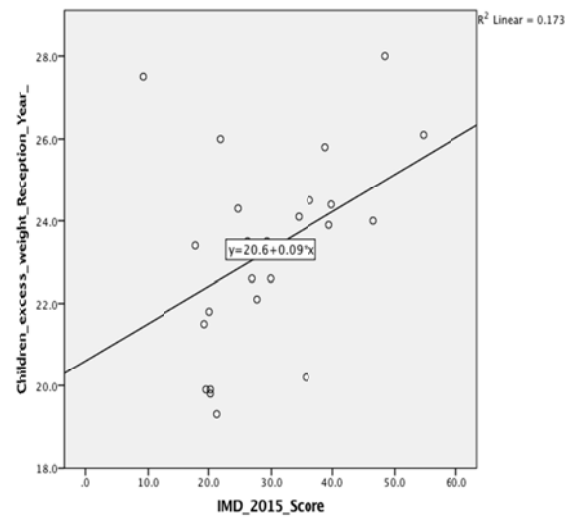
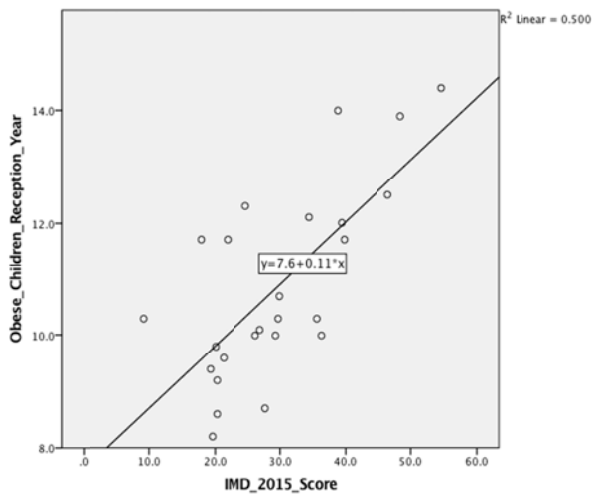
The gap in Sunderland's premature life expectancy is largely due to cardiovascular disease and cancer. Obesity increases the risk of a number of diseases including the two major killers – cardiovascular disease and cancer, associated with premature death.

Sunderland has significantly higher premature deaths in cardiovascular disease and cancer, and higher rates in diabetes. There is a strong correlation between cardiovascular mortality in the under 75 years and those who live in the most deprived quintiles in Sunderland.

Children who are obese are five times more likely to become obese adults.^{xxv} In Sunderland we have a significantly higher number of wards with obese children than England and a clear link between obesity and wards in the most deprived areas.

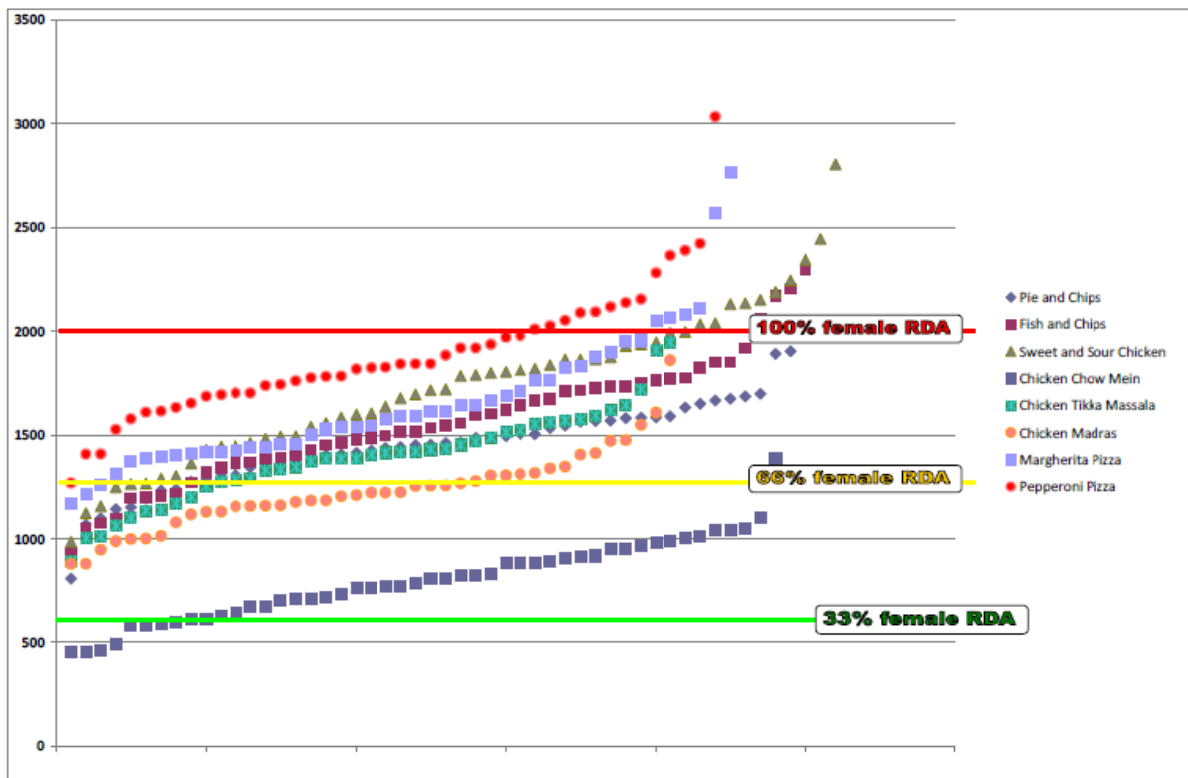
Through reducing access to fast food and takeaway outlets, as these meals tend to be meals tend to be associated with higher energy intake; higher levels of fat, saturated fats, sugar, and salt, and lower levels of micronutrients, we can protect our children and young people from obesity which increase the risk of a range of diseases that can have a significant impact on premature death.

Appendix one - Relationship between excess weight and obesity in children against deprivation (IMD score)



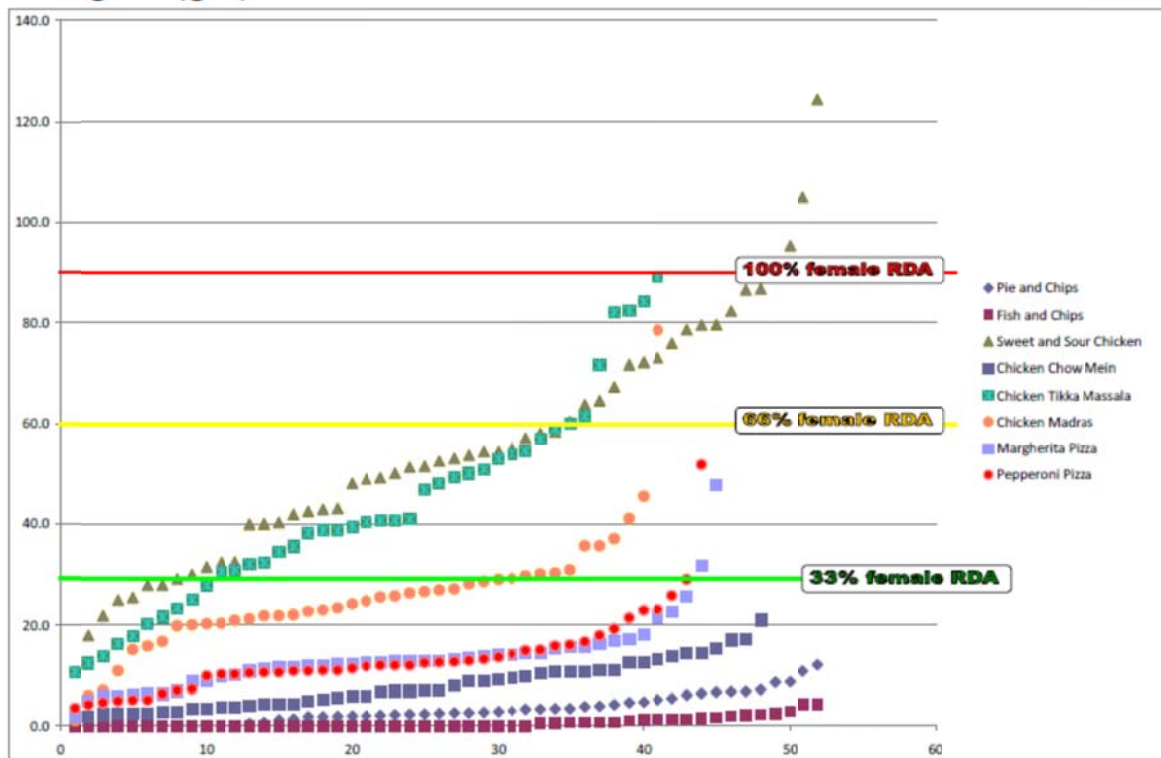
Appendix two - The Gateshead Independent Takeaway Study Analysis of Nutrient Data, 2013 (produced with permission from Gateshead Council)

Calories



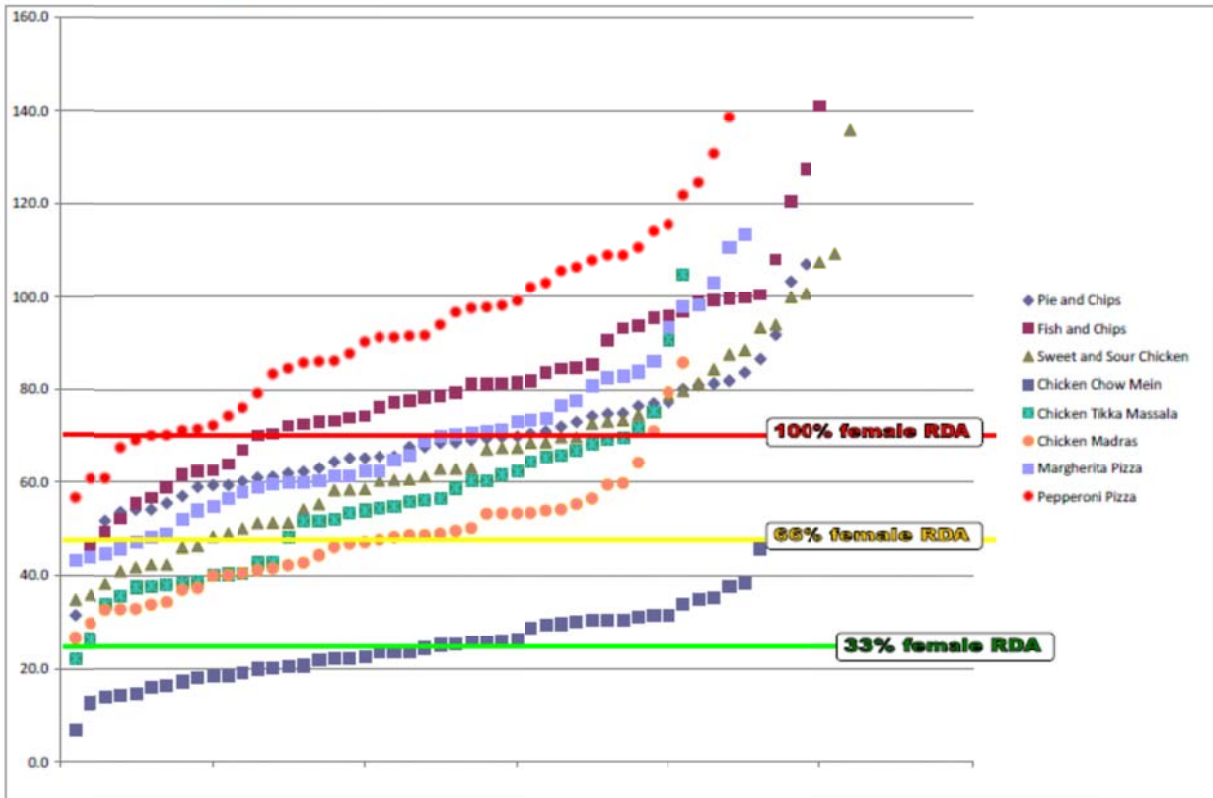
Source: The Gateshead Independent Takeaway Study Analysis of Nutrient Data, 2013

Sugars (gm)



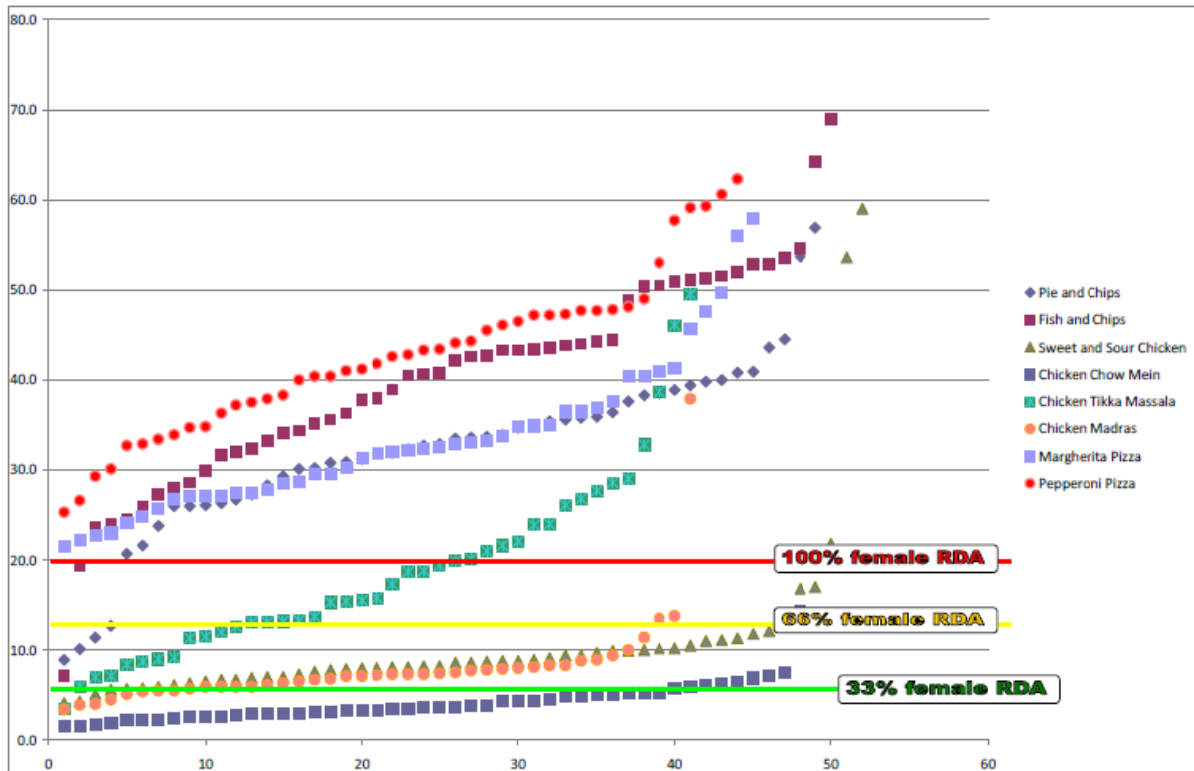
Source: The Gateshead Independent Takeaway Study Analysis of Nutrient Data, 2013

Total Fat (gm)



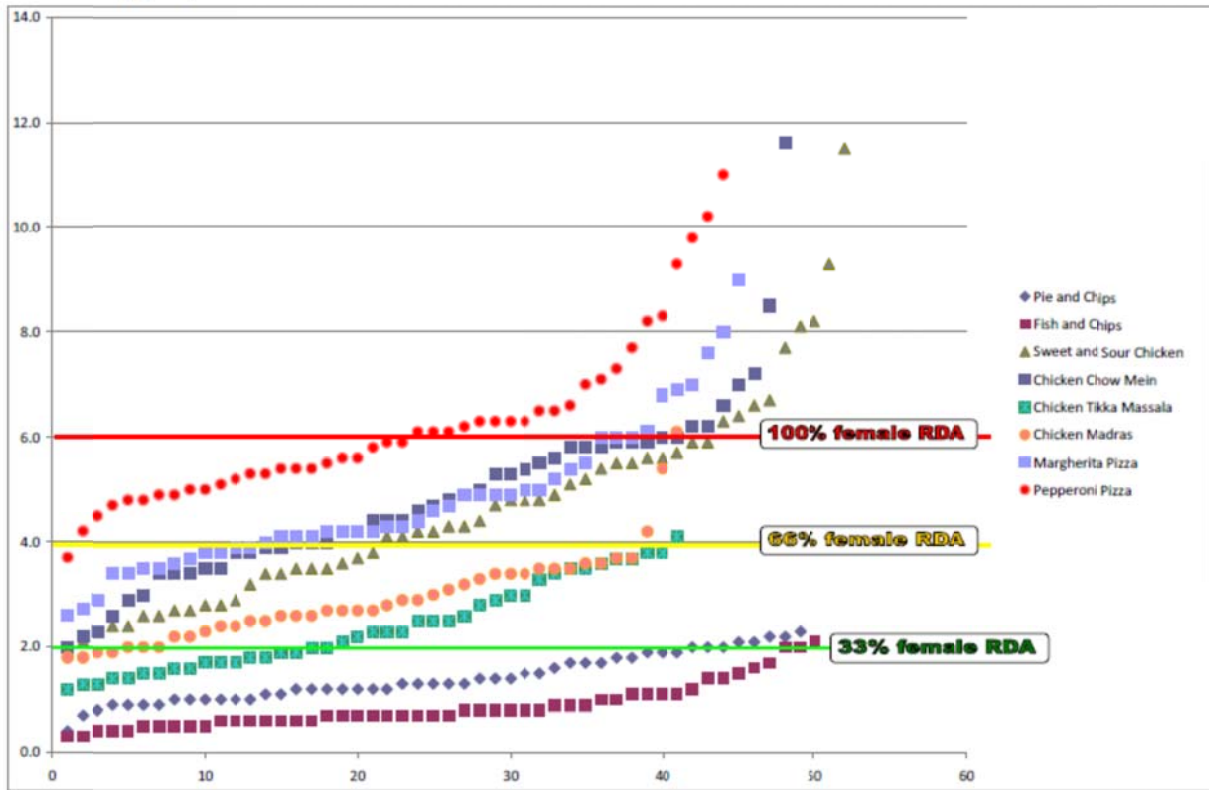
Source: The Gateshead Independent Takeaway Study Analysis of Nutrient Data, 2013

Saturated Fat (gm)



Source: The Gateshead Independent Takeaway Study Analysis of Nutrient Data, 2013

Salt (gm)



Source: The Gateshead Independent Takeaway Study Analysis of Nutrient Data, 2013

Appendix three - Evidenced based Development Planning Document (DPD) to support the Council's Local Development Strategy that prohibits the proliferation of hot food takeaways in specific areas

1. Oldham Council

To support the town centre policies in its Local Plan, Oldham has prepared a Vibrant Centres Supplementary Planning Document (SPD). One of the aims of its suite of policies is to reduce the number of hot food takeaways in the town centre because of concerns that there are too many already, and that many of them have poorly designed street frontages.

Since the SPD was adopted in July 2012 the LPA has refused 14 applications for hot food takeaways. Six of these have gone to appeal and all have been dismissed by planning inspectors – good evidence that the adopted plan policies are helping to influence decisions regarding inappropriate development in the borough.

Oldham Council have justified their policies predominantly through the need to protect and enhance the retail function within Oldham, preventing dead frontages and dominating uses and preventing harm on residential amenity.

Concentration:

When determining planning applications the council will have regard to the following:

a. Within Oldham Town Centre no more than 5% of the ground floor frontage shall consist of A5 uses in the following locations:

- i. Central Shopping Core (Oldham Town Centre's primary shopping area)
- ii. Oldham Town Centre Conservation Area
- iii. Union Street
- iv. Yorkshire Street
- v. George Street
- vi. Retiro Street
- vii. Queen Street
- viii. Waterloo Street
- ix. Mumps (between Beever Street and Walshaw Street)

b. Within Oldham Town Centre, but outside the above areas, no more than 10% of the ground floor frontage shall consist of A5 uses.

c. Within the borough's Centres of Chadderton, Failsworth, Hill Stores, Lees, Royton, Shaw and Uppermill no more than 10% of the ground floor frontage shall consist of A5 uses.

d. Elsewhere within the borough, including local shopping parades, no more than 10% of the ground floor frontage shall consist of A5 uses.

Clustering:

When determining planning applications the council will have regard to the following (subject to the ground floor frontage thresholds set out in Matter 2):

- a. No more than two A5 uses should be located adjacent to each other;
- b. Between individual or groups of A5 uses, there should be at least two non A5 uses.

Health and Well-being:

When determining planning applications the Oldham Council will have regard to the borough's health and well-being priorities, plans and programmes, including the Sustainable

Community Strategy and any relevant NHS plans. These have identified, amongst other things, health as an issue to be addressed. In particular, health inequalities and problems associated with people and children who are overweight or obese.

2. Newcastle/Gateshead Joint Core Strategy (2015) (Policy CS14 Wellbeing and Health)

Newcastle's recently adopted (2015) Joint core strategy states that the wellbeing and health of communities will be maintained and improved by:

1. Requiring development to contribute to creating an age friendly, healthy and equitable living environment through:

- i. Creating an inclusive built and natural environment,
- ii. Promoting and facilitating active and healthy lifestyles,
- iii. Preventing negative impacts on residential amenity and wider public safety from
- iv. noise, ground instability, ground and water contamination, vibration and air quality,
- v. Providing good access for all to health and social care facilities, and
- vi. Promoting access for all to green spaces, sports facilities, play and recreation opportunities.

2. Promoting allotments and gardens for exercise, recreation and for healthy locally produced food.

3. Controlling the location of, and access to, unhealthy eating outlets.

Newcastle Council is currently working on producing a Hot Food Takeaway SPD to support this policy.

3. Gateshead Hot Food Takeaway SPD (Adopted 2015)

Gateshead's SPD was adopted in July 2015. The SPD outlines evidence such as current obesity levels and relevant planning application considerations such as:

1. Locations where children and young people congregate Planning permission will not be granted for A5 use within a 400m radius of entry points to secondary schools, youth centres, leisure centres and parks*.

(*Parks are categorised as playing areas, Area parks over 5 hectares in size and Neighbourhood Open Spaces over 2 hectares in size)

2. Locations where there are high levels of obesity Planning permission will not be granted for A5 use in wards where there is more than 10% of the year 6 pupils

3. Over proliferation Planning permission will not be granted for A5 use where the number of approved A5 establishments, within the ward, equals or exceeds the UK national average, per 1000 population.

4. Clustering Planning permission will not be granted for A5 uses where it would result in a clustering of A5 uses to the detriment of the character and function or vitality and viability of a centre or local parade or if it would have an adverse impact on the standard of amenity for existing and future occupants of land and buildings.

In order to avoid clustering, there should be no more than two consecutive A5 uses in any one length of frontage. Where A5 uses already exist in any one length of frontage, a gap of

at least two non A5 use shall be required before a further A5 use will be permitted in the same length of frontage

An A5 use will not be permitted where it will result in the percentage of A5 uses in Gateshead Centre (Primary Shopping Area), District Centres, Local Centres or local parades exceeding 5% of total commercial uses. Where there are less than 20 units in a parade, no more than 1 A5 unit will be permitted.

5. Residential amenity A5 uses will not be permitted where they share a party wall with a residential property. The Discharge stack/ extraction system must be located according to best practice set out in DEFRA guidance 'Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems'.

6. Hours of opening - When determining the appropriate hours of opening for an A5 use regard will be had to:

- i. the likely impacts on residential amenity;
- ii. the existence of an established late night economy in the area;
- iii. the character and function of the immediate area, including existing levels of background activity and noise.

7. Extraction of odours and noise abatement A5 uses must provide appropriate extraction systems to effectively disperse odours. Such systems must:

- i. have minimal impact on visual amenity, including location and external finish;
- ii. be acoustically attenuated;
- iii. not have an unacceptable impact on the amenity of neighbouring occupiers, for example by virtue of vibration or odour;
- iv. be properly operated, serviced, cleaned and maintained in accordance with industry best practice; and
- v. where appropriate, be improved to reflect any subsequent changes in the mode or type of cooking that could increase odours.

Extraction equipment must at least meet the minimum standards set out in the guidance on control of odours and noise produced by the Department of Environment, Food and Rural Affairs (Defra).

8. Anti-social behaviour

Proposals for A5 uses, which, on the advice from Northumbria Police would adversely affect personal safety or crime and disorder will be restricted in their opening hours and/or will be required to provide or contribute to deterrent measures.

9. Disposal of waste products

For A5 uses, where possible, commercial bin stores should be contained within the main building. Where this is not possible, secure structures should be provided on site. The bin stores provided should adequately screen stored refuse and be designed so as to respect the character of the area.

Refuse storage structures should be sited so as not to cause an odour nuisance to neighbouring residential or commercial properties but be convenient to access for refuse collection services. Suitable grease traps must also be installed on all drains for A5 uses to prevent blockages and the flooding of properties.

10. Litter

Where there would otherwise be an insufficient availability of litter bins to serve customers, proposals for A5 uses will be required to provide and maintain:

- i. a litter bin outside the premises at all times when the business is open; and
- ii. one or more litter bins within the surrounding area, as appropriate to meet likely need.

11. Transport Planning permission for A5 uses will only be granted where there would not be an adverse impact on highway safety.

Regard will be given to;

- i. Existing traffic conditions including availability of parking spaces
- ii. Availability of safe loading areas

12. Health Impact Assessment

Applications for A5 uses will be required to include a health impact assessment*.

Where an unacceptable adverse impact on health is established, permission should not be granted.

Included content:

- i. The Gateshead SPD developed an Independent Takeaway Study Analysis of Nutrient Data, 2013
- ii. Number of hot food takeaways in an area.
- iii. How many people are classed as overweight/obese within the borough?
- iv. How many children are obese within the borough?

Other Policy Examples:

4. Haringey Development Management Policies (Draft 2015)

DM56 Hot Food Takeaways

The council will not grant planning permission for hot food takeaway shops that fall within an exclusion zone of 400 meters of the boundaries of a primary or secondary school.

5. Croydon Local Plan Strategic Policies (April 2013)

SP5.2 The Council and its partners will create and safeguard opportunities for healthy, fulfilling and active lifestyles by:

1. Working in partnership with the health authorities to improve health in Croydon;
2. Ensuring new developments provide opportunity for healthy living by the encouragement of walking and cycling, good housing design, sufficient open space and opportunity for recreation and sound safety standards;

SP5.3 The Council and its partners will encourage the creation of healthy and liveable neighbourhoods by:

1. Ensuring the provision of a network of community facilities, providing essential public services; and
2. Protecting existing community facilities that still serve, or have the ability to serve, the needs of the community.

6. South Tyneside

Policy DM3 Hot Food Uses in Shopping Centres

We will assess all planning applications for cafes and restaurants (Use Class A3) and hot food takeaways (Use Class A5) in established shopping centres with regard to their impact upon the vitality and viability of the shopping centre and the borough's shopping centre hierarchy, residential amenity, highway safety and any existing crime and anti-social behaviour.

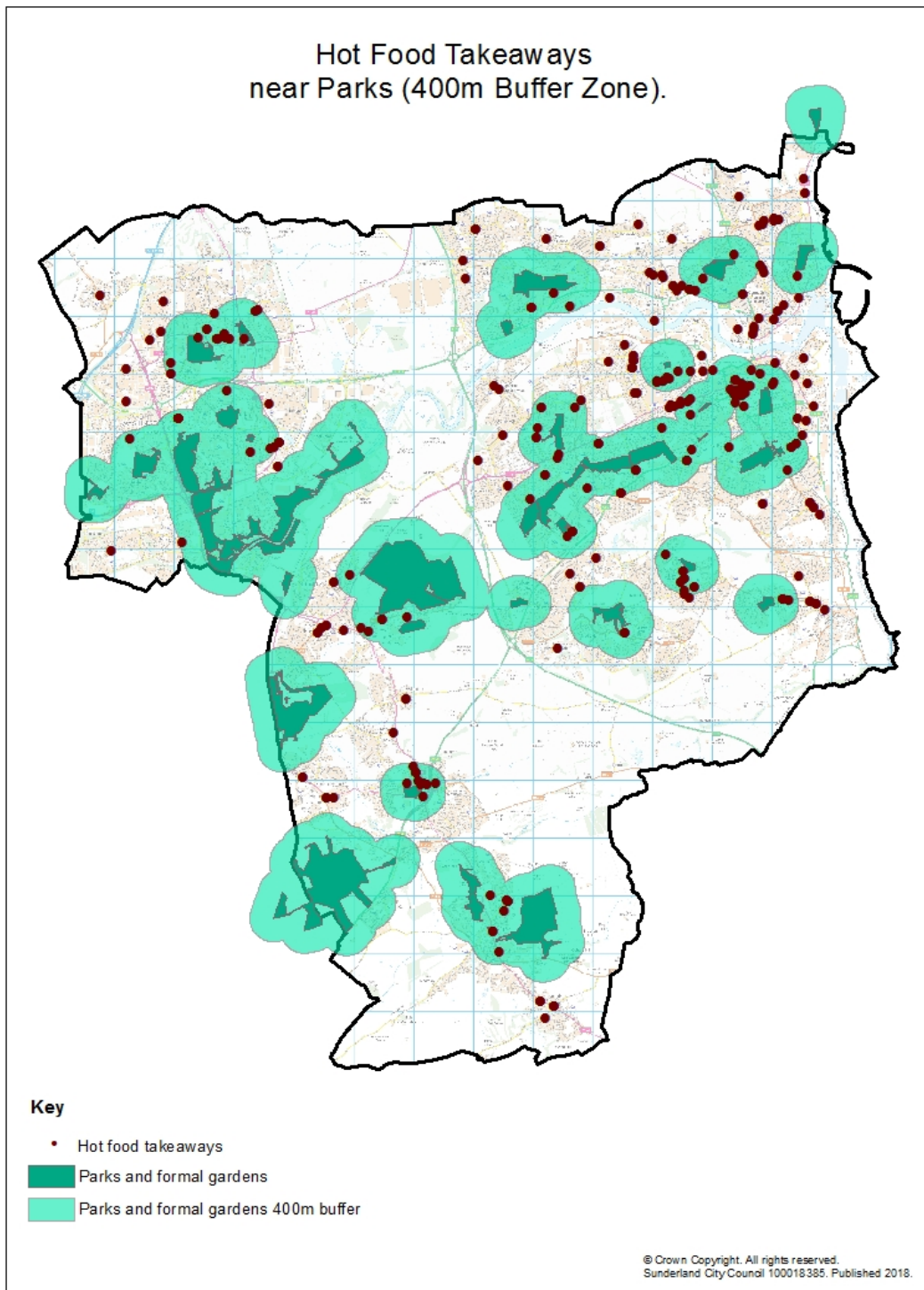
To avoid an over concentration of hot food uses in our district shopping centres we will only grant planning permission for the change of use of ground floor properties within district shopping centres to cafes and restaurants (Use Class A3) or hot food takeaways (Use Class A5) where it would not:

1. result in the loss of a prominent retail unit(s); or
2. result in more than two hot food outlets (Use Classes A3 or A5) adjacent to each other; or
3. lead to more than two hot food outlets (Use Classes A3 or A5) in any continuous frontage of 10 retail units or less.

In addition to criteria A, B and C, the potential overall impact of the proposal on the vitality and viability of the district shopping centre should be assessed.

The district shopping centres are Harton Nook, Frederick Street, Boldon Colliery, Westoe Bridges, Dean Road and Boldon.

Appendix four - Hot food takeaways near parks map in Sunderland



References

- ⁱ Sunderland Health Profile 2017; <http://fingertipsreports.phe.org.uk/health-profiles/2017/e08000024.pdf>; accessed 27th February 2018
- ⁱⁱ Public Health Matters; March 17; <https://www.gov.uk/government/publications/health-matters-obesity-and-the-food-environment/health-matters-obesity-and-the-food-environment-2>
- ⁱⁱⁱ The British Medical Journal (2014), *Associations between exposure to takeaway food outlets, takeaway food consumption, and body weight in Cambridgeshire, UK: population based, cross section*
- ^{iv} Foresight. Tackling Obesities: Future Choices – Project Report 2nd Edition. Government Office for Science, 2007
- ^v National Institute for Health & Care Excellence, Public Health Guidance 25 Prevention of Cardiovascular Disease. London 2010
- ^{vi} Healthy Lives, Health People; <https://www.gov.uk/government/publications/healthy-lives-healthy-people-a-call-to-action-on-obesity-in-england>
- ^{vii} Fair Society, Healthy Lives. Strategy review of health inequalities in England post-2010. The Marmot Review, 2010
- ^{viii} Healthy people, healthy places briefing Obesity and the environment: regulating the growth of fast food outlets. Public Health England, March 2014
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296248/Obesity_and_environment_March2014.pdf
- ^{ix} Tipping the Scales; LGA; <https://www.local.gov.uk/tipping-scales-case-studies-use-planning-powers-limit-hot-food-takeaway>
- ^x Healthy Weight, Healthy Lives: A toolkit for developing local Strategy
http://www.fph.org.uk/uploads/HealthyWeight_SectA.pdf Accessed 1st March 2018
- ^{xi} Kopelman P, (2007) *Health Risks Associated with Overweight and Obesity*. Short Science Review. Foresight Tackling Obesities: Future Choices. *Obesity Reviews*; 8 (s1): 13-17
- ^{xii} Field AE, Coakley EK, Must A, Spadano JL, Laird N, Dietz WH, et al (2001) Impact of overweight on the risk of developing common chronic diseases during a 10-year period. *Arch Intern Med*; 161: 1581–1586
- ^{xiii} Diabetes - QOF Prevalence (17plus) – NHS Sunderland CCG
- ^{xiv} PHE, LGA & Chartered Institute of Environmental Health (2014) *Obesity and the Environment: regulating the growth of fast food outlets*
www.gov.uk/government/uploads/system/uploads/attachment_data/file/296248/Obesity_and_environment_March2014.pdf
- ^{xv} NICE Public Health Guideline PH 25 Cardiovascular Disease Prevention (2010)
<https://www.nice.org.uk/guidance/ph25>
- ^{xvi} NHS, London Healthy Urban Development Unit, HUDU Planning for Health. Using the planning system to control hot food takeaways: A good practice guide (2013)
www.healthyurbandevlopment.nhs.uk
- ^{xvii} Fraser LK, Edwards KL (2010) The association between the geography of fast food outlets and childhood obesity rates in Leeds, UK Health Place. 2010 Nov; 16(6):1124-8)
<https://www.ncbi.nlm.nih.gov/pubmed/20691630>
- ^{xviii} Engler-Stringer et al. The Community and Consumer Food Environment and Children's Diet: A Systematic Review. BMC Public Health. 2014
<https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-14-522>
- ^{xix} Public Health Outcome Framework; <https://fingertips.phe.org.uk/profile/public-health-outcomes-framework>
- ^{xx} Sunderland Healthy Lifestyle Survey 2017;
- ^{xxi} Public Health Outcome Framework; <https://fingertips.phe.org.uk/profile/national-child-measurement-programme>
- ^{xxii} Gateshead Independent Takeaway Study Analysis of Nutrient Data, 2013
<https://www.gov.uk/government/case-studies/planning-document-to-limit-the-proliferation-of-takeaways>

-
- ^{xxiii} 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
- ^{xxiv} Planning Inspectorate appeal ref APP/MO655/A/14/2215776, May 2014
- ^{xxv} Simmonds, M. et al. Predicting adult obesity from childhood obesity: a systematic review and meta-analysis. Obesity Reviews (2016).

