

## SEVENOAKS

# National Child Measurement Programme: Further Analysis of the Drivers of Excess Weight

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## | 1. Background

This paper provides a high level summary of the results of in-depth analyses exploring the drivers of excess weight among reception and year six children, a [full report](#) has been published.

The following analyses of local childhood weight data have also been produced:

- Local authority level [trend analysis of data up to 2015/16](#), with comparisons to Kent, the South East and England.
- Kent [analysis of the inequalities](#) in childhood obesity.

The above analyses have established that overweight and obesity prevalence is higher in children resident within areas of deprivation. Further, there is evidence for a widening gap in obesity prevalence between the most and the least deprived groups across Kent during 2008/09 to 2014/15.

The following paragraphs summarise the key findings from the [full report](#). Maps have also been presented for the LSOAs in Sevenoaks with the highest levels of excess weight<sup>1</sup> across Kent.

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<sup>1</sup> defined as the upper quartile of excess weight across Kent between 2008/09 to 2014/15

## | 2. Ethnicity

The association between deprivation and high levels of obesity and excess weight in childhood is well documented. There is also a strong body of evidence indicating that certain ethnic groups are at greater risk of excess weight.

Our analysis used statistical methods to enable comparison to White children and demonstrated **higher odds of excess weight among:**

- **Black children** within reception year in Kent
- **Black, Asian and Other<sup>2</sup> children** within year six in Kent

This remained even after accounting for deprivation.

We were able to show that the strength of the association between excess weight and Black populations varies across localities in Kent. The [full report](#) details the statistical methods used.

This identifies areas where:

- the **association** between black ethnicity and excess weight is **strong**
- and there is a **high** concentration of **black** individuals within the **population**.

### KEY FOCUS:

**Identifying these areas may help the effective targeting of public health interventions.**

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<sup>2</sup> Arab and any other ethnic category

### | 3. Living Environment

There is a high level of interest in the influence of the living environment on excess weight. But, unpicking the key features of an obesogenic environment is challenging as the factors that guide food choice and physical activity are complex.

Using appropriate statistical techniques we were able to demonstrate **higher odds of excess weight** for areas with:

- **shorter distances to food outlets (takeaways)**
- **lower access to food supermarkets**

We also found **lower odds of excess weight** for areas with:

- **lower access to greenspace**
- **longer distances to public & private sports facilities**

But, all findings were only before adjustment for deprivation, ethnicity and urban/rural environment.

#### **KEY FOCUS:**

**Locality mapping of the main assets and vulnerabilities may guide understanding of some of the possible determinants of obesity within the local context.**

**Table 1: Areas with highest levels of childhood excess weight.**

Ward Code	Ward Name	LSOA Code	LSOA Name	IMD Kent weighted quintile	Mind the Gap Type	Upper quartile excess weight
E05005008	Ash	E01024415	Sevenoaks 016C	5		reception
E05005013	Edenbridge North & East	E01024427	Sevenoaks 014C	2		year six
E05005014	Edenbridge South & West	E01024429	Sevenoaks 014E	2		year six
		E01024430	Sevenoaks 014F	3		reception/ year six
E05005016	Farningham, Horton Kirby & South Darenth	E01024434	Sevenoaks 005D	4		reception
E05005017	Fawkham & West Kingsdown	E01024435	Sevenoaks 007A	4		reception
		E01024436	Sevenoaks 007B	3		year six
E05005018	Halstead, Knockholt & Badgers Mount	E01024439	Sevenoaks 008C	4		reception
E05005021	Kemsing	E01024448	Sevenoaks 009A	4		year six
E05005030	Swanley Christchurch & Swanley Village	E01024472	Sevenoaks 001D	3		reception
		E01024473	Sevenoaks 003B	5		year six
		E01024475	Sevenoaks 003D	4		reception
E05005031	Swanley St Mary's	E01024476	Sevenoaks 002A	1	3	year six
		E01024477	Sevenoaks 002B	1	3	reception/ year six
		E01024478	Sevenoaks 002C	2		reception/ year six
E05005032	Swanley White Oak	E01024479	Sevenoaks 001E	4		reception
		E01024480	Sevenoaks 002D	1		year six
		E01024481	Sevenoaks 002E	1		year six
		E01024482	Sevenoaks 002F	1		year six

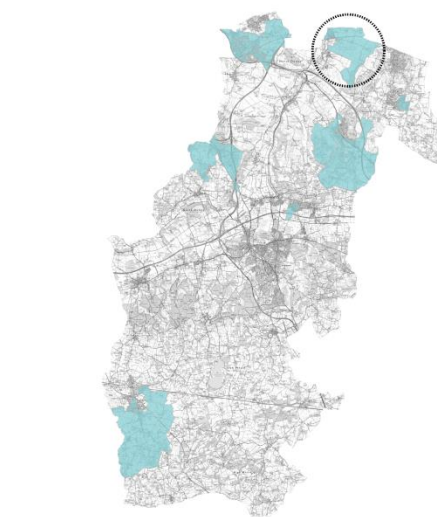
### WARDS:

- Farningham, Horton Kirby & South Darenth,

### ETHNICITY:

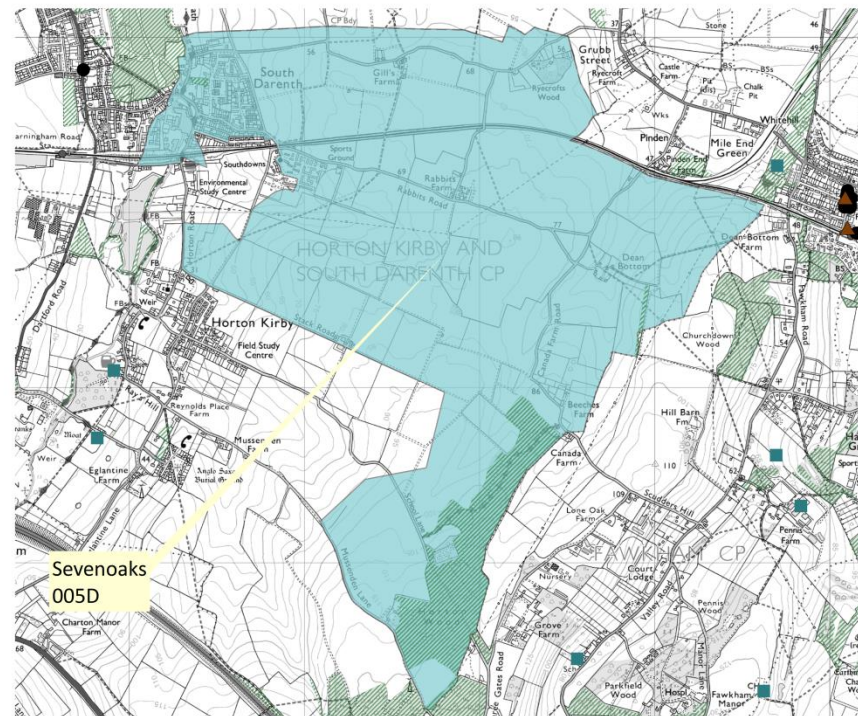
The association between black ethnicity and excess weight was **strong and an** area with high concentration of black individuals in the population.

### The living environment: further analysis of the drivers of excess weight.



### Sevenoaks 005D

- Greenspace
- Food outlet
- Public & private sports facility
- ▲ Supermarket



Source: OS, produced by KPHO (ZC) April 2017

\*LSOAs 001A in Boxley & 011D in North Downs

### THE LIVING ENVIRONMENT:

- Rural and urban classification is Town & Fringe.
- No evidence for lower access to supermarkets.
- Less than 50% of the population with access to greenspace.
- Distance to nearest food outlet within 1200m.

### WARDS:

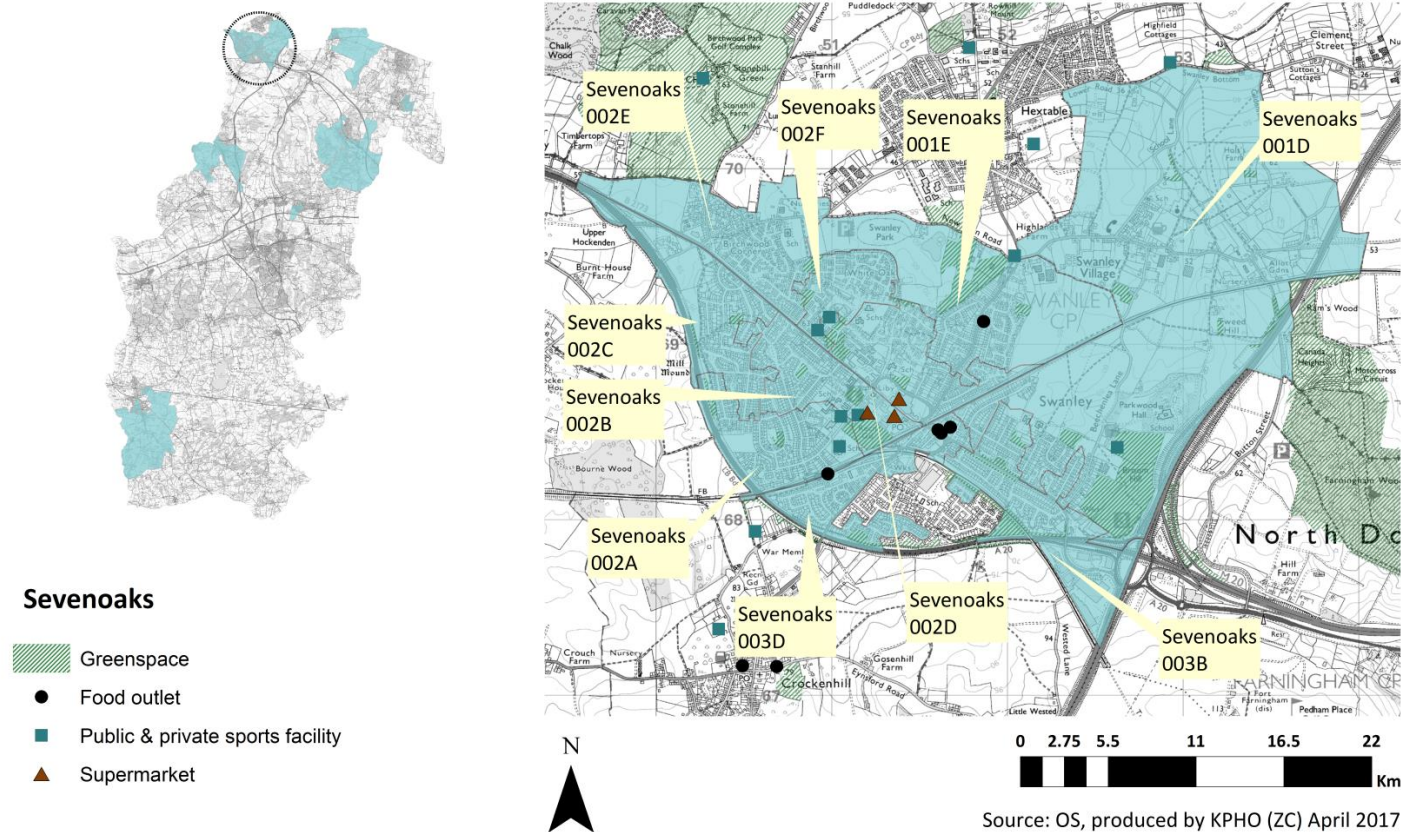
- Swanley Christchurch & Swanley Village,
- Swanley St. Mary's\*,
- Swanley White Oak,

\*in most deprived decile Type 3

### ETHNICITY:

The association between black ethnicity and excess weight was **strong and are areas** with high concentration of black individuals in the population.

### The living environment: further analysis of the drivers of excess weight.



\*LSOAs 002A & 002B in Swanley St. Mary's

### THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban.
- Good access to supermarkets.
- Less than 50% of LSOA populations have access to greenspace.
- Distance to nearest food outlet within 1200m.

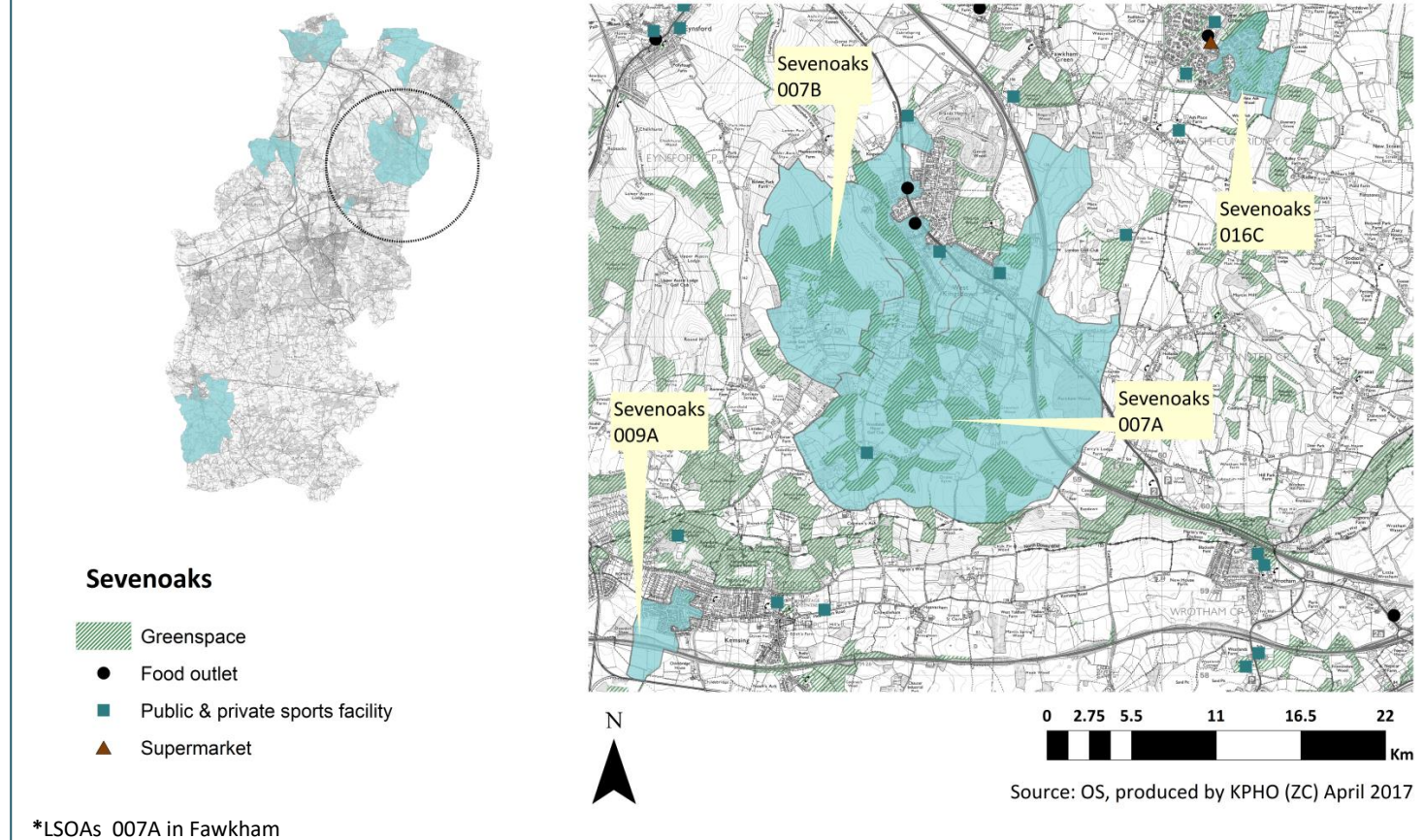
### WARDS:

- Ash,
- Fawkham & West Kingsdown,
- Kemsing,

### ETHNICITY:

**Some** association between black ethnicity and excess weight. Not an area with high concentration of black individuals in the population.

### The living environment: further analysis of the drivers of excess weight.



### THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban, as well as, Town & Fringe.
- Low access to supermarkets within parts of Fawkham ward, driven by greater distance to nearest supermarket.
- Some parts with less than 50% of the population with access to greenspace in Fawkham (007A) and Kemsing (009A).
- Distance to nearest food outlet generally within 1200m, except for parts in Fawkham (007A) and Kemsing (009A).



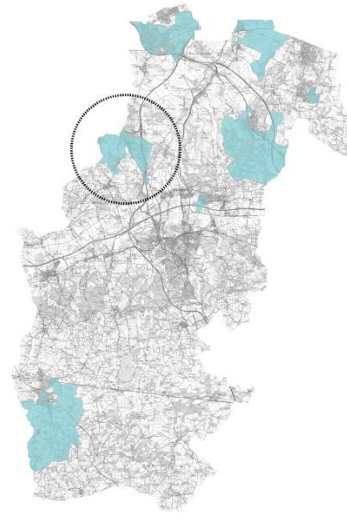
### WARDS:

- Halstead, Knockholt & Badgers Mount

### ETHNICITY:

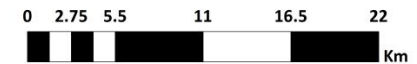
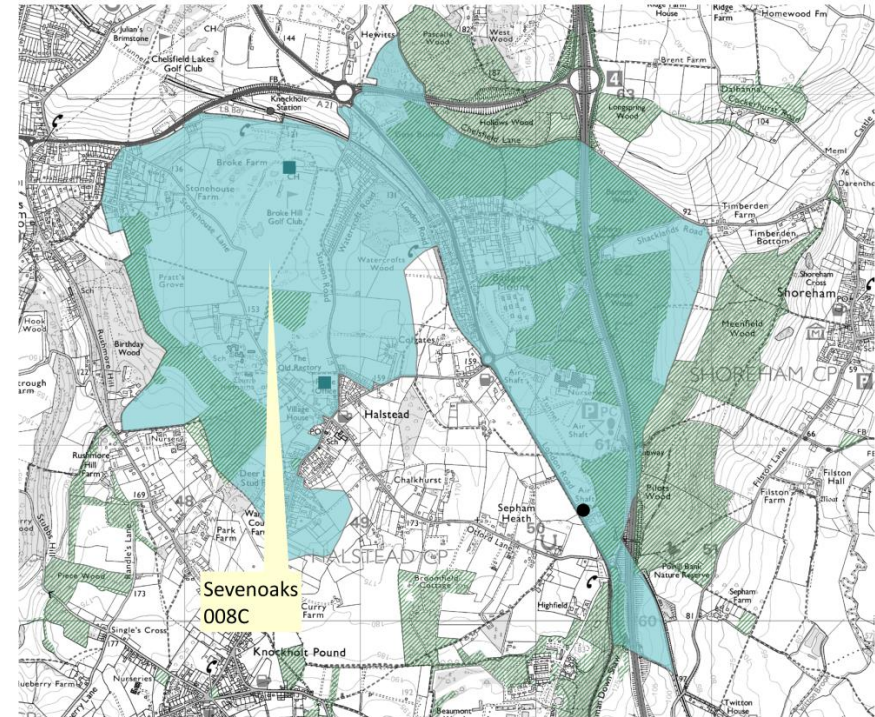
Some association between black ethnicity and excess weight. Not an area with high concentration of black individuals in the population.

### The living environment: further analysis of the drivers of excess weight.



#### Sevenoaks

- Greenspace
- Food outlet
- Public & private sports facility
- ▲ Supermarket



Source: OS, produced by KPHO (ZC) April 2017

### THE LIVING ENVIRONMENT:

- Rural and urban classification is Village.
- Lower access to supermarkets, driven by greater distance to nearest supermarket.
- Less than 50% of the population with access to greenspace.
- Distance to nearest food outlet greater than 1200m from LSOA centroid.

### WARDS:

- Edenbridge North & East
- Edenbridge South & West

### ETHNICITY:

The association between black ethnicity and excess weight was **weak**.

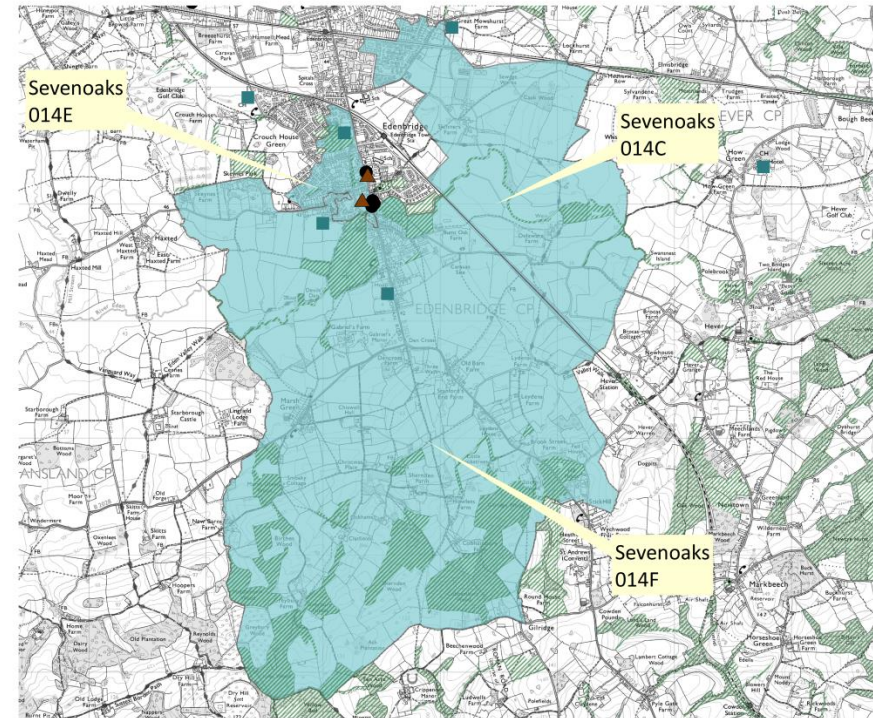
Not an area with high concentration of black individuals in the population.

### The living environment: further analysis of the drivers of excess weight.



#### Sevenoaks

- Greenspace
- Food outlet
- Public & private sports facility
- Supermarket



Source: OS, produced by KPHO (ZC) April 2017

\*LSOAs 014B in Coxheath & Hunton, 0015E in Sutton Valence & Langley, 018B in Marden & Yalding

### THE LIVING ENVIRONMENT:

- Rural and urban classification is Town & Fringe.
- Good access to supermarkets.
- Less than 50% of the population with access to greenspace within Edenbridge North & East.
- Distance to nearest food outlet within 1200m from LSOA centroid.

## | Appendix A: Indicators Used

Lower super output areas with **high levels of excess weight** defined as:

- upper quartile of overweight or obesity as measured by the National Child Measurement Programme 2008-2014

**Geographically weighted regression** performed using the following variables:

- percentage overweight or obese as measured by the National Child Measurement Programme 2008-2014
- percentage of total population from a Black ethnic group, all ages, as measured by the 2011 Census

Areas with **high Black ethnic group concentration** have been defined as:

- upper quintile of local authority Black population resident within lower super output area as measured by the 2011 Census

The **living environment variables** used:

- mapping the locations of greenspace, food outlets, public & private sports facilities and supermarkets
- straight line distance from LSOA population weighted centroid to nearest takeaway, with emphasis on takeaways within 1200m
- bottom 25<sup>th</sup> percentile of index scores for supermarket access, combined using arithmetic mean of:
  - straight line distance from LSOA population weighted centroid to supermarket
  - the percentage of LSOA households with no car access for families with dependent children or lone parents was extracted from the 2011 Census
- LSOAs with less than 50% population access to greenspace
  - 1 site greater than 2ha (using ANGSt naturalness 1,2 & 3) within 300m of where people live
- straight line distance from LSOA population weighted centroid to nearest public & private sports facility, with emphasis on the bottom 10<sup>th</sup> percentile of distances (roughly equivalent to distances greater than 1km)