

MAIDSTONE

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

February 2017



Produced by

Val Miller: Public Health Specialist (Val.Miller@Kent.gov.uk)

Wendy Jeffreys: Public Health Specialist (Wendy.Jeffreys@Kent.gov.uk)

Rachel Kennard: Senior Intelligence Analyst (Rachel.Kennard@kent.gov.uk)

Zara Cuccu: Public Health Analyst (Zara.Cuccu@Kent.gov.uk)

Correspondence to: Zara Cuccu



Version: 01

Last Updated: February 2017

| 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 Maidstone with the highest levels of excess weight¹ across Kent.

¹ 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 Other² 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.

² 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	
E05004982	Allington	E01024320	Maidstone 003A	5		reception/ year six	
		E01024323	Maidstone 003D	5		reception	
E05004985	Boughton Monchelsea & Chart Sutton	E01024332	Maidstone 015A	3		reception/ year six	
E05004986	Boxley	E01024333	Maidstone 001A	3		year six	
E05004996	High Street	E01024339	Maidstone 006A	2		reception	
E05004987	Bridge	E01024340	Maidstone 006B	3		reception	
E05008553	Coxheath & Hunton	E01024342	Maidstone 016A	2		year six	
		E01024346	Maidstone 014B	3		year six	
E05004991	East	E01024352	Maidstone 004A	1		reception	
		E01024354	Maidstone 002B	4		year six	
E05004992	Fant	E01024356	Maidstone 006C	2		reception	
		E01024360	Maidstone 009A	3		reception	
		E01033087	Maidstone 006F	2		reception/ year six	
		E01033091	Maidstone 006G	3		reception	
E05004994	Headcorn	E01024364	Maidstone 017A	2		reception/ year six	
E05004995	Heath	E01024367	Maidstone 008C	3		year six	
E05004996	High Street	E01024339	Maidstone 006A	2		reception	
		E01024372	Maidstone 009B	1		year six	
		E01024374	Maidstone 009C	1		3	reception
		E01033092	Maidstone 004G	1		reception	
E05004999	Marden & Yalding	E01024377	Maidstone 014C	2		reception	
		E01024379	Maidstone 018B	2		reception	
		E01024381	Maidstone 018D	2		reception	

Ward Code	Ward Name	LSOA Code	LSOA Name	IMD Kent weighted quintile	Mind the Gap Type	Upper quartile excess weight
E05005000	North	E01024382	Maidstone 004C	2		reception/ year six
		E01024383	Maidstone 004D	2		reception/ year six
		E01024384	Maidstone 004E	2		reception
E05005001	North Downs	E01024387	Maidstone 011D	2		reception
E05005002	Park Wood	E01024390	Maidstone 013B	1	3	reception
E05005003	Shepway North	E01024391	Maidstone 013C	1		reception
		E01024393	Maidstone 010C	3		year six
		E01024395	Maidstone 010D	2		year six
		E01024396	Maidstone 010E	1		reception/ year six
E05005004	Shepway South	E01024397	Maidstone 013D	1	3	reception/ year six
		E01024398	Maidstone 013E	1	3	reception/ year six
		E01024399	Maidstone 013F	1		year six
		E01024400	Maidstone 013G	2		year six
E05005006	Staplehurst	E01024407	Maidstone 019B	4		year
		E01024409	Maidstone 019D	5		reception
E05005007	Sutton Valence & Langley	E01024410	Maidstone 015E	3		year six
E05008553	Coxheath & Hunton	E01024342	Maidstone 016A	2		year six
		E01024346	Maidstone 014B	3		year six
E05008555	South	E01024403	Maidstone 009E	4		reception

WARDS:

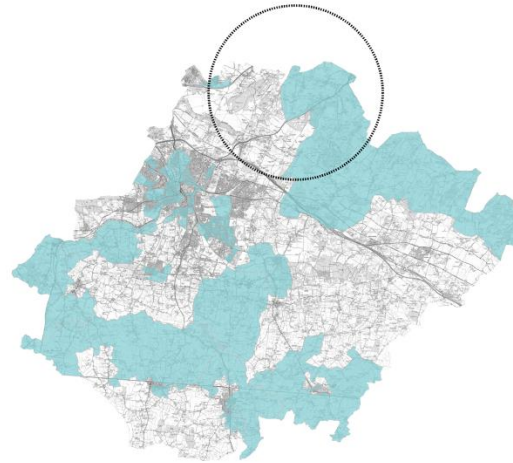
- Boxley,
- North Downs,

ETHNICITY:

The association between black ethnicity and excess weight was **strong for reception year.**

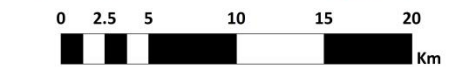
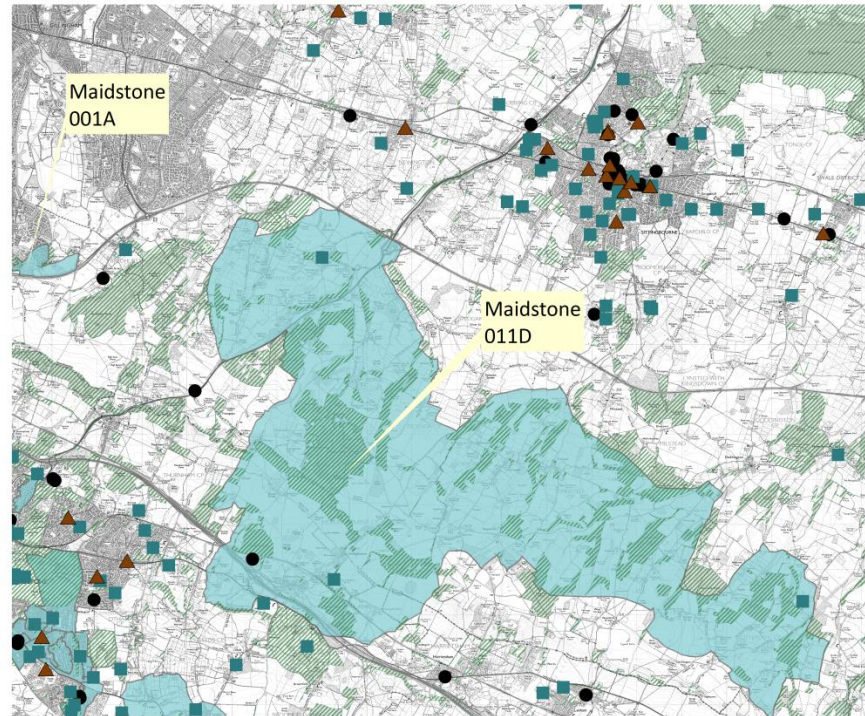
But are not areas with high concentration of black individuals in the population.

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



Maidstone

- ▨ 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 Urban in Boxley, as well as, Village in North Downs.
- Some evidence for lower access to supermarkets, driven by greater distances to supermarkets.
- Less than 50% of the population with access to greenspace within parts of North Downs ward.
- Distance to nearest food outlet greater than 1200m.

WARDS:

- Park Wood,
- Shepway North,
- Shepway South,

LSOAs in Park Wood & Shepway South in deprived decile.

ETHNICITY:

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

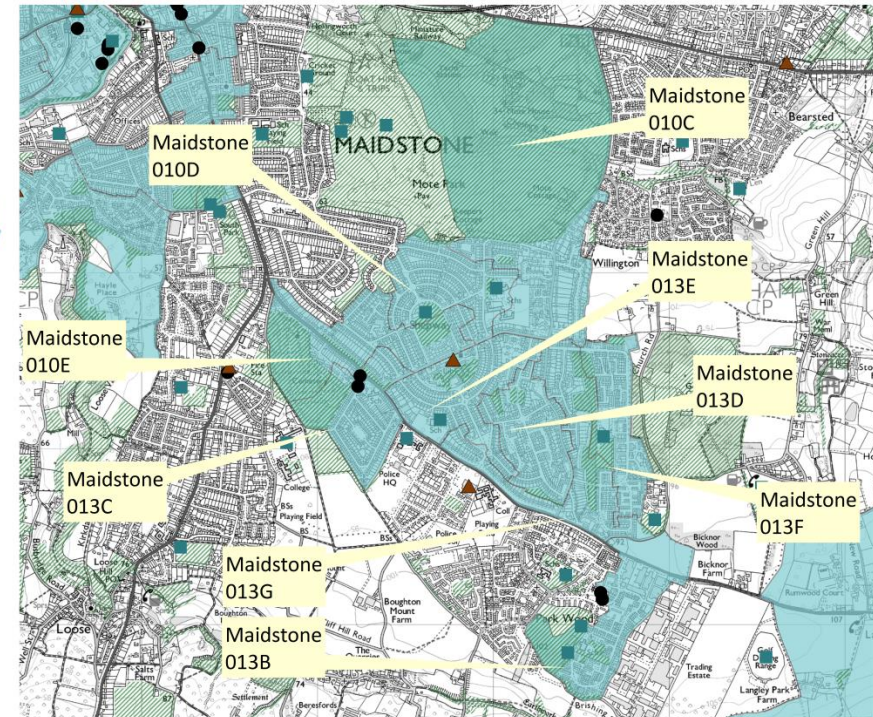
Parts*of Shepway North & Shepway South with high concentration of black individuals in the population.

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



Maidstone

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



*LSOAs 013C in Shepway North & 013E in Shepway South
Most deprived decile Type 3: 013B in Park Wood, 013D & 013E in Shepway South

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

THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban.
- Some evidence for lower access to supermarkets in Park Wood, driven by low car ownership.
- Approximately 50% of LSOA populations have access to greenspace. But less than 5% of population with access in 013C Shepway North.
- Distance to nearest food outlet within 1200m.

WARDS:

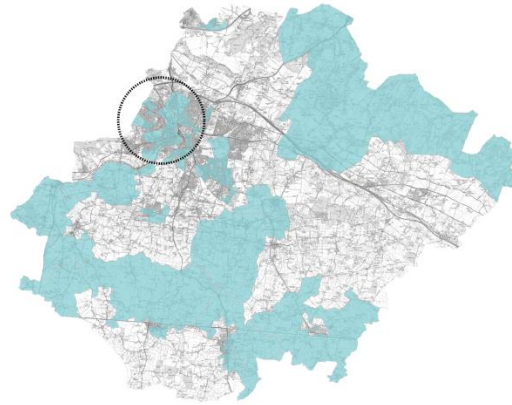
- Allington,
- East
- Fant,
- High St*.
- North,
- South,

*in most deprived decile Type 3

ETHNICITY:

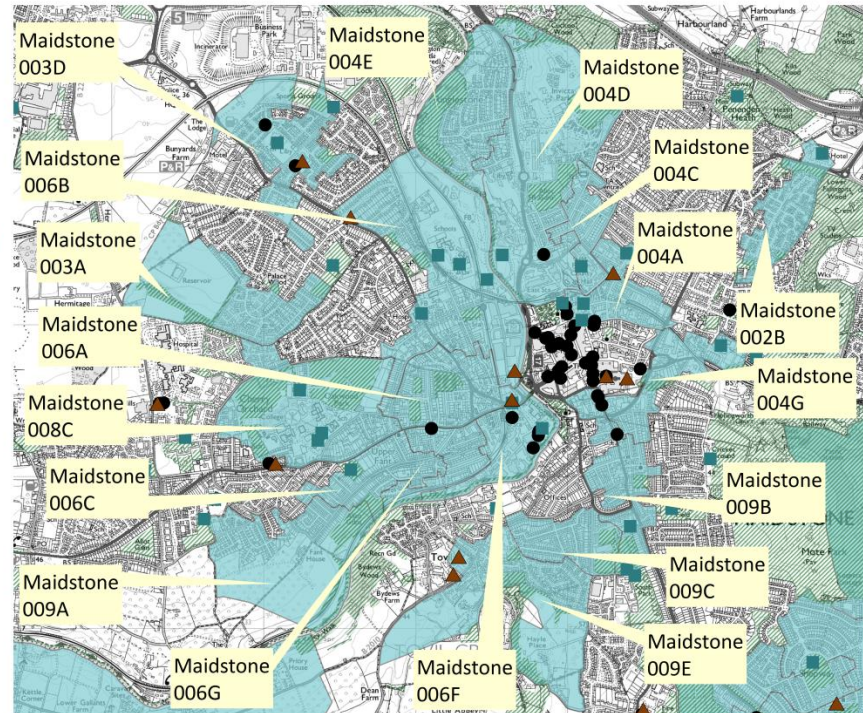
Strong association between black ethnicity and excess weight. Parts of **East, Fant, High St. & North** has high concentration of black populations.

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



Maidstone

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



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

*LSOAs 009C in High St.

THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban.
- Low access to supermarkets within East & High St. wards, driven by low car ownership.
- Generally less than 50% of the population with access to greenspace.
- Distance to nearest food outlet generally within 1200m, except for parts of South ward (009E)

WARDS:

- Boughton Monchelsea & Chart Sutton,
- Coxheath & Hunton,
- Headcorn,
- Marden & Yalding
- Staplehurst,
- Sutton Valence & Langley,

ETHNICITY:

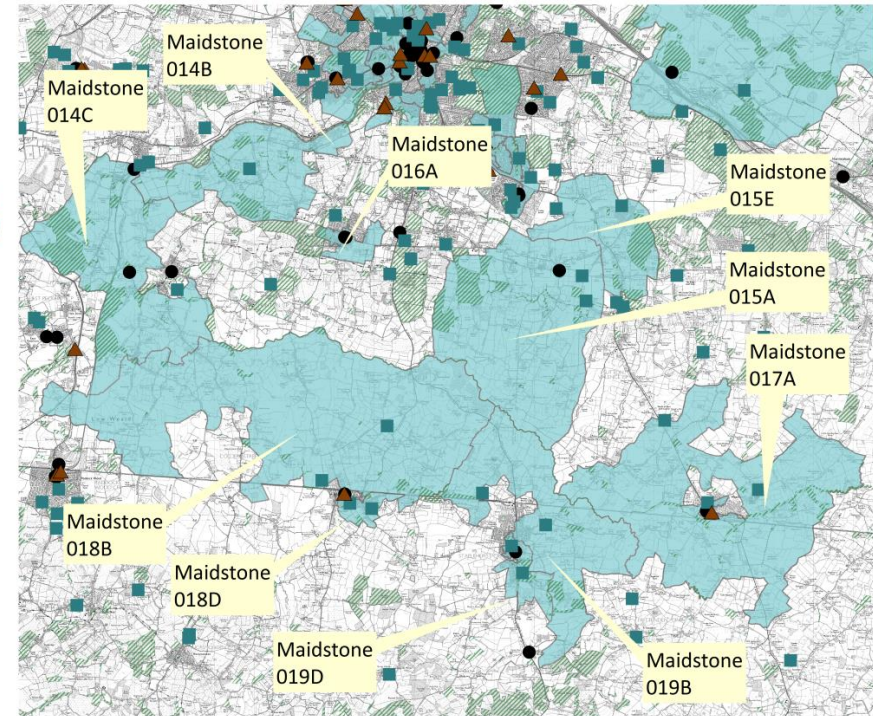
Some association between black ethnicity and excess weight. Not an area with high concentration of black individuals in the population.

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



Maidstone

- ▨ 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 and Village.
- Lower access to supermarkets in areas near Staplehurst.
- Less than 50% of the population with access to greenspace in Boughton Monchelsea & Chart Sutton and Headcorn.
- Distance to nearest food outlet generally within 1200m, except for some parts*

| 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 25th 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 10th percentile of distances (roughly equivalent to distances greater than 1km)