

GRAVESHAM

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 Gravesham 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
E05004964	Central	E01024257	Gravesham 002A	1	4	reception/ year six
		E01024259	Gravesham 005A	4		year six
E05004965	Chalk	E01024261	Gravesham 003B	4		year six
E05004966	Coldharbour	E01024262	Gravesham 004A	2		reception/ year six
		E01024263	Gravesham 004B	1		year six
		E01024264	Gravesham 009A	1		reception
E05004967	Higham	E01024265	Gravesham 010A	5		year six
		E01024266	Gravesham 010B	3		reception/ year six
		E01024267	Gravesham 010C	4		reception
E05004968	Istead Rise	E01024268	Gravesham 012A	5		reception
E05004969	Meopham North	E01024272	Gravesham 012E	5		reception
E05004970	Meopham South & Vigo	E01024273	Gravesham 013A	4		year six
		E01024275	Gravesham 013C	5		reception
E05004971	Northfleet North	E01024276	Gravesham 001A	3	1	year six
		E01024277	Gravesham 001B	1		reception/ year six
		E01024278	Gravesham 001C	1		reception/ year six
		E01024279	Gravesham 001D	1		year six

Ward Code	Ward Name	LSOA Code	LSOA Name	IMD Kent weighted quintile	Mind the Gap Type	Upper quartile excess weight
E05004972	Northfleet South	E01024280	Gravesham 006A	1		reception/ year six
		E01024282	Gravesham 004C	2		reception/ year six
		E01024283	Gravesham 004D	2		reception
		E01024284	Gravesham 004E	2		reception/ year six
E05004973	Painters Ash	E01024285	Gravesham 006C	3		year six
		E01024288	Gravesham 006E	4		year six
E05004974	Pelham	E01024291	Gravesham 002D	1		year six
		E01032799	Gravesham 002F	1	4	year six
E05004975	Riverside	E01024293	Gravesham 003C	2		reception/ year six
		E01024294	Gravesham 003D	1		reception/ year six
		E01024295	Gravesham 002E	1	4	reception
		E01024296	Gravesham 003E	2		reception/ year six
E05004976	Riverview	E01024298	Gravesham 008B	5		year six
		E01024299	Gravesham 008C	5		reception
E05004978	Singlewell	E01024303	Gravesham 011A	3		year six
		E01024305	Gravesham 011C	1	3	reception/ year six
		E01024306	Gravesham 011D	1	3	reception/ year six
E05004979	Westcourt	E01024310	Gravesham 007B	1		reception/ year six
		E01024311	Gravesham 007C	1		year six
E05004980	Whitehill	E01024314	Gravesham 007D	3		reception
		E01024315	Gravesham 007E	1		year six

WARDS:

- Meopham North,
- Meopham South & Vigo

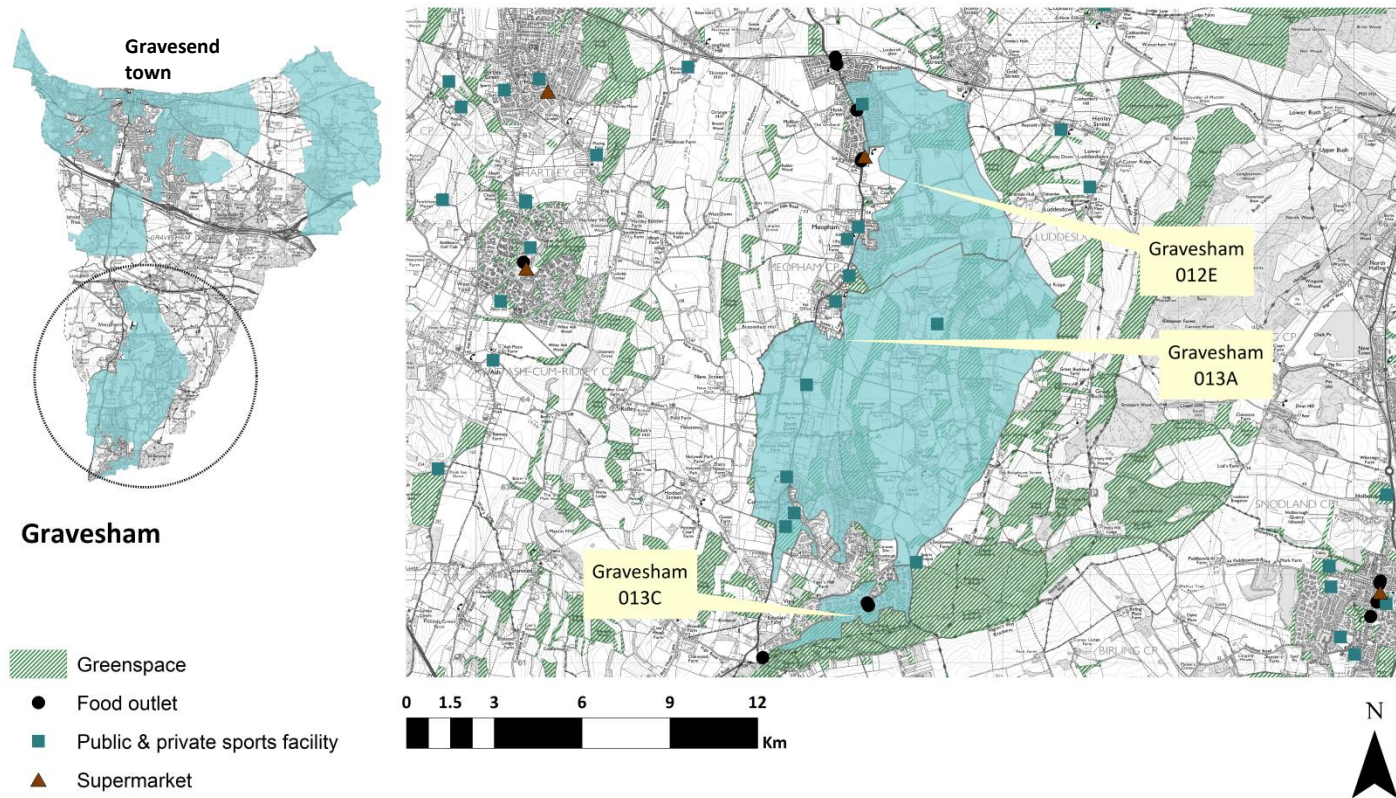
Not in the most deprived decile.

ETHNICITY:

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

Not an area with high concentrations of black individuals within the population.

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



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

THE LIVING ENVIRONMENT:

- Rural and urban classification is Village, Town & Fringe.
- Some evidence for lower access to supermarkets.
- Greater percentage of the population with access to greenspace within Meopham South & Vigo.

WARDS:

- Higham,
- Chalk,
- Westcourt,
- Riverview,

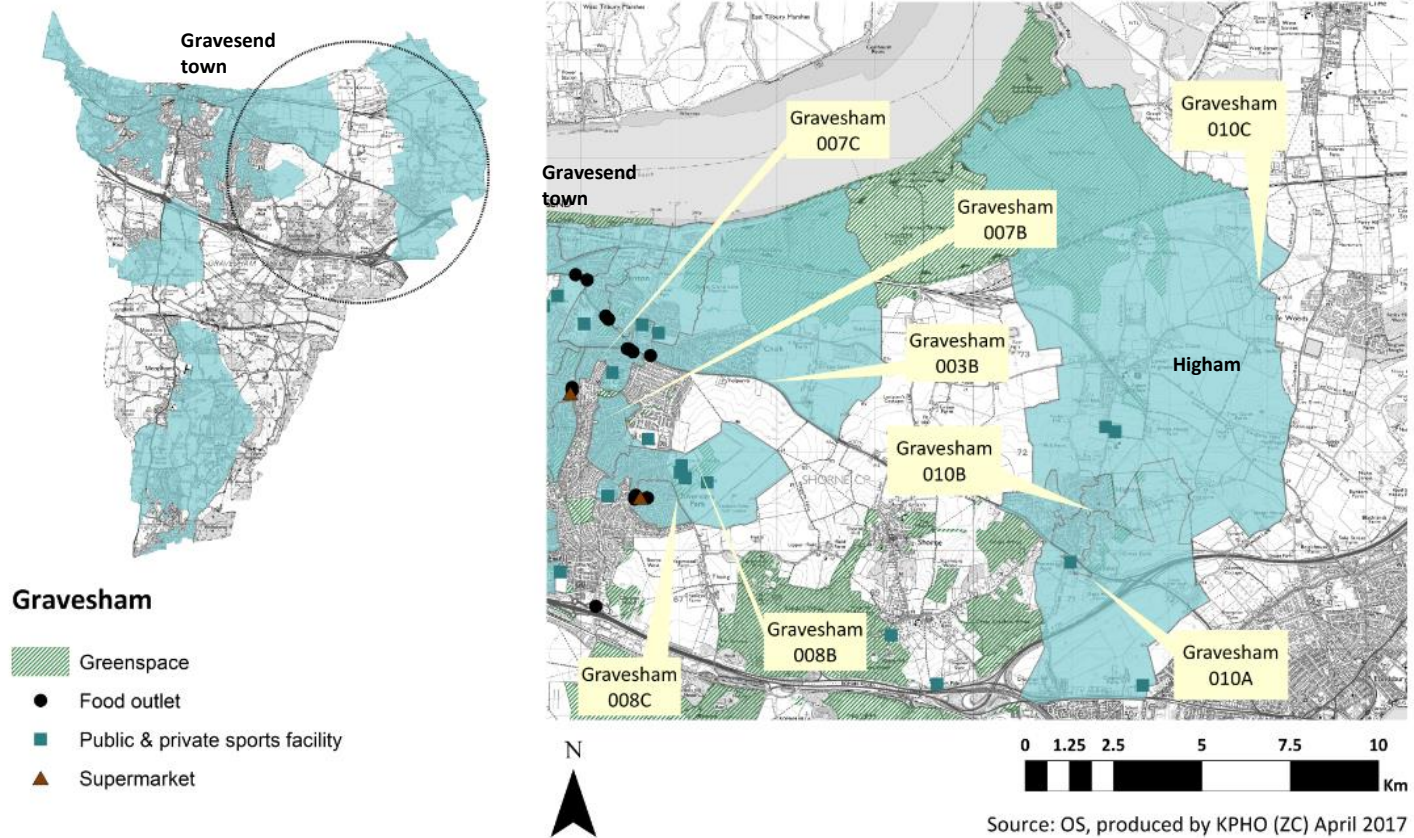
Westcourt - in the most deprived quintile

ETHNICITY:

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

Westcourt is area with high concentration of black individuals in the population.

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



Note: LSOAs 007C & 007B are in Westcourt ward

THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban in LSOAs closer to Gravesend town, as well as, Village, Town & Fringe in Higham.
- Some evidence for lower access to supermarkets in Higham.
- Very low percentage of the population with access to greenspace within Westcourt.
- Smaller distances to nearest food outlet in LSOAs closer to Gravesend town.

WARDS:

- Painters Ash,
- Coldharbour,
- Singlewell,
- Whitehill,
- Istead Rise

Singlewell - most deprived decile Type 3

ETHNICITY:

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

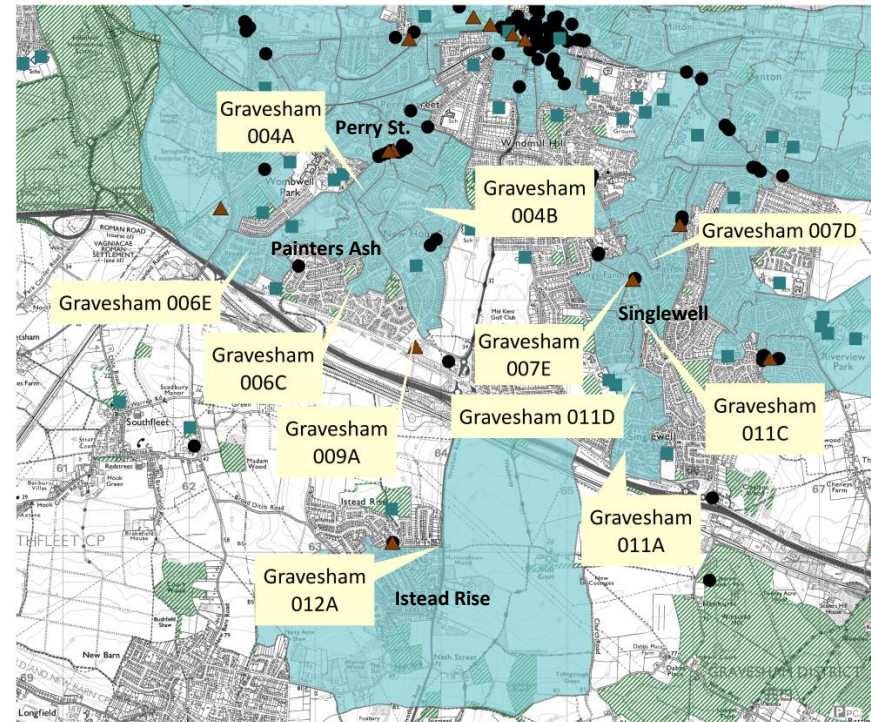
Parts of **Whitehill & Singlewell*** are areas with high concentration of black individuals in the population.

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



Gravesham

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



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

*LSOAs 007E & 011C are in Whitehill & Singlewell wards respectively

THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban in LSOAs closer to Gravesend town, as well as, Town & Fringe in Istead Rise.
- Some evidence for lower access to supermarkets in Singlewell ward, driven by greater percentages of families without a car.
- Very low percentage of the population with access to greenspace within Painters Ash.
- Smaller distances to nearest food outlet in LSOAs closer to Perry Street area.

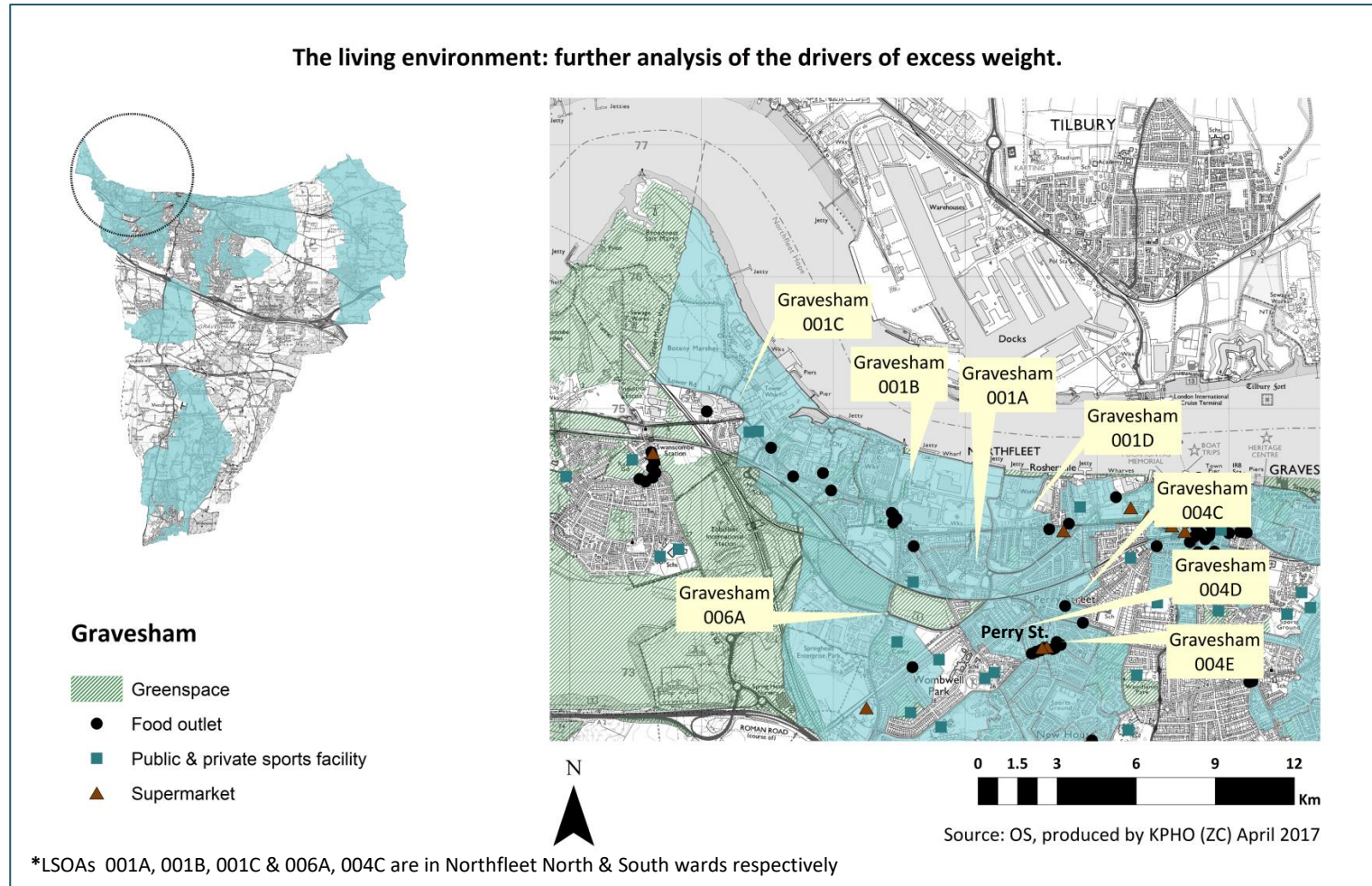
WARDS:

- Northfleet North
 - Northfleet South
- Northfleet North** - most deprived decile Type 1

ETHNICITY:

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

Parts of **Northfleet North & South*** are areas with high concentration of black individuals in the population.



THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban.
- Some evidence for lower access to supermarkets in Northfleet North ward.
- Very low percentage of the population with access to greenspace within Northfleet North & South in areas closer to Gravesend town.
- Smaller distances to nearest food outlet in LSOAs closer to Perry Street area.

WARDS:

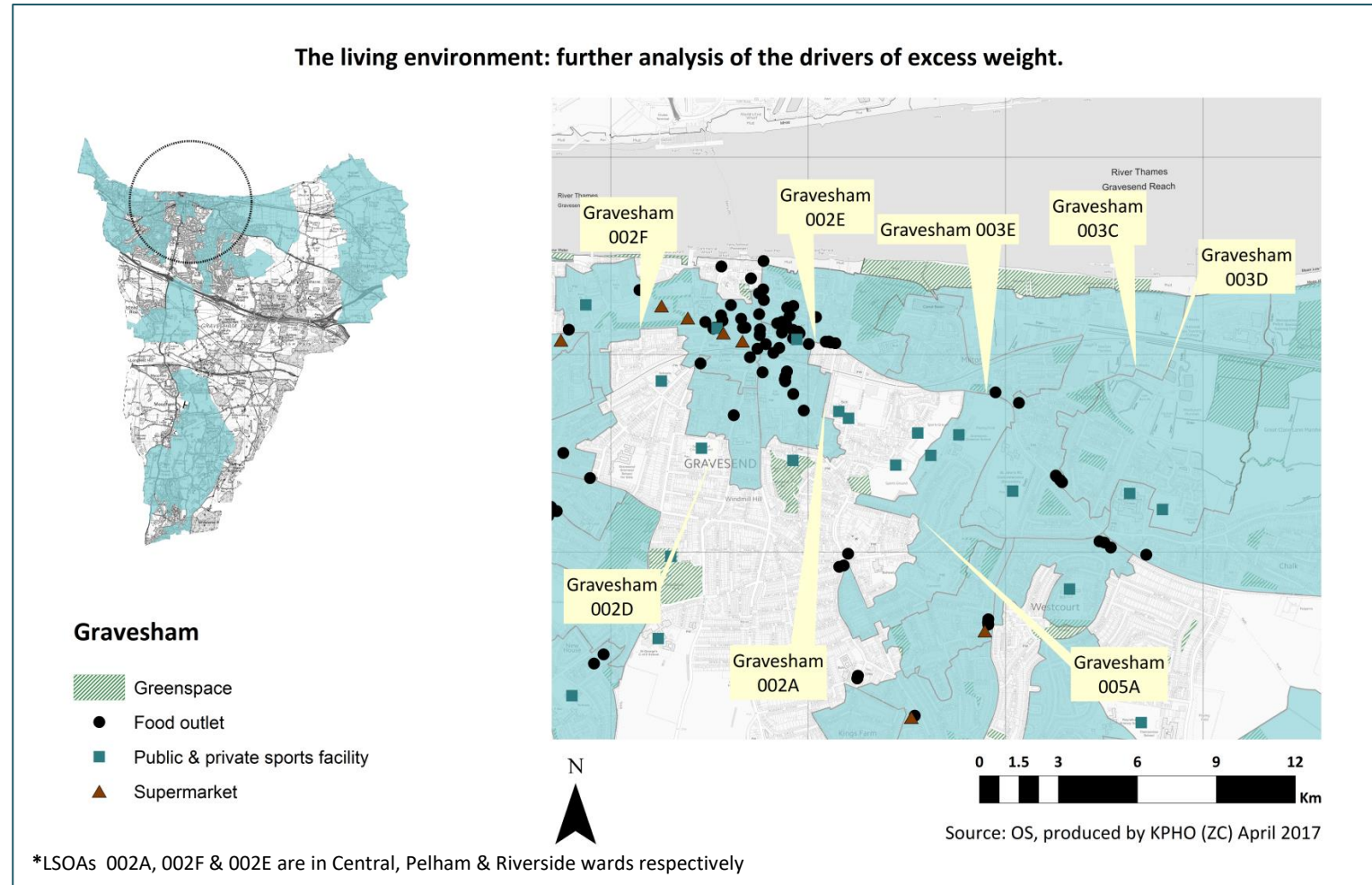
- Central
- Riverside
- Pelham

Parts of all wards* in most deprived decile Type 4

ETHNICITY:

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

Riverside ward has a high concentration of black individuals in the population.



THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban.
- Some evidence for lower access to supermarkets in parts of all wards* in this area.
- Very low percentage of the population with access to greenspace within Central ward.
- Smaller distances to nearest food outlet in LSOAs closer to Gravesend town.

| 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)