

## SWALE

# 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 Swale 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
E05005057	Borden	E01024554	Swale 009A	3		reception
E05005058	Boughton & Courtenay	E01024555	Swale 017A	3		year six
		E01024558	Swale 017D	3		reception
E05005059	Chalkwell	E01024560	Swale 012A	2		reception
E05005060	Davington Priory	E01024563	Swale 015D	1	3	year six
		E01024564	Swale 014A	4		year six
E05005061	East Downs	E01024565	Swale 016A	2		reception
E05005062	Grove	E01024567	Swale 009C	1		reception
E05005063	Hartlip, Newington & Upchurch	E01024570	Swale 008A	2		reception
		E01024571	Swale 008B	3		year six
		E01024572	Swale 008C	4		year six
		E01024573	Swale 008D	3		year six
E05005065	Kemsley	E01024577	Swale 007C	2		reception
E05005066	Leysdown & Warden	E01024580	Swale 006A	1	2	year six
		E01024581	Swale 006B	1	2	reception/ year six
E05005067	Milton Regis	E01024582	Swale 009E	2		reception
E05005068	Minster Cliffs	E01024587	Swale 003B	2		reception/ year six
E05005069	Murston	E01024592	Swale 011B	4		reception
		E01024593	Swale 011C	2		year six
E05005070	Queenborough & Halfway	E01024594	Swale 005A	3		reception/ year six
		E01024595	Swale 004A	2		reception
		E01024597	Swale 005C	1	3	year six
		E01024598	Swale 004B	2		year six
E05005071	Roman	E01024601	Swale 011E	2		reception
E05005072	St Ann's	E01024602	Swale 015E	3		year six

Ward Code	Ward Name	LSOA Code	LSOA Name	IMD Kent weighted quintile	Mind the Gap Type	Upper quartile excess weight
E05005073	St Michaels	E01024608	Swale 010E	1		reception
E05005074	Sheerness East	E01024610	Swale 001B	1	1	reception
		E01024611	Swale 001C	1	3	reception
		E01024612	Swale 001D	1	1	reception
		E01024613	Swale 002A	1	3	reception/ year six
		E01024614	Swale 002B	1	3	reception
		E01024615	Swale 002C	1	3	year six
E05005075	Sheerness West	E01024616	Swale 002D	1	3	reception/ year six
E05005076	Sheppey Central	E01024618	Swale 006D	1	2	year six

### WARDS:

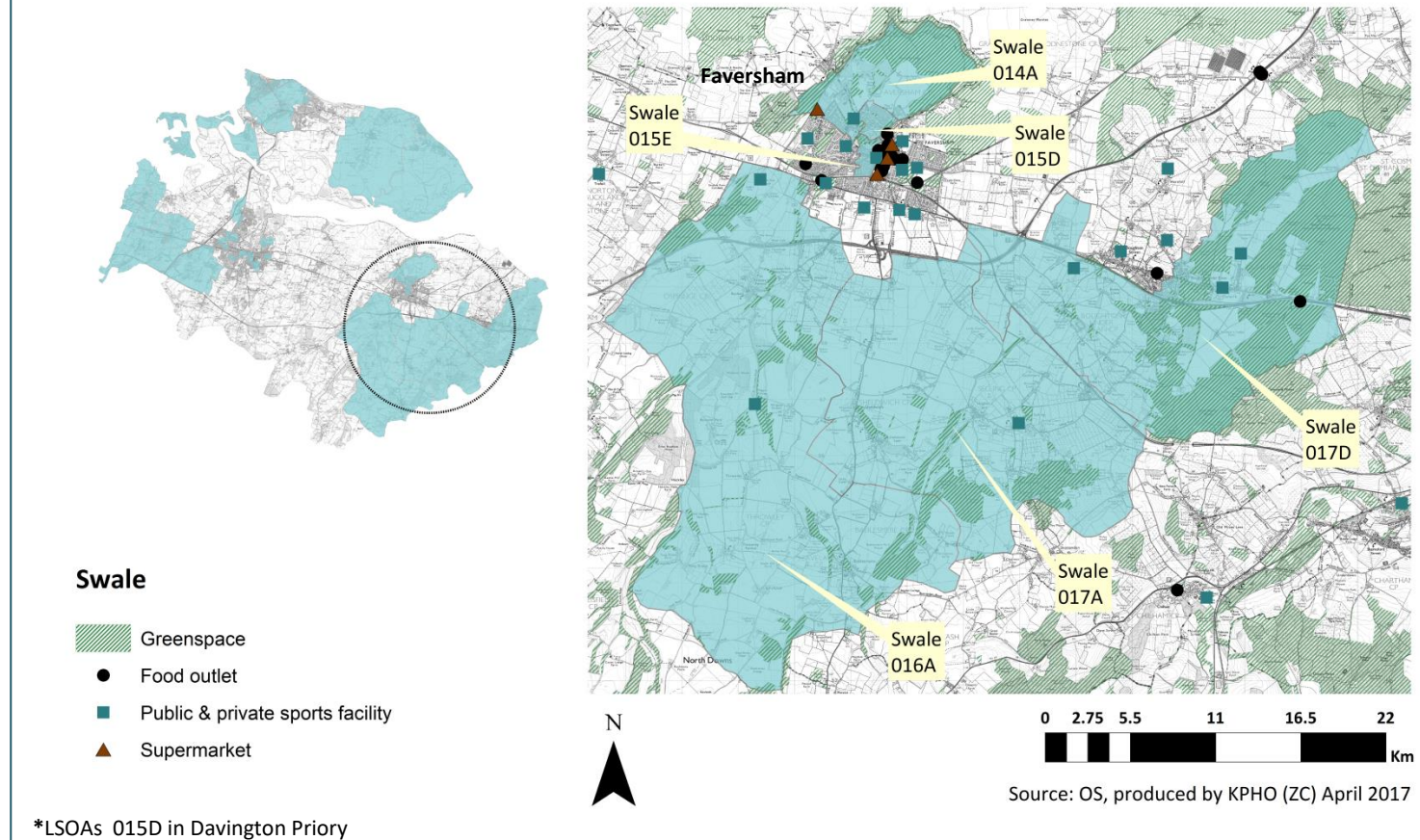
- Boughton & Courtenay,
- Davington Priory\*,
- East Downs,
- St Ann's,

\*in most deprived decile Type 3

### 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 near Faversham, whereas, Village in East Downs and Boughton & Courtenay.
- Some evidence for lower access to supermarkets within parts of Davington Priory (015D), driven by low car ownership. As well as, Boughton & Courtenay, driven by greater distance to nearest supermarket.
- Less than 50% of the population with access to greenspace. Distance to nearest food outlet within 1200m, except East Downs (016A).

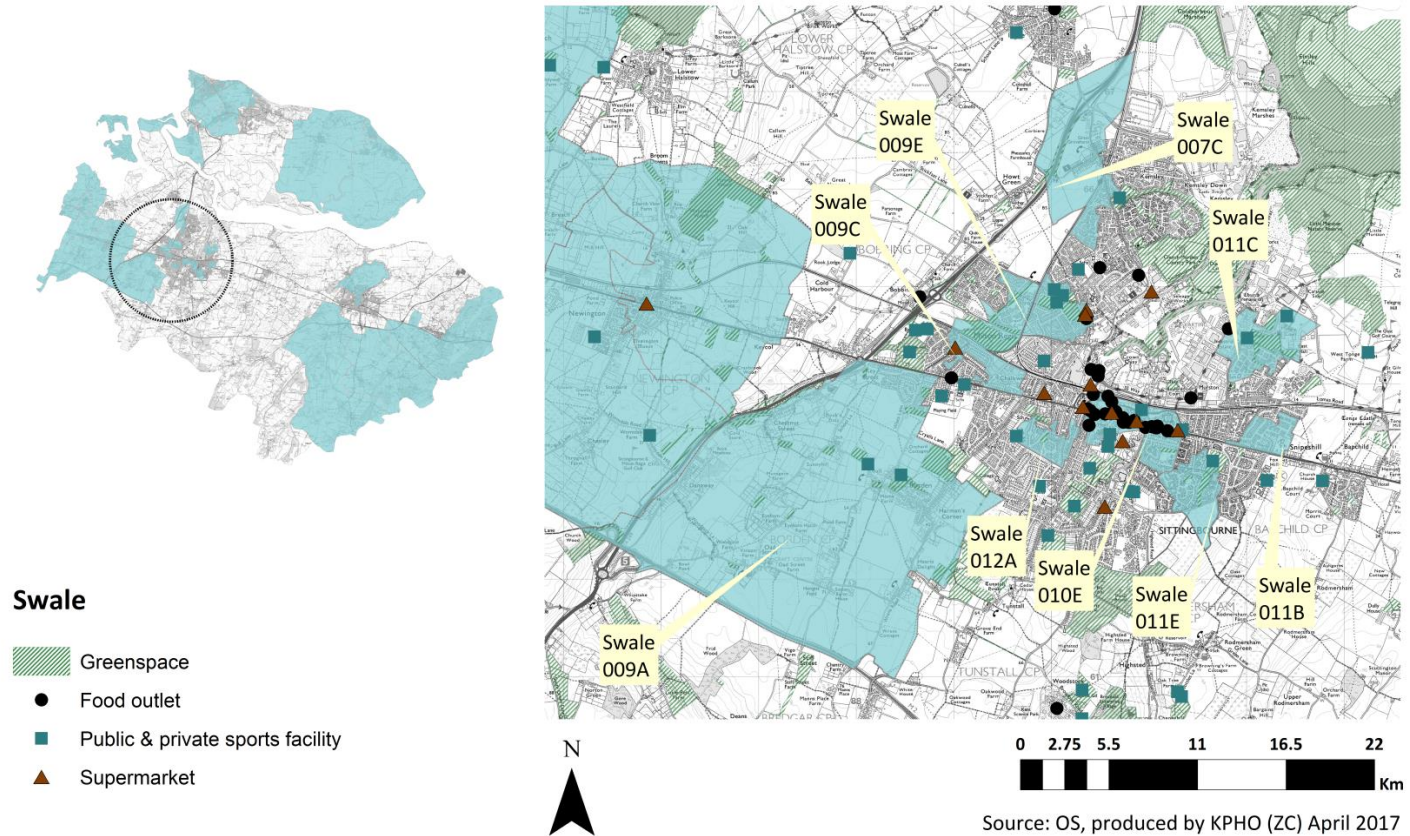
### WARDS:

- Borden,
- Chalkwell,
- Grove,
- Kemsley,
- Milton Regis,
- Murston,
- Roman,
- St. Michaels,

### ETHNICITY:

Some association between black ethnicity and excess weight. Some areas\* have a high concentration of black individuals in the population.

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



\*LSOAs 007C in Kemsley, 009C in Grove, 009E in Milton Regis, 010E in St. Michaels

### THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban, except for parts of Borden (009A) which is Village.
- Good access to supermarkets.
- Some areas with less than 50% of LSOA populations have access to greenspace in St Michael's (010E) and Chalkwell (012A).
- Distance to nearest food outlet within 1200m.



### WARDS:

- Hartlip, Newington & Upchurch,

### ETHNICITY:

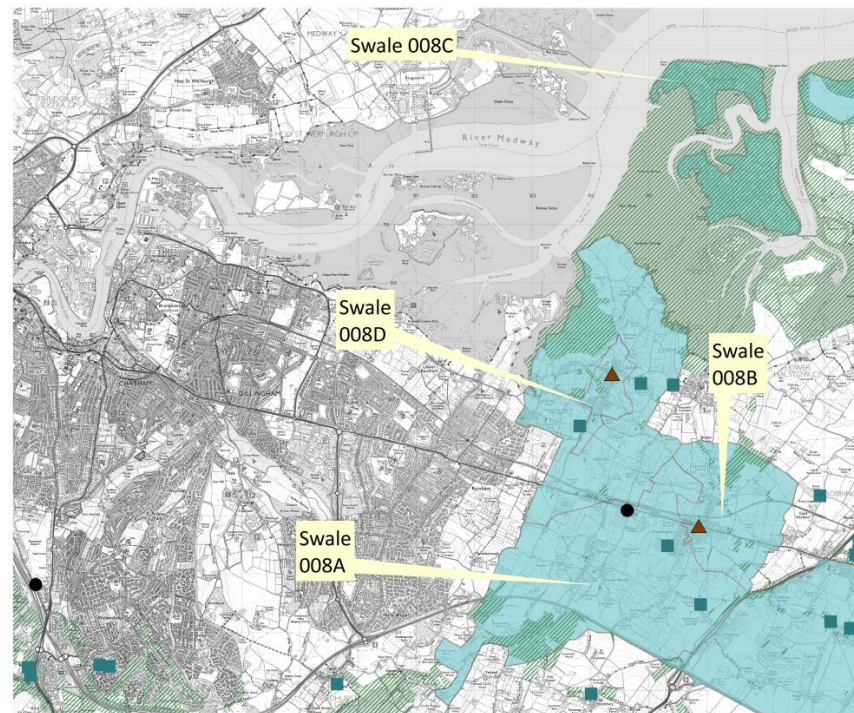
**Some** association between black ethnicity and excess weight. Not an area with high concentration of black individuals in the population.

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



#### Swale

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



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

\*in most deprived decile: 003C in Folkestone East, 004B in Folkestone Foord, 014C in Folkestone Harvey Central

### THE LIVING ENVIRONMENT:

- Rural and urban classification is Town & Fringe and Village.
- Low access to supermarkets.
- Less than 50% of the population with access to greenspace.
- Distance to nearest food outlet greater than 1200m.

### WARDS:

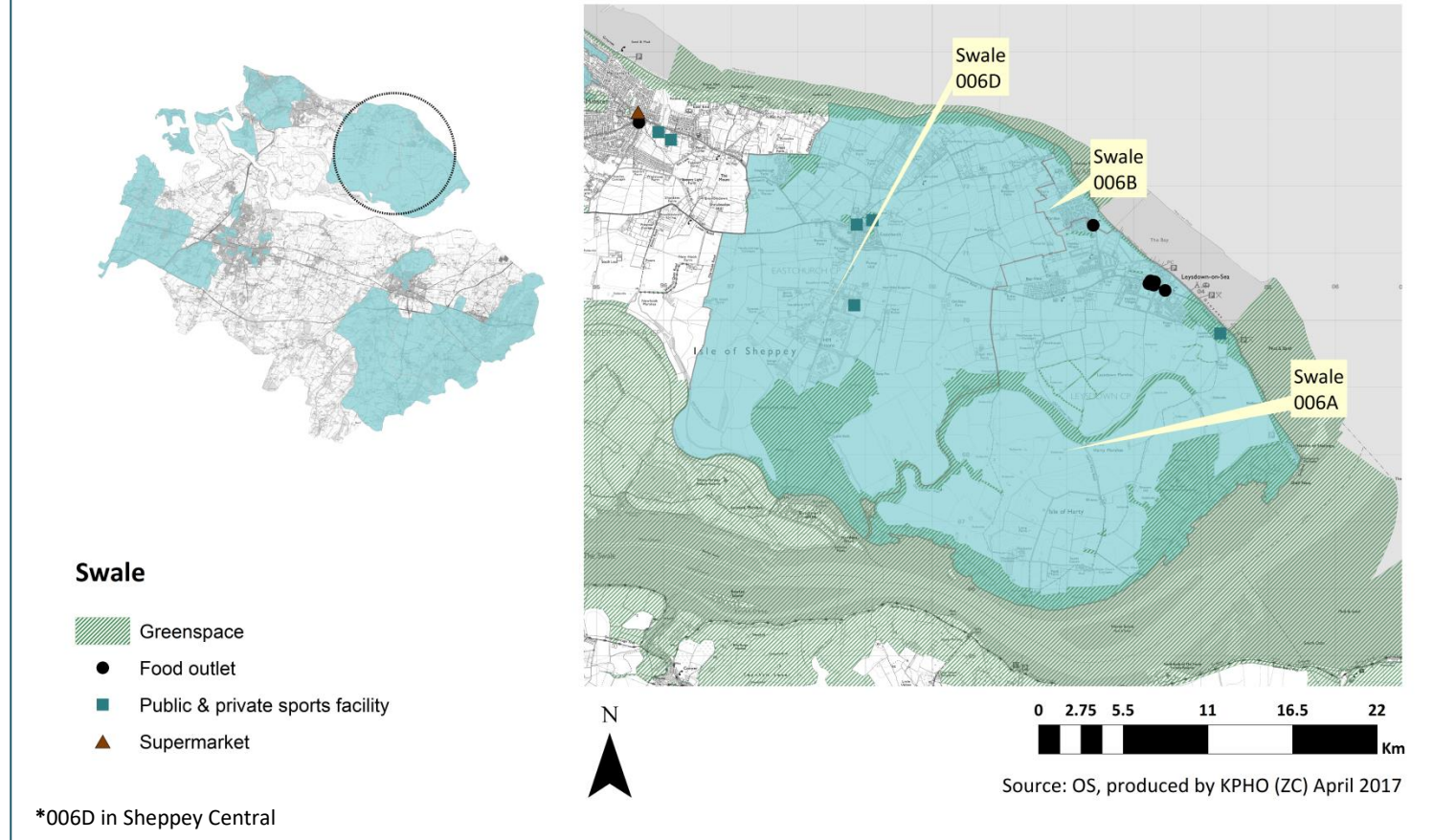
- Leysdown & Warden,
- Sheppey Central,

In most deprived decile Type 2

### ETHNICITY:

**Some** association between black ethnicity and excess weight. **Some areas\*** have a 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 Town & Fringe (006B) and Village in remaining areas.
- Low 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 within 1200m in Leysdown & Warden (006A & 006B), but not in Sheppey Central.

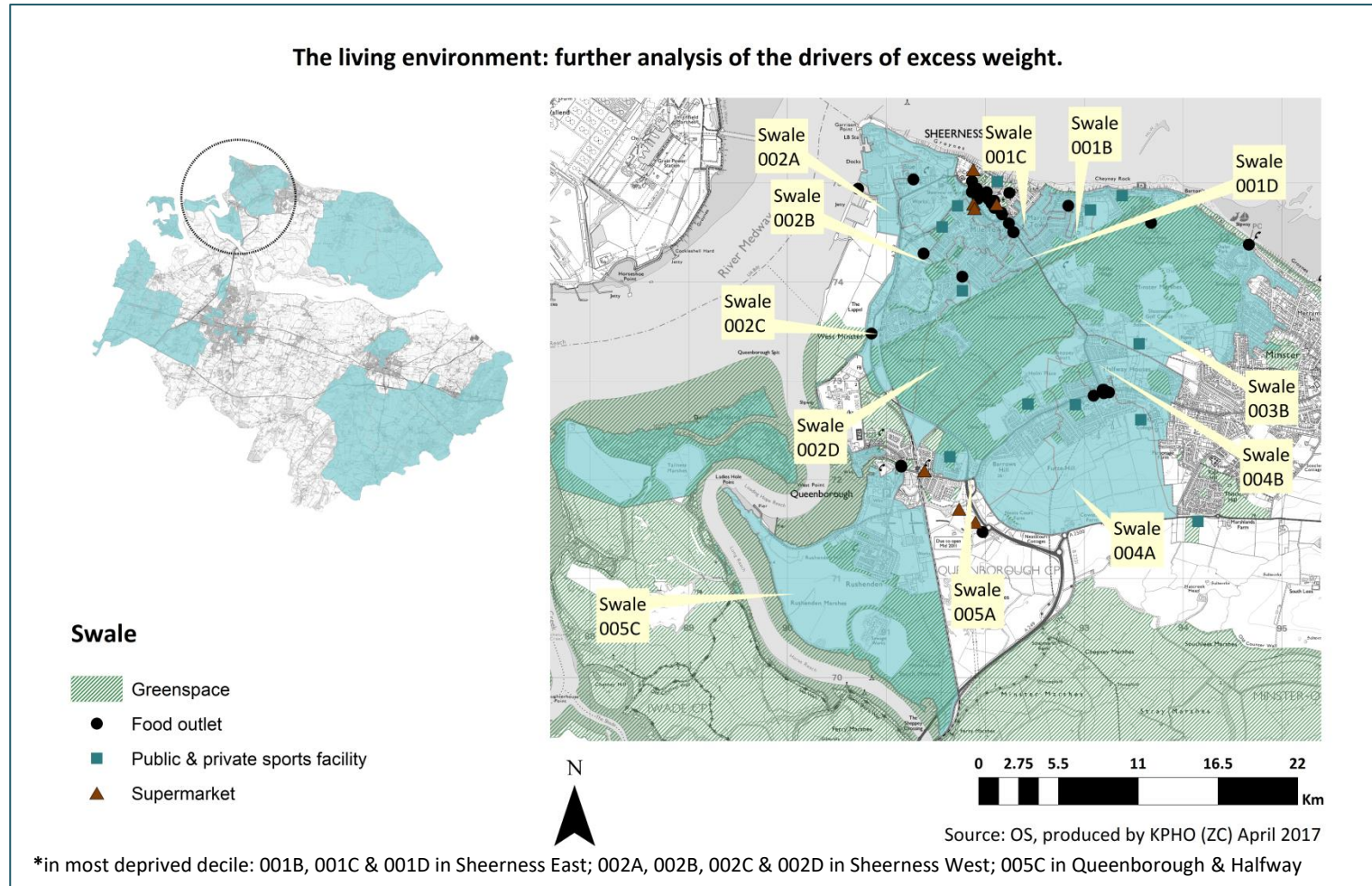
### WARDS:

- Minster Cliffs,
- Queenborough & Halfway\*,
- Sheerness East\*,
- Sheerness West\*,

\*parts in most deprived decile 2

### ETHNICITY:

Some association between black ethnicity and excess weight. **Some areas\*** have a high concentration of black individuals in the population.



### THE LIVING ENVIRONMENT:

- Rural and urban classification is Urban.
- Low access to supermarkets mainly in LSOAs in most deprived decile, driven by low car ownership.
- Less than 50% of the population with access to greenspace within Sheerness East and Minster Cliffs (003B).
- Distance to nearest food outlet within 1200m.

## | 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)