



## **Thurrock Flexible Generation Plant**

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### **Preliminary Environmental Information Report Appendix 13.1: Human Health Baseline**

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**Date:** September 2018

<Thurrock Power logo to be added>

**Environmental Impact Assessment**  
**Preliminary Environmental Information Report**

**Volume 6**

**Appendix 13.1**

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## Summary

This appendix reports the extensive collection and analysis of public health and socio-economic baseline statistics used within the Human Health chapter to define local health and socio-economic circumstance.

## Qualifications

This document has been prepared by Tara Barratt, a Health Impact Assessment (HIA) Consultant with an MSc in Environmental Technology and two years' experience. Tara is an Associate Member of the Institute of Environmental Management and Assessment (IEMA) and contributor to the IEMA Health in EIA Working Group.

It has been reviewed by Dr Andrew Buroni, RPS' Health and Social Impact Assessment Practice Leader with two decades' experience. Dr Buroni holds a PhD on international Health and Impact Assessment methods and best practice, a Masters in Environmental Impact Assessment and BSc (Hons) in Biological sciences. He is a Fellow of the Royal Society of Medicine (RSM) and Royal Society for Public Health (RSPH) and sits on the IEMA Health in EIA Working Group.

## 13. Human Health Baseline

### 13.1 Introduction

13.1.1 Evidence suggests that different communities have varying susceptibilities to health impacts and benefits as a result of social and demographic structure, behaviour and relative economic circumstance. The aim of the following information which makes up this human health baseline, is to put into context the local health circumstance of communities likely to be affected by the Proposed Development.

13.1.2 Health-specific indicators are collected for Thurrock Borough Council, or Thurrock Clinical Commissioning Group (CCG) where applicable, which is considered representative of communities in proximity to the Proposed Development for environmental health pathways due to the local nature of their effects. Socio-economic indicators include statistics at the county (Essex) geographic level in order to reflect the wider-reaching sphere of influence that income and employment opportunities provide.

### 13.2 Life expectancy and healthy life expectancy

13.2.1 Both male and female life expectancy within Thurrock are below the regional and national averages. There is particular disparity between the average life expectancy within Thurrock and the regional average. Female Healthy Life Expectancy (HLE) follows this trend and is generally lower than the regional and national average (in all years recorded below bar 2011-13). Male HLE has been increasing over the years to above the regional and national average.

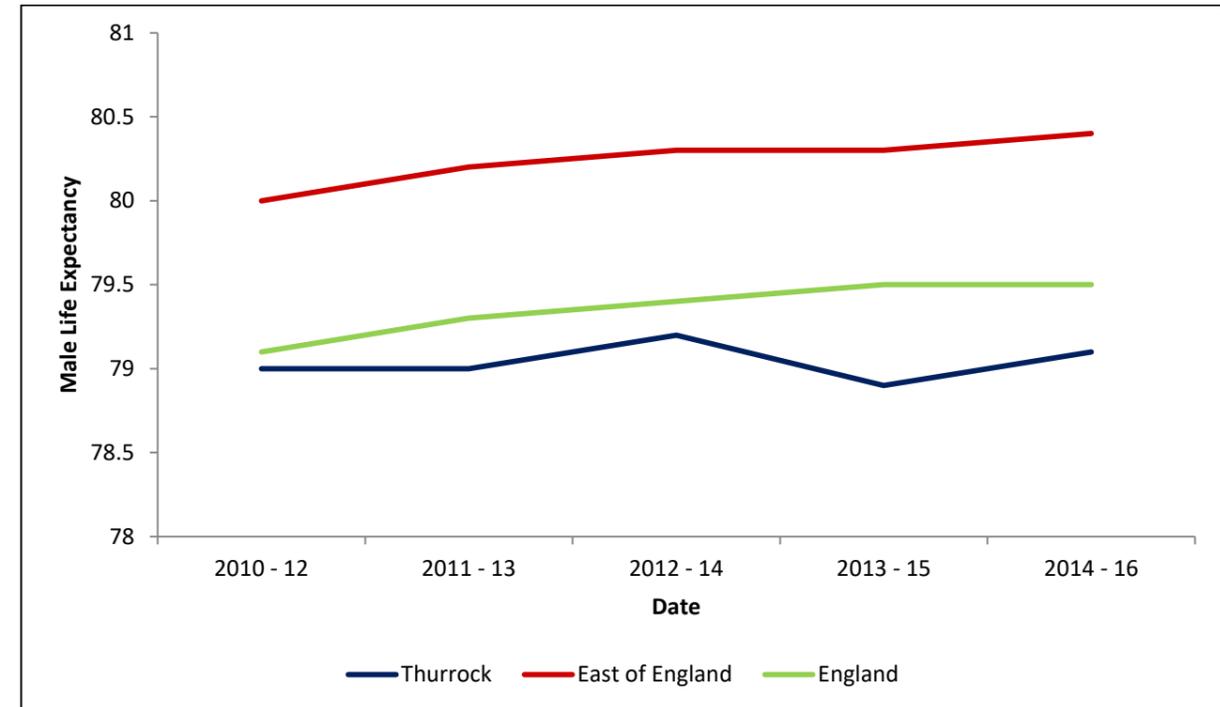


Figure 13.1: Male life expectancy

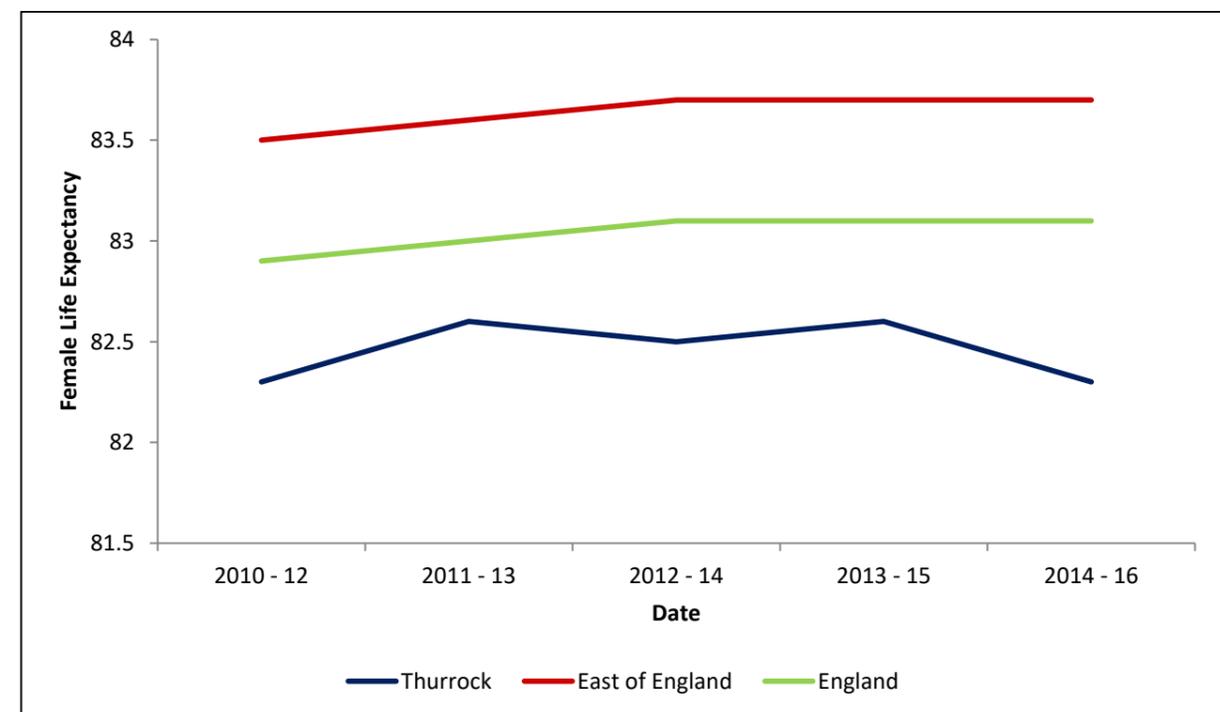


Figure 13.2: Female life expectancy

### 13.3 Mental health

13.3.1 Within Thurrock, depression recorded incidence has remained relatively static over the years compared to the regional and national averages which have been gradually increasing. Dementia recorded prevalence within Thurrock CCG is below both the regional and national average by 0.1% and 0.3% respectively.

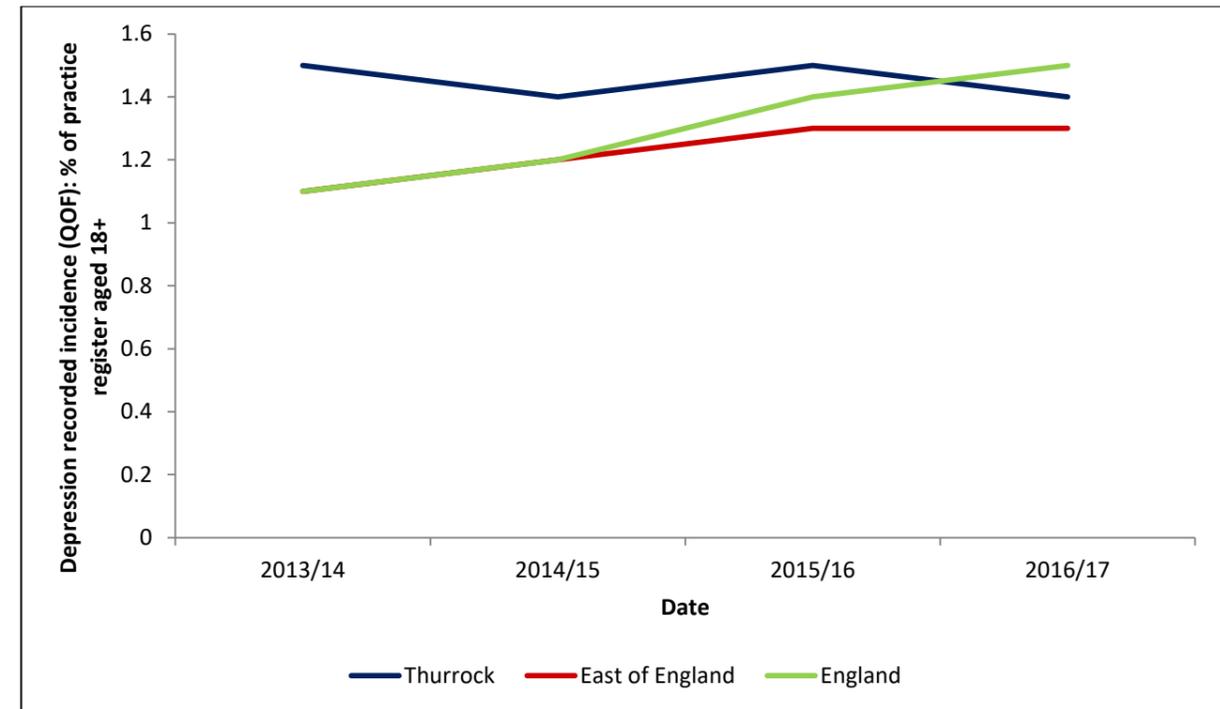


Figure 13.5: Depression recorded incidence

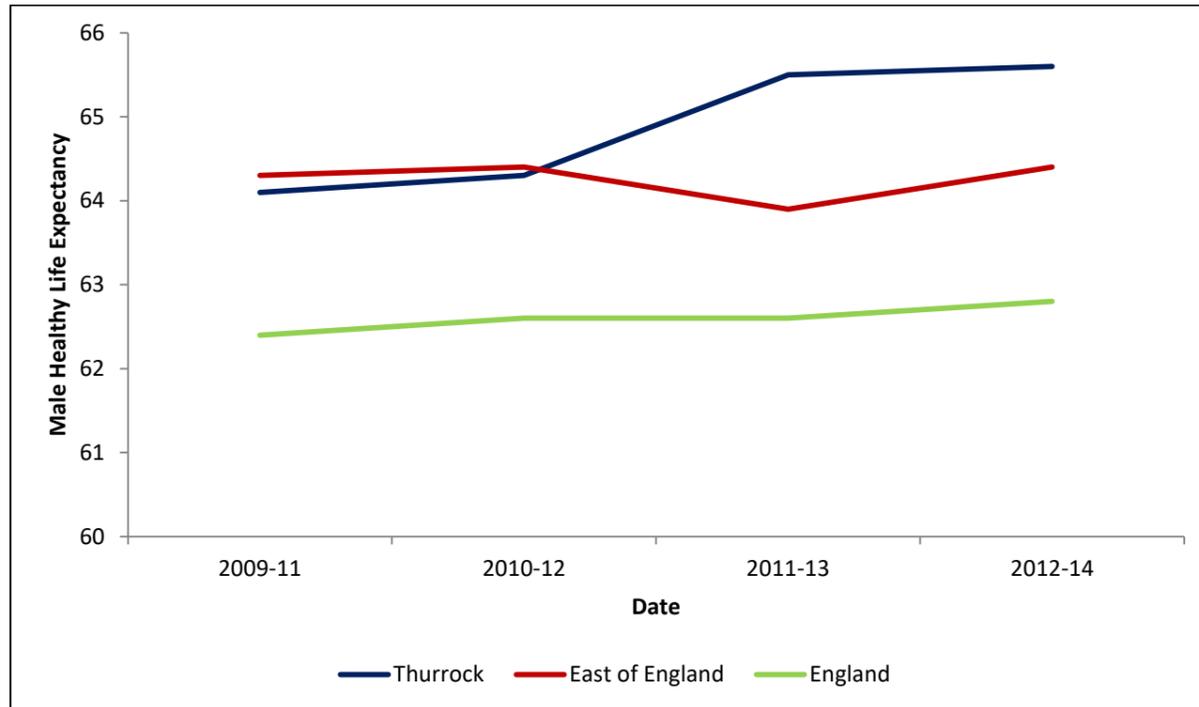


Figure 13.3: Male healthy life expectancy

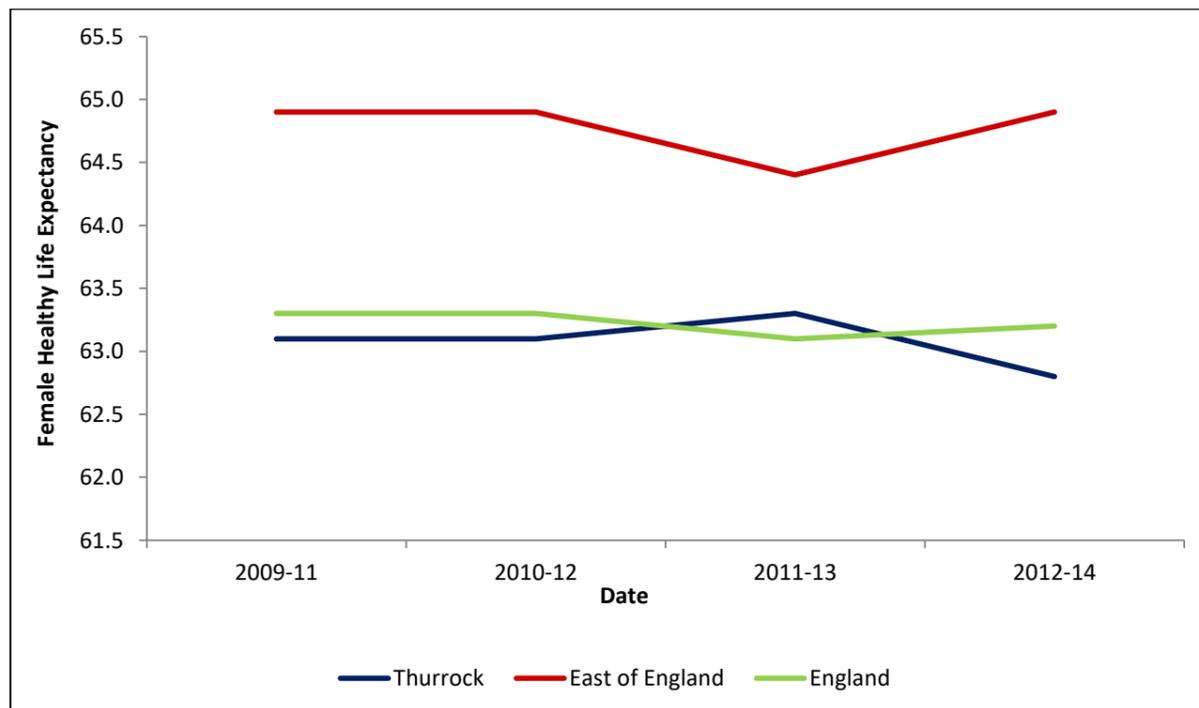


Figure 13.4: Female healthy life expectancy

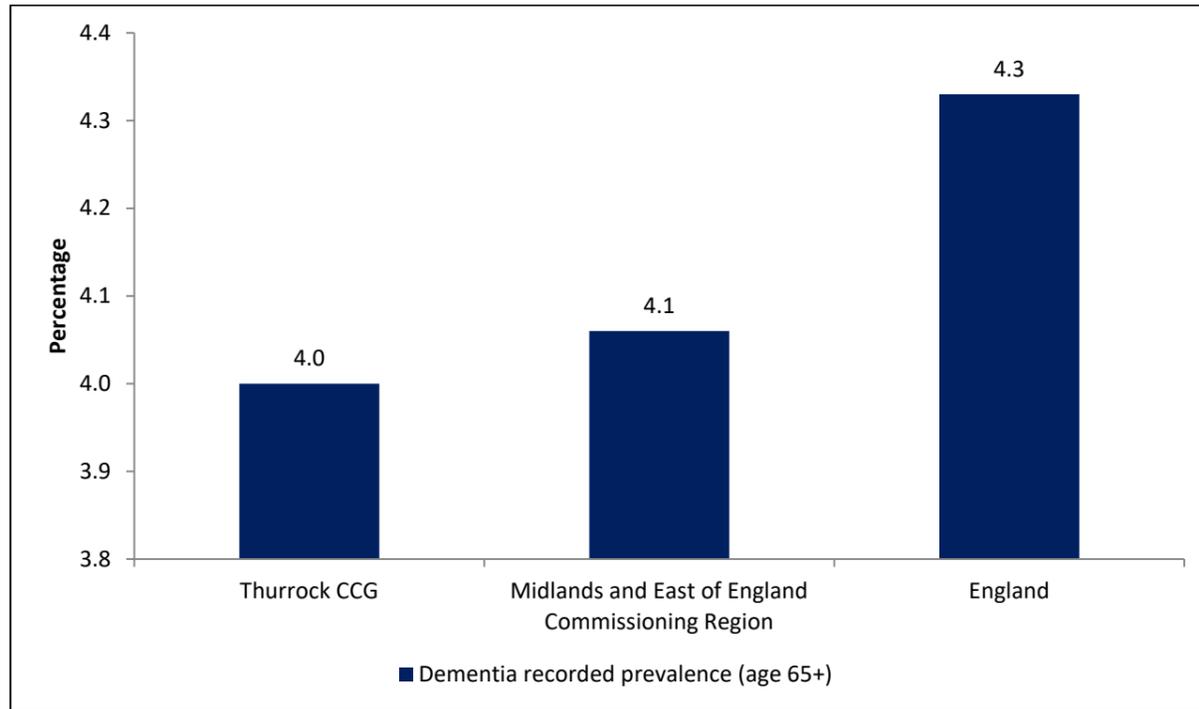


Figure 13.6: Dementia recorded prevalence

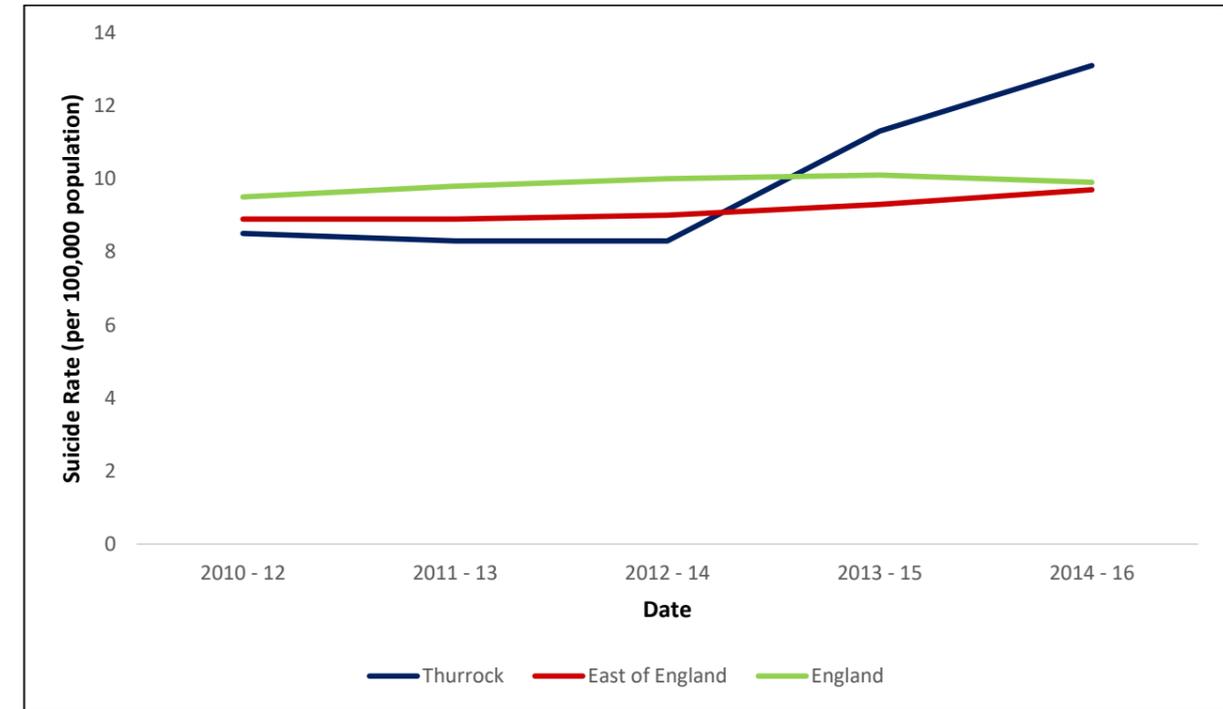


Figure 13.7: Suicide rate

- 13.3.2 Between the years of 2012-12 and 2011-13, suicide rate within Thurrock was below the regional and national average. Since 2012-14, suicide rate has been increasing to above the regional and national averages which have remained relatively static.
- 13.3.3 Hospital stays for self-harm within Thurrock are consistently below the regional and national average by approximately 100 people per 100,000 population. Over the years, the rate of hospital stays for self-harm have remained relatively static at all geographic levels.

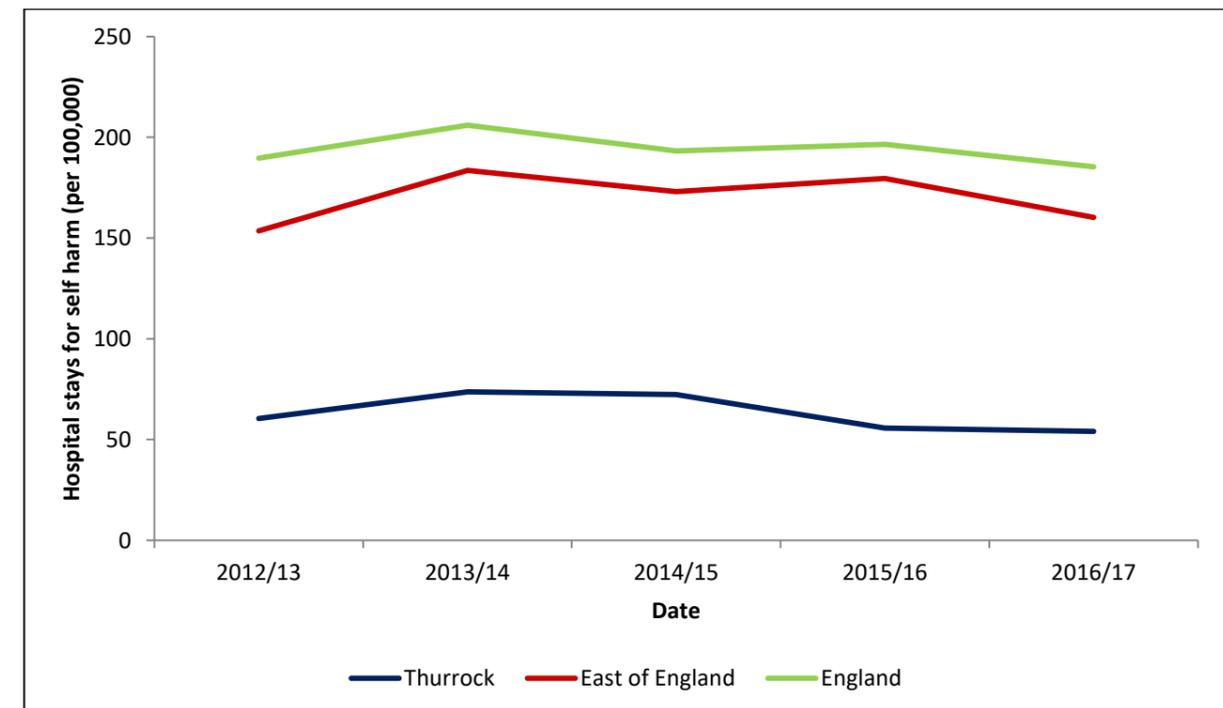


Figure 13.8: Hospital stays for self-harm

## 13.4 Physical health

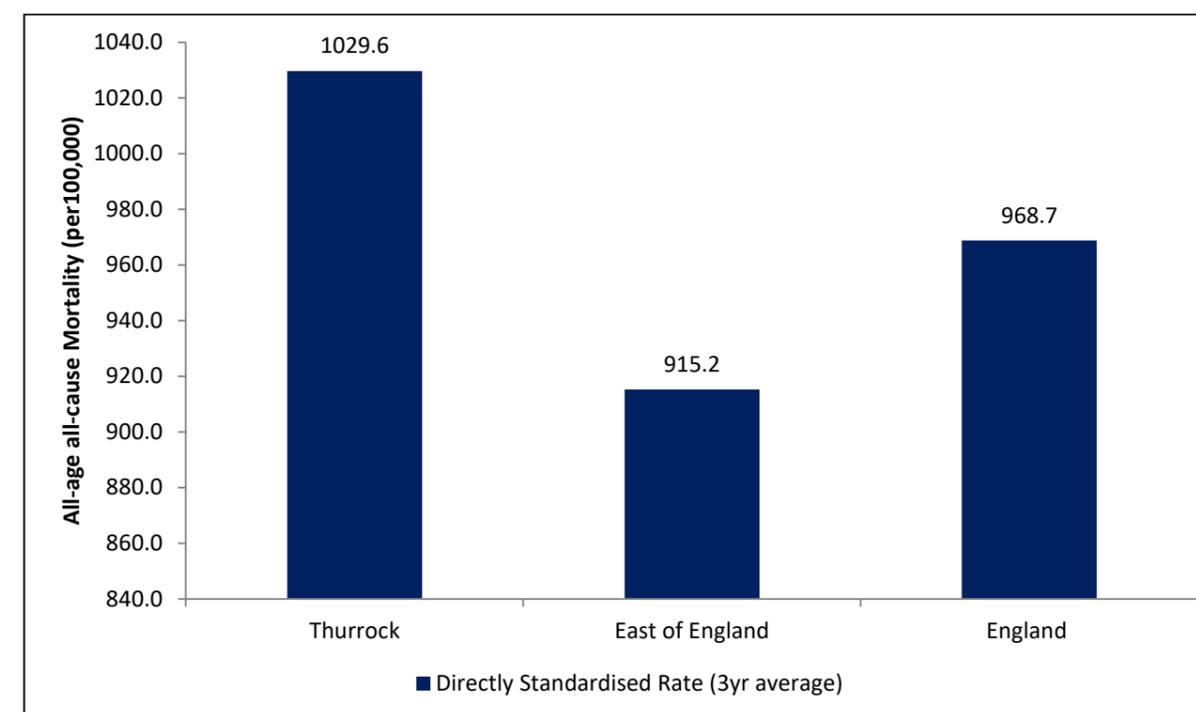
13.4.1 Emergency hospital admissions for a variety of respiratory and cardiovascular diseases and conditions are higher in Thurrock compared to the national average. There is a larger disparity between Thurrock health circumstance and the national average for diseases of the respiratory system compared to for cardiovascular diseases.

**Table 13.1: Emergency hospital admissions**

ICD Code	Disease	Emergency Hospital Admissions Incidence Rate (per 100,000)	
		Thurrock	England
<b>Cardiovascular</b>			
I00-I09	Rheumatic heart disease	2.6	2.6
I10-I15	Hypertensive diseases	23.4	23.2
I20-I25	Ischaemic heart diseases	251.3	249.1
I26-I28	Pulmonary heart disease & diseases of pulmonary circulation	48.8	48.3
I30-I52	Other forms of heart disease	329.7	326.7
I60-I69	Cerebrovascular diseases	168.2	166.7
I70-I79	Diseases of arteries, arterioles & capillaries	39.0	38.7
I80-I89	Diseases of veins & lymphatic system nec.	73.7	73.0
I95-I99	Other & unspecified disorders of the circulatory system	41.7	41.3
<b>Respiratory</b>			
J00-J06	Acute upper respiratory infections	264.7	223.2
J09-J18	Influenza & pneumonia	516.2	435.2
J20-J22	Other acute lower respiratory infections	320.5	270.3

J30-J39	Other diseases of upper respiratory tract	33.5	28.2
J40-J47	Chronic lower respiratory diseases	422.4	356.1
J60-J70	Lung diseases due to external agents	44.1	37.2
J80-J99	Other diseases of the respiratory system	96.1	81.0

The all-age all-cause mortality rate within Thurrock is higher than both the regional and national average by approximately 115 and 60 people per 100,000 population respectively. Cardiovascular diseases and cancer mortality rates within Thurrock have been consistently higher than the regional and national averages over the years and have shown slight decreases. In all years other than 2012, respiratory disease mortality rate within Thurrock has also been higher than the national average (no regional comparison available), and has been increasing.



**Figure 13.9: All-age all-cause mortality**

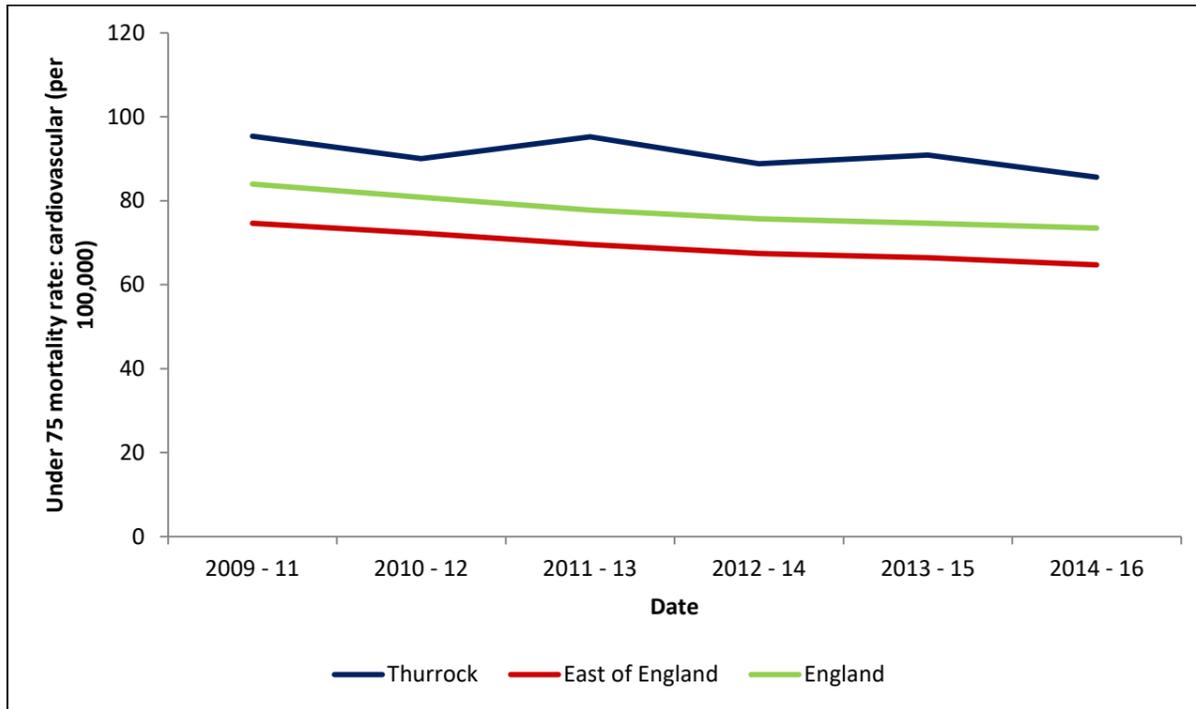


Figure 13.10: Cardiovascular mortality

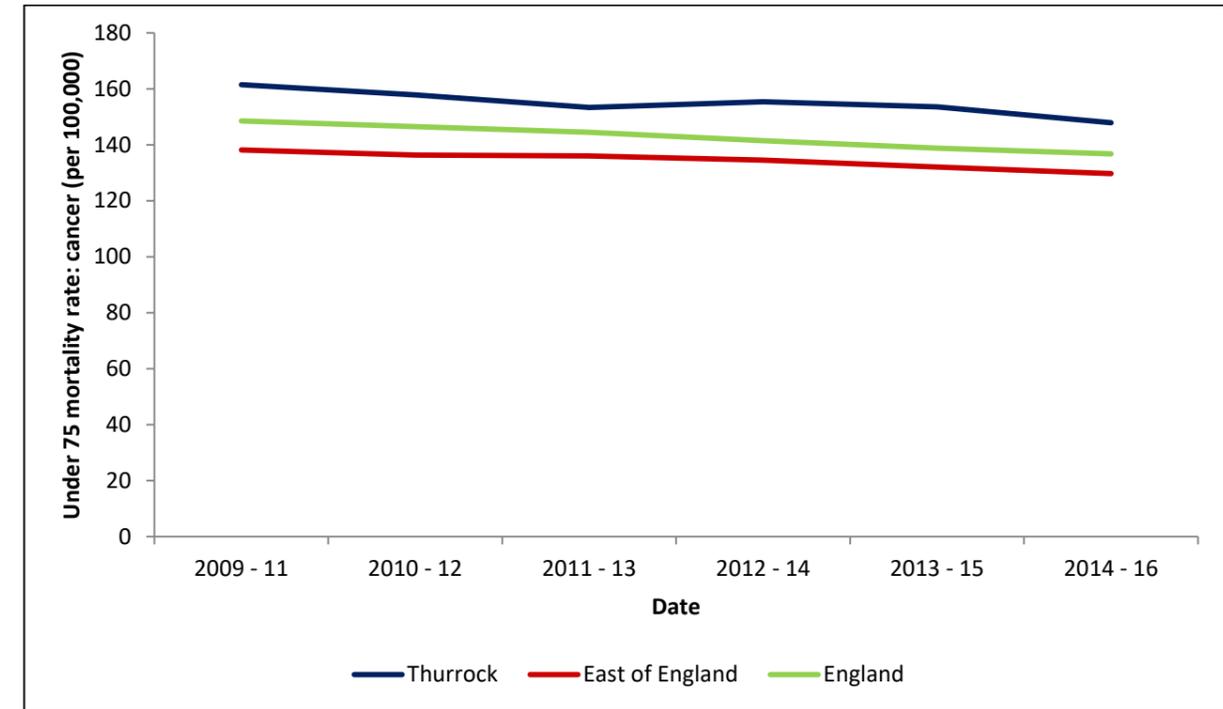


Figure 13.12: Cancer mortality

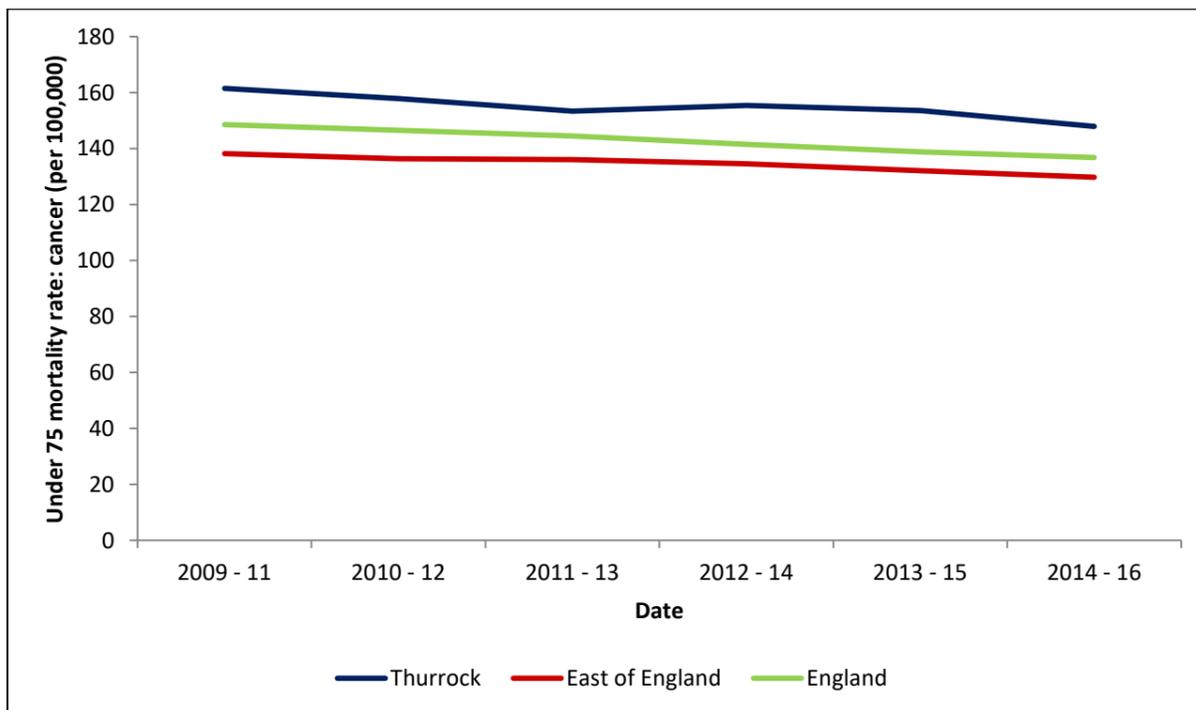


Figure 13.11: Respiratory mortality

### 13.5 Lifestyle

- 13.5.1 The proportion of obese children and excess weight in adults is higher than the regional and national averages and is increasing. The proportion of adults meeting the recommended weekly duration of physical activity is below the regional and national averages which mirrors the obesity and excess weight statistics.
- 13.5.2 Between the years of 2013 and 2015 there was an increase in smoking prevalence within Thurrock going against the regional and national decreasing trends. Since 2015, there has been a gradual decrease in smoking prevalence within Thurrock. In all years, smoking prevalence within Thurrock is consistently higher than the regional and national average.
- 13.5.3 Hospital stays for alcohol-related harm within Thurrock are consistently below the regional and national averages and since 2014/15 has shown a gradual decrease.

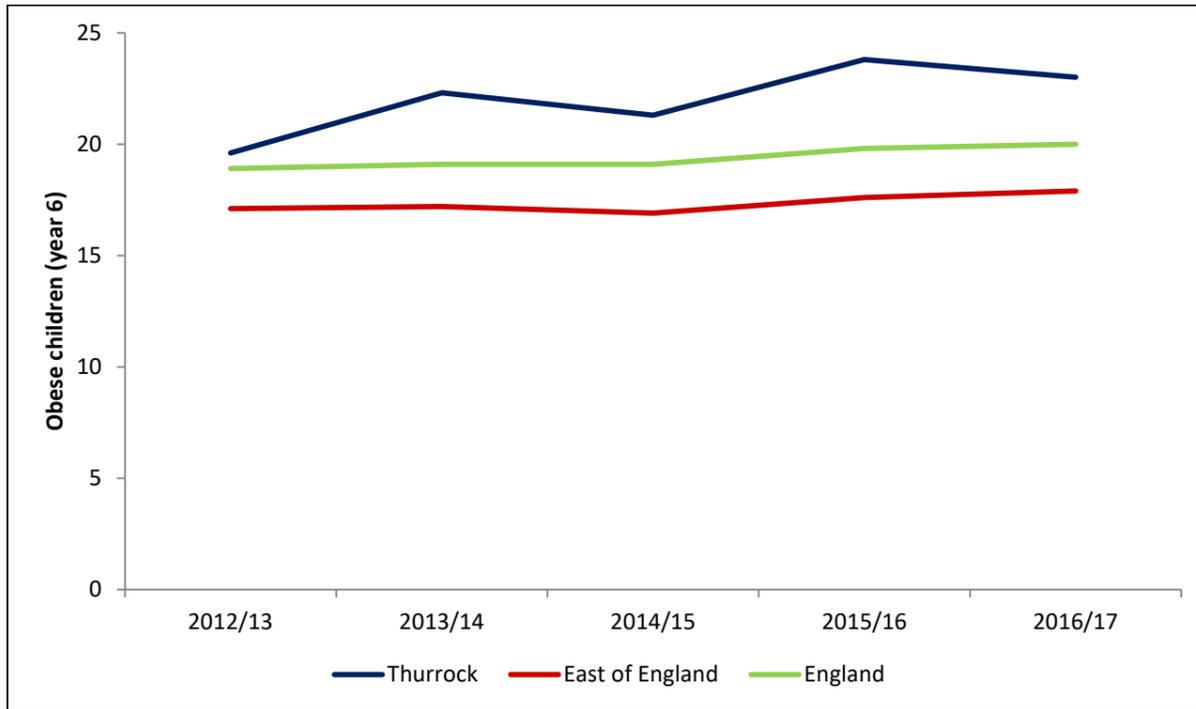


Figure 13.13: Childhood obesity

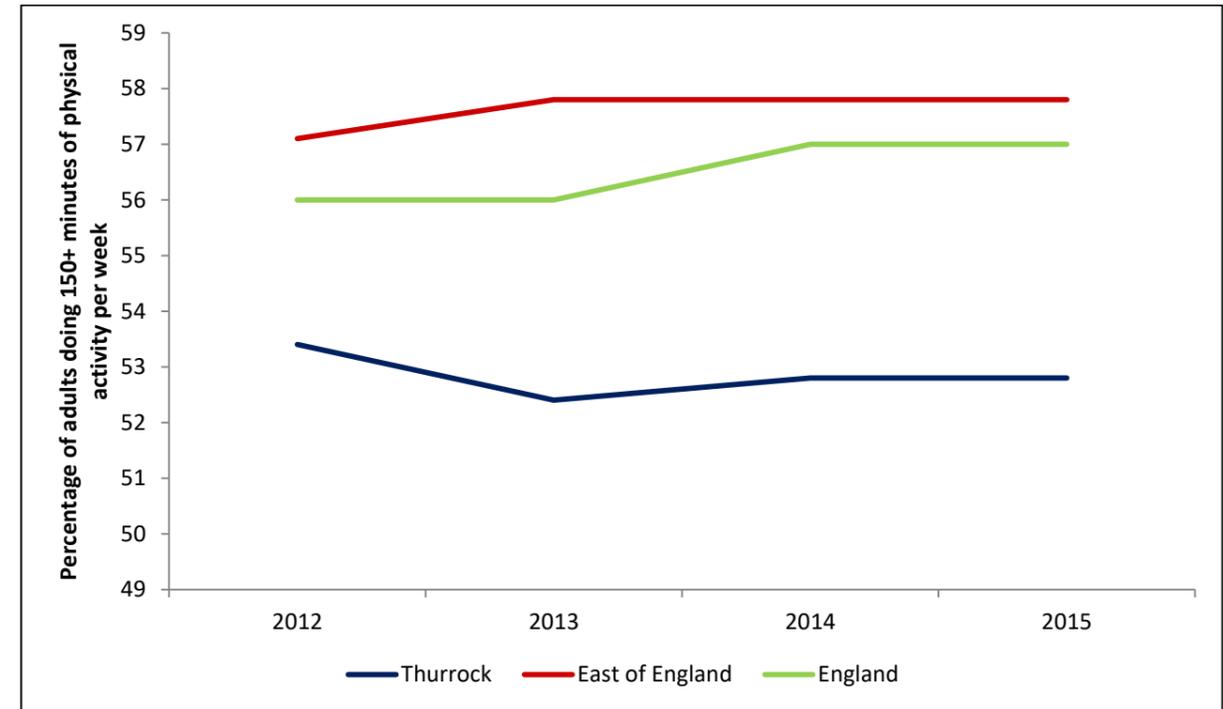


Figure 13.15: Physical activity participation

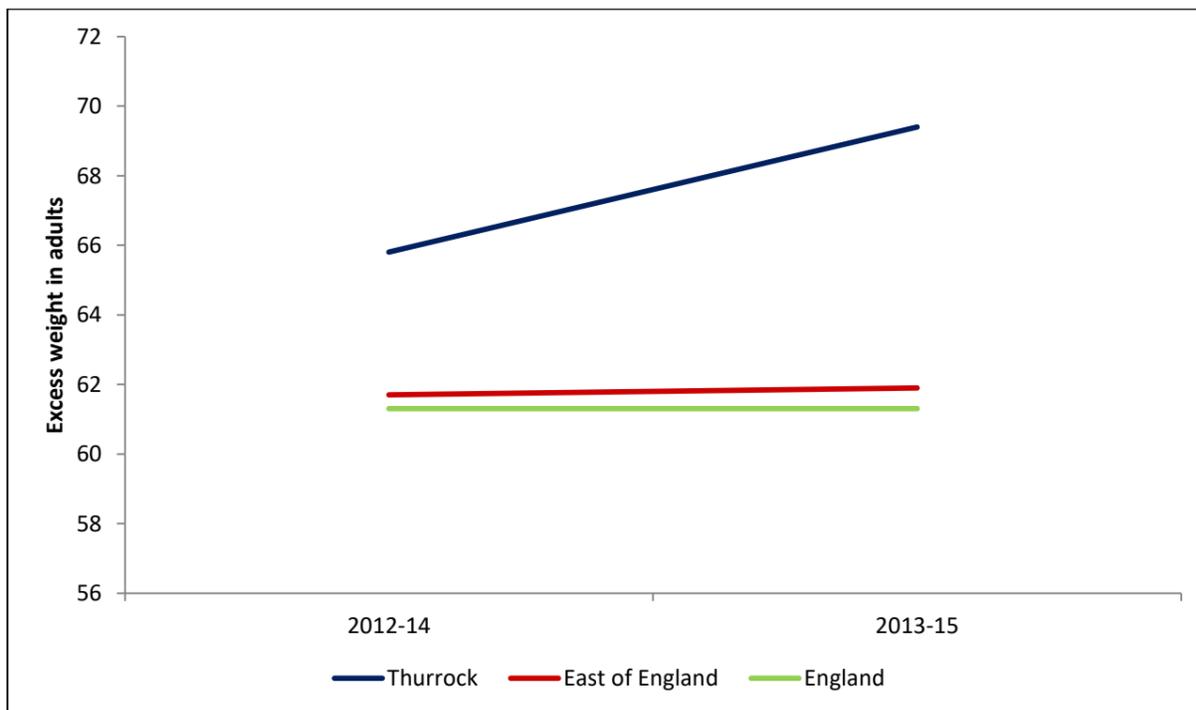


Figure 13.14: Excess weight in adults

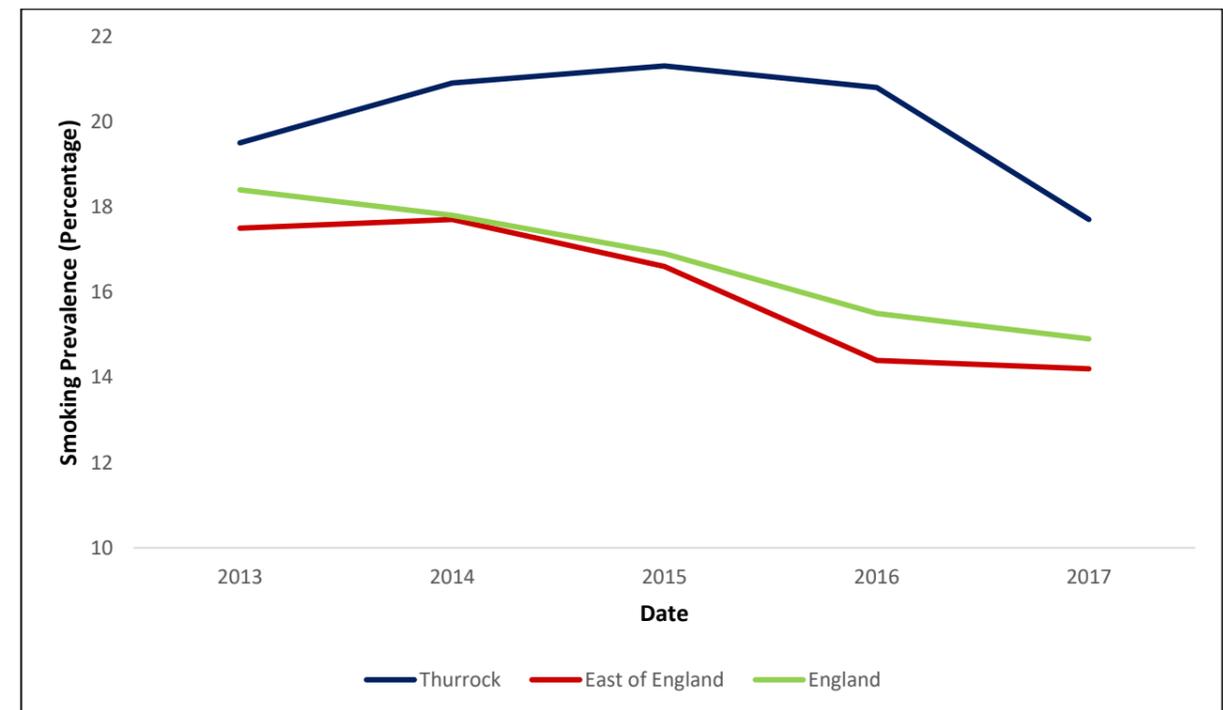


Figure 13.16: Smoking prevalence

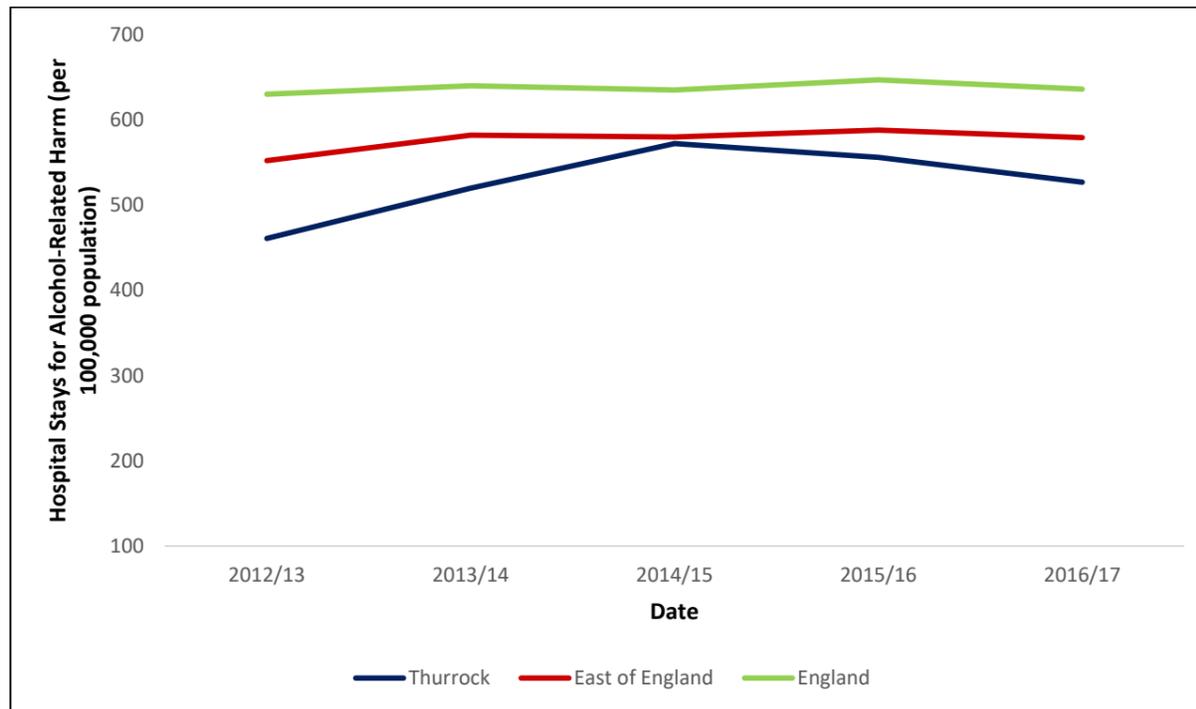


Figure 13.17: Hospital stays for alcohol-related harm

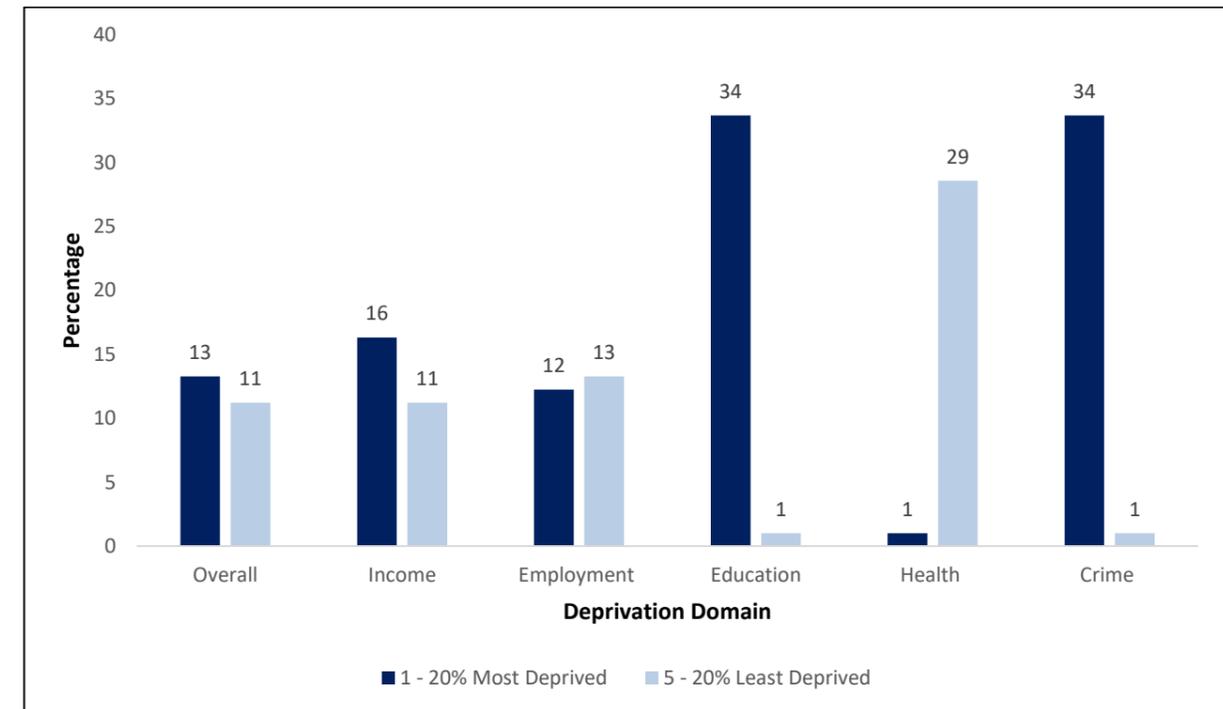


Figure 13.18: Deprivation summary

## 13.6 Deprivation

- 13.6.1 The IMD is produced at Lower Super Output Area (LSOA) level, of which there are 32,482 in the country, and the LSOAs are ranked dependent on their relative level of deprivation. Deprivation scores are produced for seven separate domains comprising employment, income, education, proximity to services, living environment, crime and disorder, and the existing burden of poor health. While each domain can be represented individually, they can also be combined to produce an overall score. In this case, the 'barriers to housing and services' and 'living environment deprivation' domains are not analysed individually but are still incorporated into the overall deprivation score.
- 13.6.2 Analysis shows that overall, there is a larger proportion of LSOAs categorised within the 20% most deprived nationally compared to the 20% least deprived nationally. The education and crime domains are the most deprived within Thurrock, while the health domain is the least deprived within Thurrock.

## 13.7 Socio-economic indicators

- 13.7.1 Employment statistics show that the percentage of the population within Thurrock who are employed is equal to the national average but lower than the county and regional average. Unemployment within Thurrock is relatively similar to the average at county, regional and national levels. The proportion of the population within Thurrock who are claiming jobseekers allowance is decreasing but remains consistently higher or equal to than the county, regional and national averages.
- 13.7.2 Median income levels within Thurrock for full time employees is generally increasing but remains consistently below the county, regional and national averages.
- 13.7.3 Qualification attainment within Thurrock is lower for NVQ1+ to NVQ4+ level of qualification compared to the county, regional and national averages. However, the proportion of the population achieving "other" qualifications is higher than the county, regional and national averages. The proportion of the population with no qualifications is 5% higher than the county and regional averages, and 4% higher than the national average.

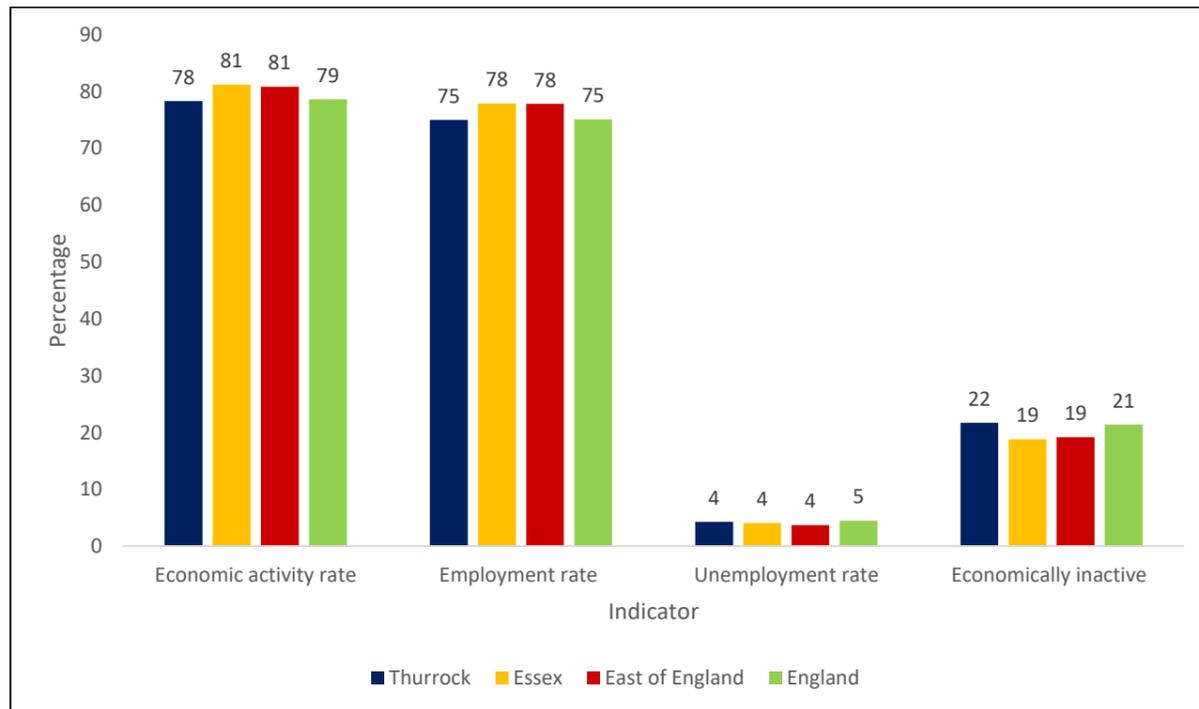


Figure 13.19: Employment statistics

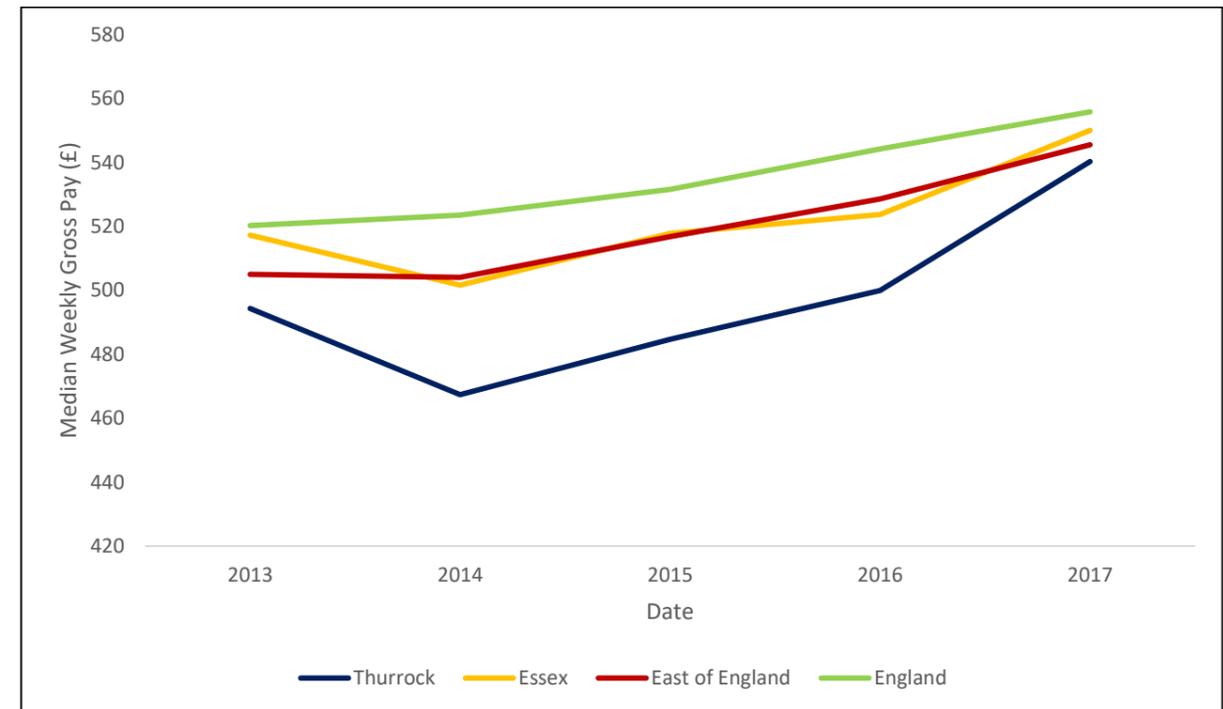


Figure 13.21: Income

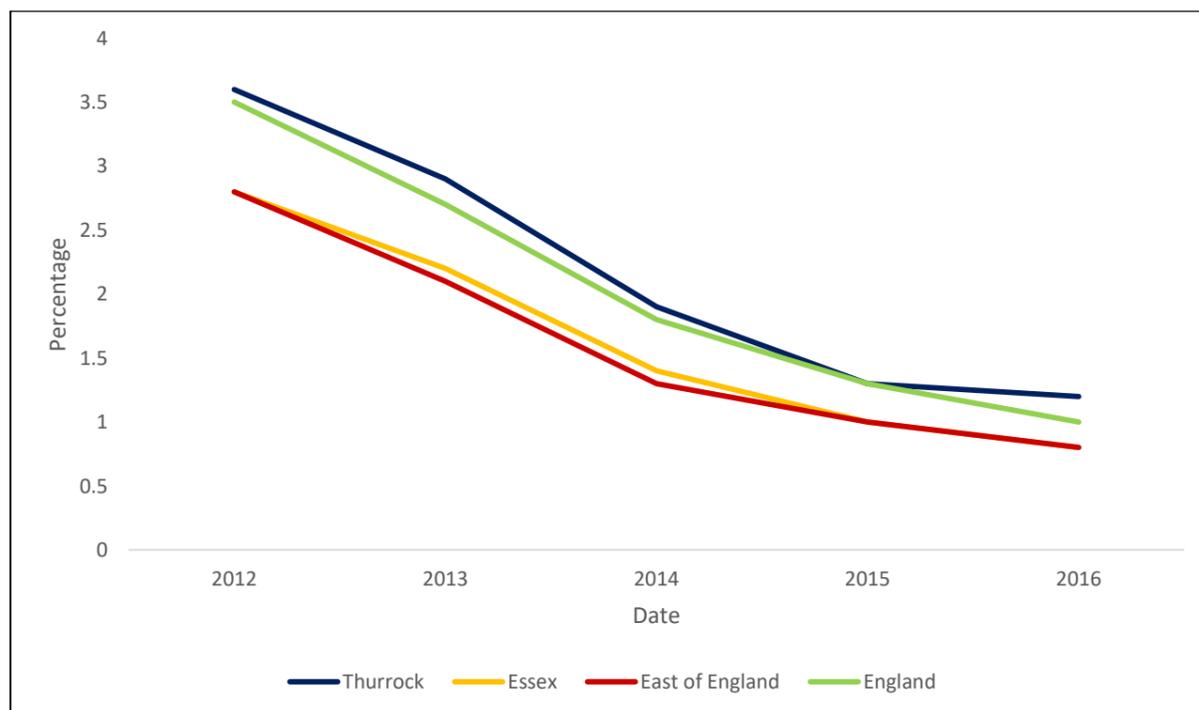


Figure 13.20: Job seekers allowance claimants

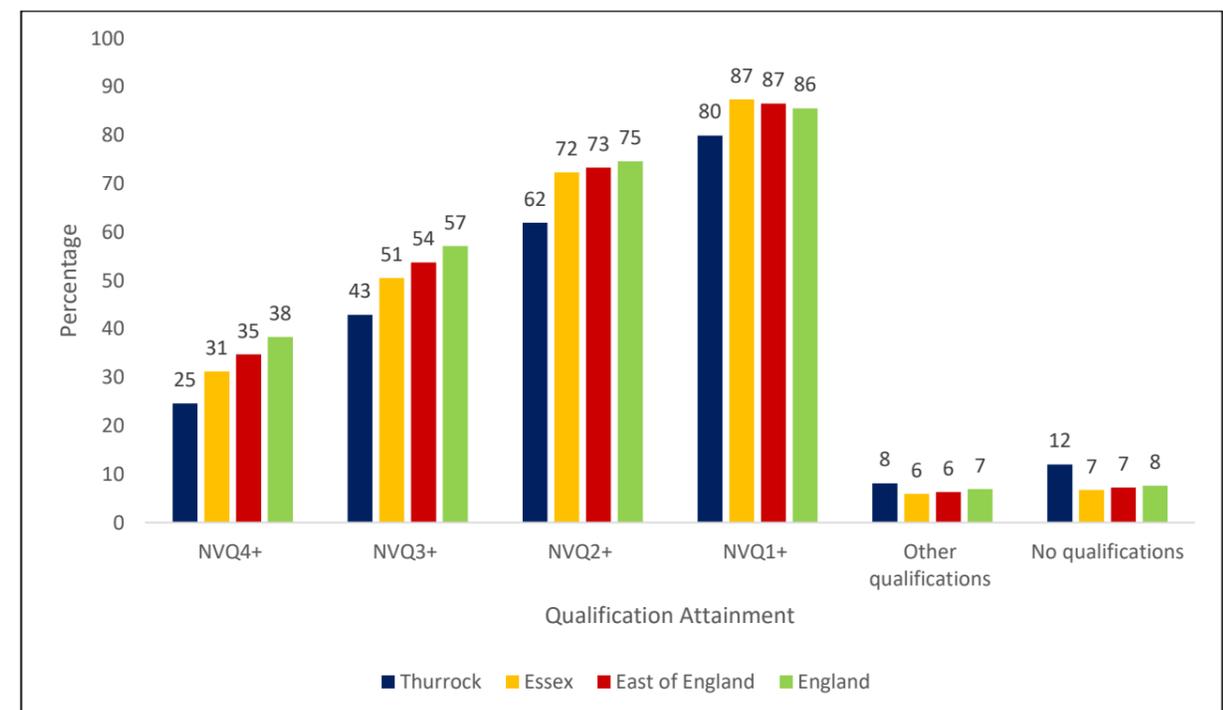


Figure 13.22: Qualification attainment

## 13.8 Conclusion

- 13.8.1 Life expectancy for males and females within Thurrock is low in comparison to regional and national averages. In addition, mortality and emergency hospital admission statistics are generally worse than the national average (and regional average where applicable). Mental health statistics are more varied in the sense that there are fluctuations above and below regional and national averages.
- 13.8.2 All lifestyle factors analysed, except hospital stays for alcohol related harm (a proxy for excessive alcohol intake), are worse than the regional and national averages.
- 13.8.3 Education and crime within Thurrock have the highest levels of deprivation. Socio-economic indicators such as employment, income and qualification attainment are all lower than geographic comparators while the proportion of residents claiming job seekers allowance is higher. This suggests that there are higher levels of socio-economic deprivation within Thurrock compared the county, regional and national averages.

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