Appendix 8.2 ◆ Detailed Baseline

INTRODUCTION

8.2.1 **Chapter 8: Human health** reports the existing health conditions relevant to the study areas of the London Resort.

8.2.2 However, it is important to outline the baseline conditions in more detail than in **chapter 8: Human health**. This appendix reviews the baseline conditions at a more detailed geography and presents additional metrics and industry specific data.

8.2.3 This appendix follows the same structure as the baseline presented in the chapter, where data relevant to each effect is listed in the order of effects assessed.

8.2.4 The study areas are consistent with that presented in the main chapter, as shown in the table below.

Table 8.2.1 Study areas considered in the London Resort

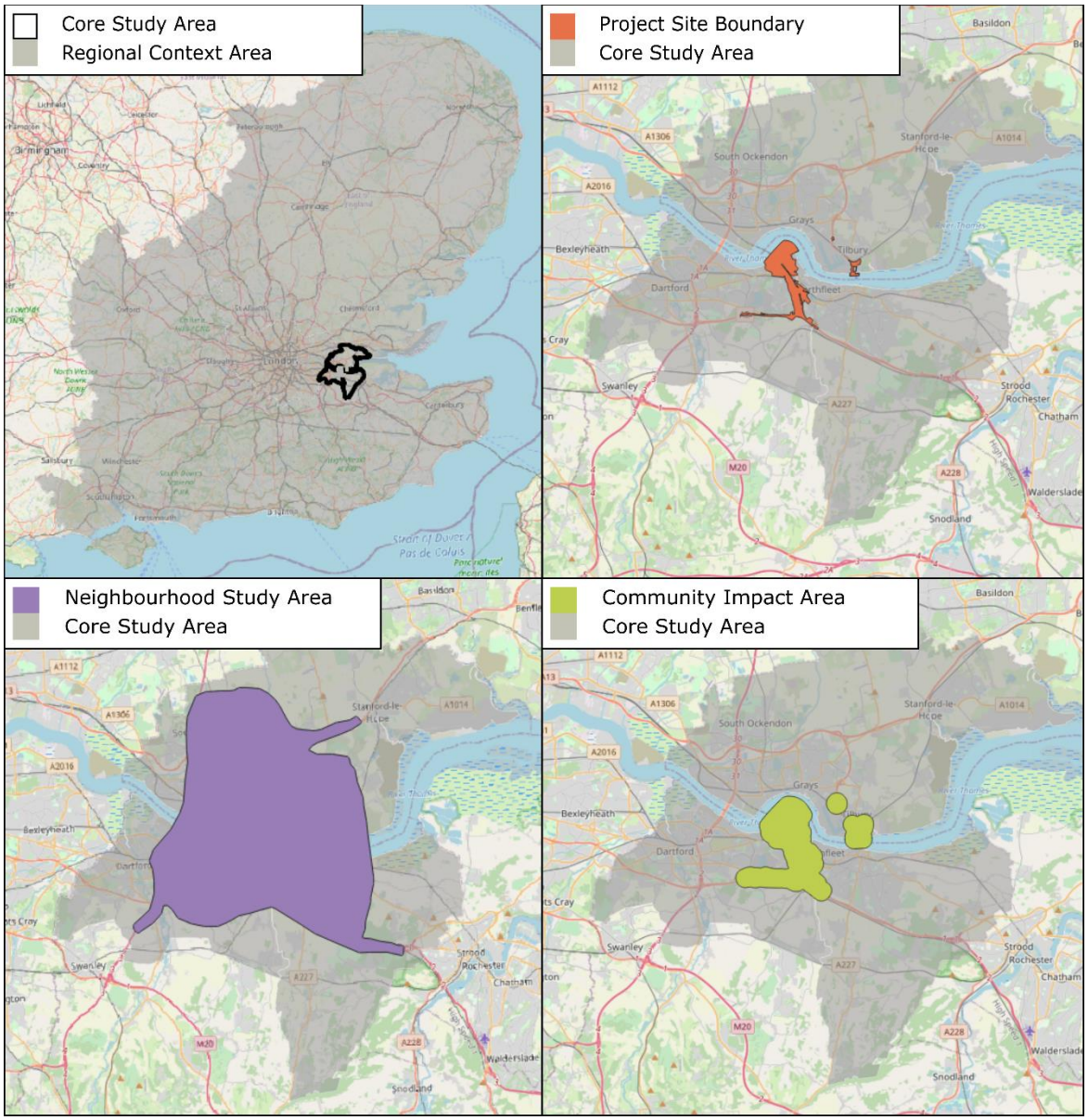
Geographical Study Area	Definition	Rationale
The Project Site Boundary (PSB)	The DCO Order Limits. Refer to Figure 8.2 of chapter 8 for a map of the Project Site Boundary	The Project Site Boundary study area is used for effects which are at the Project Site level. It is used for the assessment of displacement / loss of businesses.
Community Impact Area (CIA)	A 500m radius around the Project Site Boundary	The Community Impact Area is used to assess the displacement / loss of community uses, such as open spaces, public rights of way and other recreational or community facilities as the community uses affected will in or near the Project Site.
Neighbourhood Study Area (NSA)	Area defined as the transport modelling area, with a 100m buffer applied. Refer to Figure 8.2.1 for a map of the Neighbourhood Study Area. This study area is aimed to capture all significant effects relating to traffic, flooding, air quality, noise and vibration and electromagnetic	The Neighbourhood Study Area is used to assess effects relating to local traffic, flooding, air quality, noise and vibration, and electromagnetic field exposure.

Geographical Study Area	Definition	Rationale
	field exposure and inform the health baseline for those effects. The NSA remains under review.	
Core Study Area (CSA)	Dartford, Gravesham and Thurrock (local authorities)	The three local authorities that the Project Site falls within. Many of the effects are expected at the Core Study Area.
Sub-Regional Context Area[1] (SRCA)	Kent and Medway, Essex, Thurrock (combination of districts)	These study areas are presented in the baseline for context but are not used to assess the significance of any health effects. They are included for context such that the health baseline and receptor population characteristics can be placed in the context of appropriate wider areas.
Regional Context Area (RCA)	South East, East and London	
National Context Area	England, GB, UK (depending on data source availability)	

8.2.5 The relevant study areas are shown in Figure 8.2.1.

[1] Defined as county / unitary authorities to be consistent with ONS statistical data releases.

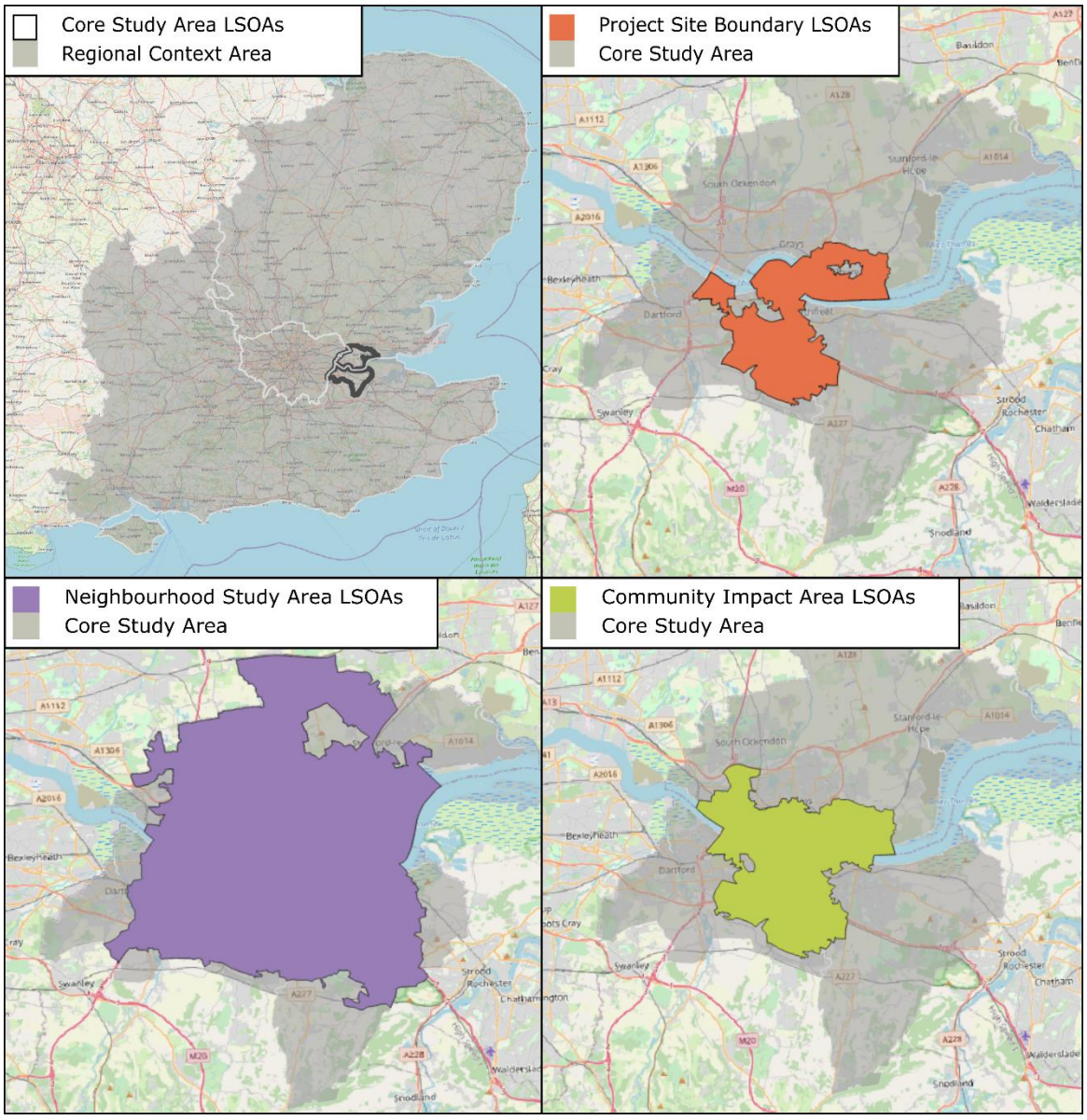
Figure 8.2.1 Relevant study areas



8.2.6 For the purposes of data collection, for the PSB, CIA and NSA small statistical areas called lower-layer super output areas, or LSOAs[2] which overlap these areas have been used. These are presented in Figure 8.2.2

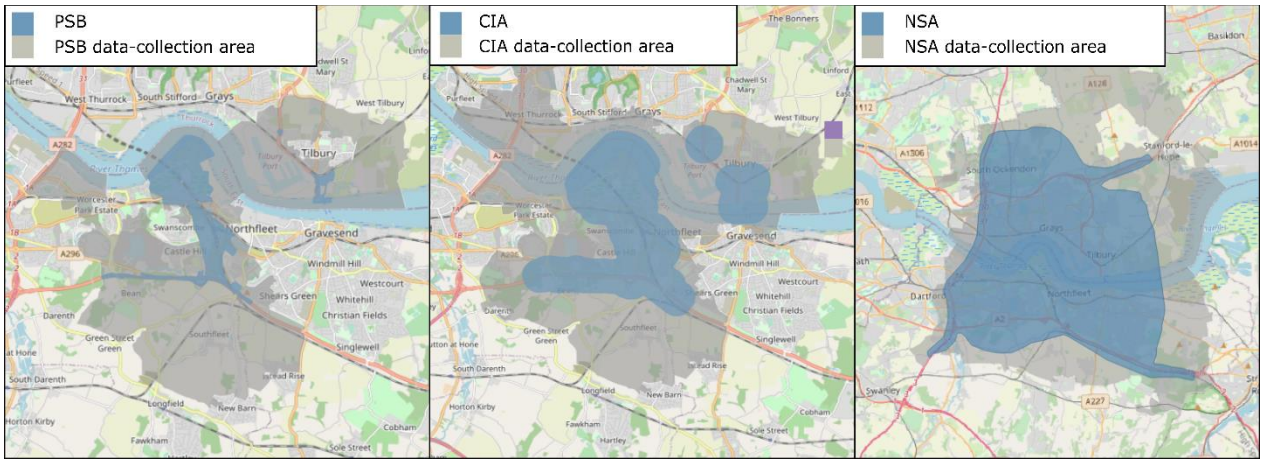
[2] LSOAs are a geospatial statistical unit used in England and Wales to facilitate the reporting of small area statistics. They have a minimum population of 1,000 and a mean size of 1,500.

Figure 8.2.2 Data collection areas



8.2.7 Figure 8.2.3 compares the data-collection areas and the actual study areas.

Figure 8.2.3 Comparison of data-collection areas and study areas



General health baseline conditions

Population health

Census – self-reported health

8.2.8 As part of the 2011 UK census individuals were asked to report on their own health on a five point scale from very bad health to good health. The results presented in the table below indicate that self-reported health is essentially the same across all relevant geographical areas.

Table 8.2.2 Self-reported health

Area	Very good health	Good health	Fair health	Bad health	Very bad health
Project Site Boundary (PSB)	46%	35%	13%	4%	1%
Community Impact Area (CIA)	47%	35%	12%	4%	1%
Neighbourhood Study Area (NSA)	48%	35%	13%	4%	1%
Core Study Area (CSA)	48%	35%	13%	4%	1%
Subregional Context Area (SRCA)	47%	35%	13%	4%	1%
Regional Context Area (RCA)	49%	34%	12%	4%	1%
National Context Area (NCA)	47%	34%	13%	4%	1%

Source: ONS, the 2011 Census

OVERVIEW OF HEALTH BASELINE CONDITIONS

Current baseline conditions

8.2.9 This section sets out a summary baseline of the health conditions in the three host authorities of Dartford, Gravesham and Thurrock. The data and sources which inform this summary are presented further below.

8.2.10 Public Health England (PHE) prepares public health profiles[3] to provide an overview of health conditions within individual local authorities. A summary of the indicators and how the local authorities perform is shown in 00. The values for each area are shown as a circle; the England average is indicated by a red line. The grey bar indicates the range of values taken by all English local authorities.

8.2.11 Life expectancy at birth is similar to the national average or lower at each of the three local authorities. The life expectancy of females is significantly worse in two of the three local authorities compared to the national average. Road accidents leading to injury or death are a particular problem in all the areas, and diagnoses of dementia are also relatively high. Cancer is highlighted in the area's Joint Strategic Needs Assessments (JSNAs) as a cause of concern.[4] Levels of anxiety are high in the area. This is despite the wider region scoring relatively highly on questionnaires of community support and social ties.

8.2.12 Lifestyle factors with a negative influence on health which are problem sources for the area include obesity (both among children and adults), lack of physical activity, smoking, in some areas, and, on average, a relatively high under-18 conception rate. Note that wider sexual health is good in the area, as discussed further below. Alcohol-specific hospital admissions are relatively low in the areas.

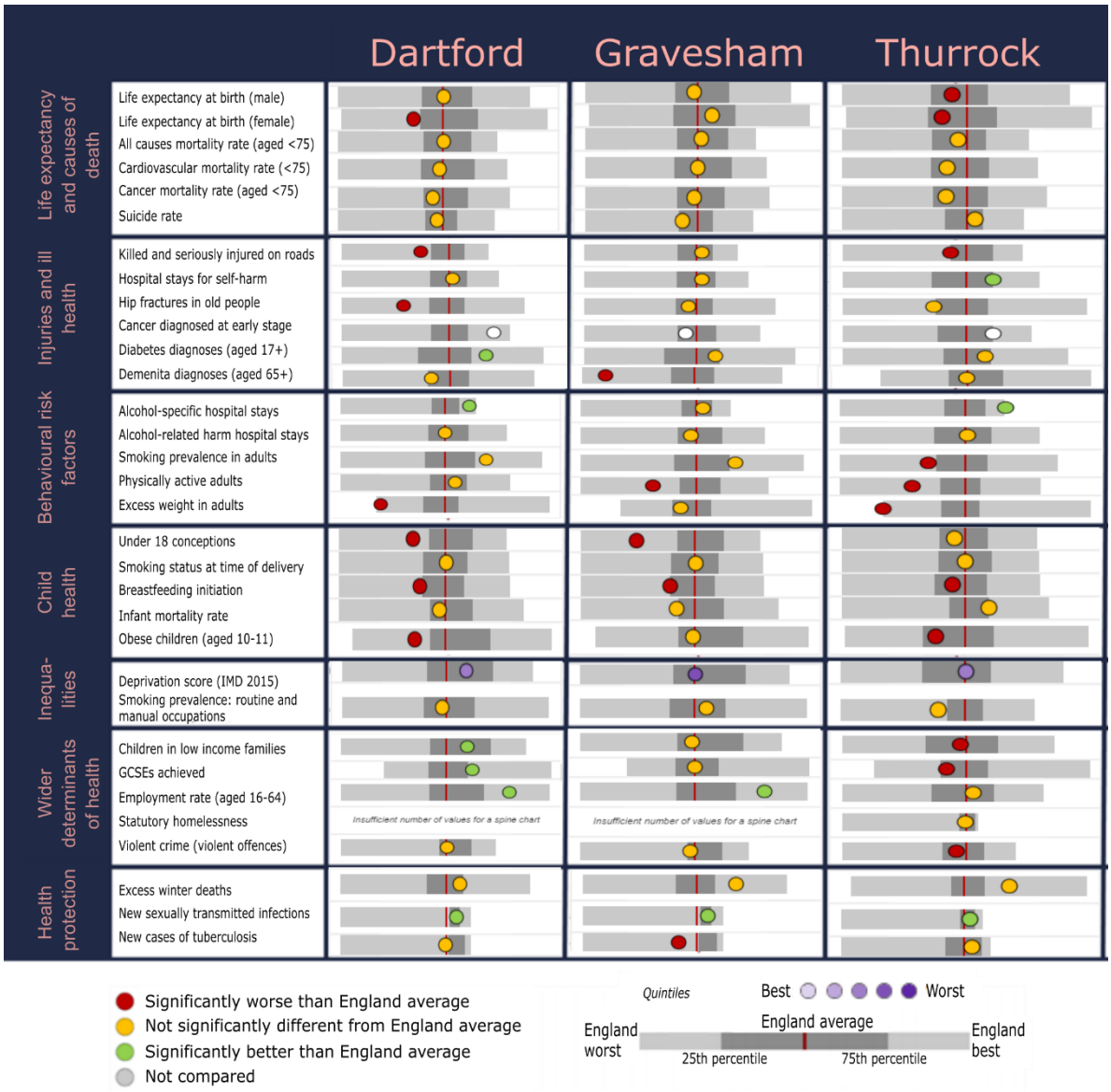
8.2.13 Locals enjoy a high employment rate, with the attendant health benefits the better socio-economic status employment brings. However, the skills level of the areas is limited compared to regional and national levels.

8.2.14 The three local authorities are not particularly deprived on the English Indices of Multiple Deprivation (IMD) measure, but problems exist around education, employment, and skills and crime.

[3] PHE, Local authority fingertip profiles

[4] KCC, 2016, Joint Strategic Needs Assessment; Thurrock Council, 2012, Joint Strategic Needs Assessment

Figure 8.2.4 PHE public health profile of Dartford, Gravesham and Thurrock, 2019



Source: PHE, Local authority fingertip profiles

Future baseline

8.2.15 Future baseline conditions are informed by national trends, as described in PHE's Health Profile for England 2019 document.[5] Where the trends identified concern the present, the most accurate expectation of future baseline conditions is the continuation of the trends below.

[5] PHE, 2019, Health Profile for England 2019

Life expectancy

8.2.16 The future trend of life expectancy in England is uncertain. Provisional data shows that 2018 may have recorded no gains in life expectancy over 2017. The UK's performance when compared to the 27 other EU countries is not bright: female life expectancy is 17th highest, and male life expectancy is 10th highest (down from 6th highest in 2006). The life expectancy gap between those living in the most deprived and least deprived areas of the country has increased since 2011-13, mainly due to higher mortality from heart and respiratory diseases.

Mortality

8.2.17 Since 2006, mortality rates from dementia have increased steadily. Dementia is now the most common cause of death for women. The mortality rate for dementia is forecast in 2024 to be double what it was in 2012. Deaths from drug misuse are also increasing and reached a new high in 2018. Deaths from heart conditions are at the same time decreasing, albeit at a slower rate than previously forecast.

Demography

8.2.18 One of the most important factors shaping the population's health is demographic change. Whilst England's population has steadily increased over recent decades, the population has also been ageing. Today there are three times as many people aged over 85 than there were in 1971. The proportion of those aged over 85 is forecast to increase in the future.

Chronic ill health

8.2.19 As England's population grows older, the number of people with chronic conditions, or living with ill health (morbidity) is forecast to increase. The number of people with diabetes is expected to increase from 3.9 million in 2017 to 4.9 million in 2035. In 2017 it is estimated that the most common causes of morbidity were musculoskeletal disorders, mental disorders and neurological disorders.

8.2.20 Mental health conditions account for an estimated 16.2% of the population's morbidity. The prevalence of mental health disorders has increased since 1993, with nearly 1 in 5 adults aged 16-64 suffering from at least one mental health disorder in 2014.

Lifestyle

8.2.21 Obesity and smoking are among the leading risk factors for ill health and are associated with a range of conditions. Since 2007 there has been an upward trend in adult obesity, and the rate of increase is faster than was previously forecast. Childhood obesity has not declined in recent years. Smoking prevalence continues to decline, although the speed of transition to a tobacco-free society is uncertain, as recent decreases have not been as large as previously forecast. The latest data also shows an increase in the rate of certain new sexually-transmitted infections (STIs), although HIV diagnosis rates have dropped.

Housing and socio-economic status

8.2.22 The quality of housing plays a role in maintaining good health. Homelessness remains high in England, but the proportion of homes meeting the Decent Homes Standard has increased in recent years.

8.2.23 England's employment rate continues to rise, although certain groups of the population find it hard to enter into or stay in meaningful work.[6]

Joint Strategic Needs Assessment – detailed data

8.2.24 The following section summarises the key findings from Joint Strategic Needs Assessments (JSNA) concerning the authorities.

Kent County Council

8.2.25 Dartford and Gravesham produce no JSNAs of their own. Instead, the relevant parts of Kent County Council's (KCC) JSNA, which covers all 12 Kent authorities, is presented below.[7] KCC identifies six emerging health priorities: cancer, demographics, diabetes, growth, health inequalities, healthy weight, mental health and stroke.

8.2.26 Cancer is one of the largest causes of mortality in Kent. Cancer was recorded as the underlying cause of death in 29% of mortality in 2014. In Kent the most common cancers in men are: prostate, colorectal and lung cancer; in women: breast, colorectal and lung cancer.

8.2.27 Across Kent, the recorded diabetes prevalence has risen from 4.5% in 2006/07 to 6.2% in 2014/15, an average annual increase of 0.2%. This rate of increase is similar across all CCGs of Kent, with none of the CCGs increasing at a significantly different rate to Kent.

8.2.28 The prevalence of obesity varies across Kent, with the highest prevalence rates of adult obesity to be found in North and East Kent. The percentage of adults classified as overweight or obese (2012) in the county had risen from 63.8% to 64.6% whilst that for children aged 10-11 has dropped from 33.5% to 32.7%. Children aged four - five has also dropped from 22.5% to 20.8%

8.2.29 The number of people with mental health problems can be calculated by using The Adult Psychiatric Morbidity Survey (2007) and applying it to the Kent population. The majority of people with the worst mental health in Kent are aged 35-65 years old. The over 65s also face non dementia related depression and anxiety. There is a strong link between the severity and duration of common mental illness and socioeconomic conditions. At risk groups include perinatal women, offenders and substance misusers.

8.2.30 The recorded prevalence of stroke in Kent and Medway has increased from 1.56% in

[6] No reliable employment forecasts taking into account the impact of COVID-19 have been identified. It is expected that employment will have suffered a blow, which is not yet recorded in the available data.

[7] KCC, 2016, Joint Strategic Needs Assessment

2006/07 to 1.71% in 2013/14. The rate of change with each passing year was not significantly higher than for England at 0.022%.

Thurrock

8.2.31 Thurrock's JSNA reports the following.[8] All age, all cause and premature (age under 75 years) death rates in Thurrock are statistically significantly greater than Essex and the East of England but statistically significantly less than many of its Chartered Institute of Public Finance and Accountancy (CIPFA) local authority comparators. Wards in the south of the Borough such as Tilbury St. Chads, Grays Riverside, Belhus and Riverside and Thurrock Park have premature death rates that are much greater than wards in the north of the Borough.

8.2.32 Amongst men in Thurrock, death rates:

- have recently fallen in line with regional rates for circulatory diseases, including CHD and stroke;
- are significantly higher than regional and national rates in respect of respiratory diseases but have shown an overall decline in recent years;
- from cancer have declined over the past decade, but remain higher in Thurrock than regional comparators;
- have for lung cancer generally remained higher than both regional and national rates, yet overall have declined;

8.2.33 Amongst women in Thurrock, death rates:

- have remained higher for circulatory diseases, including Coronary Heart Disease (CHD) and strokes when compared to regional averages, whilst remaining consistently lower than for males. The rate amongst women has fallen, albeit at a smaller and steadier rate of decline than for men.
- are lower for respiratory diseases than observed in males but are higher than regional and national rates with no decline;
- have declined for cancer, are lower than observed in males but are higher than regional and national rates. This is against the observed trend for regional and national rates where female cancer rates are higher than that of males.
- show no significant decline in respect of lung cancer. Although female mortality rates for lung cancer are lower than that of males, there is an observed narrowing of the gap in mortality rates between the genders.

[8] Thurrock Council, 2012, Joint Strategic Needs Assessment

8.2.34 The most prevalent psychiatric disorders in mid adult years include neurotic disorder, phobias, panic, obsessive compulsive disorder, depression and mixed and general anxiety disorders. Within Thurrock, the prevalence of these disorders map directly to the borough's areas of deprivation.

8.2.35 Thurrock has a higher prevalence of obese adults (16+) than geographical neighbours and amongst a third of CIPFA comparator local authorities; this is statistically significantly higher. Obesity prevalence across Thurrock is linked to deprivation with nearly a third of people in the areas of Tilbury and in the East of Thurrock being classified as being obese. Over the last four years, rates of childhood obesity in Thurrock have been increasing. In the school year 2009-10, more than 1 in 10 children in reception (age 4-5) measured as obese and this increased to 1 in 5 in year 6 (aged 10-11). Again, there is a strong link between deprivation and childhood obesity. Compared with CIPFA areas, Thurrock has the highest prevalence of childhood obesity.

8.2.36 The prevalence of smoking amongst adults in Thurrock is significantly greater than national and regional comparators, but not statistically different to its CIPFA comparator group of local authorities. Smoking prevalence is not distributed evenly within Thurrock but largely linked to deprivation levels.

Life expectancy and health inequalities

8.2.37 Significant health inequalities exist across Dartford, Gravesham and Thurrock.

Dartford[9]

8.2.38 Based on the period 2016 to 2018, male life expectancy at birth in Dartford is 79.7, slightly above that of England (79.6). However, female life expectancy at birth is lower (82.2) than in England (83.2). Life expectancy is 7.1 years lower for men and 5.7 years lower for women in the most deprived areas of Dartford compared to the least deprived areas.

Gravesham[10]

8.2.39 Based on the period 2016 to 2018, male life expectancy at birth in Gravesham is 79.4, similar to that of England (79.6). Female life expectancy at birth is (83.7), also similar to that of England (83.2). Life expectancy is 11.7 years lower for men and 4.9 years lower for women in the most deprived areas of Dartford compared to the least deprived areas.

Thurrock[11]

8.2.40 Based on the period 2016 to 2018, male life expectancy at birth in Thurrock is 79.0, lower than that of England (79.6). Female life expectancy at birth is (82.5), is also lower than

[9] PHE, Local Authority Health Profile 2019: Dartford
[10] PHE, Local Authority Health Profile 2019: Gravesham
[11] PHE, Local Authority Health Profile 2019: Thurrock

that of England (83.2). Life expectancy is 8.4 years lower for men and 7.4 years lower for women in the most deprived areas of Dartford compared to the least deprived areas.

Obesity and physical activity

8.2.41 Excess weight and obesity are a significant problem in Dartford, Gravesham and Thurrock, especially amongst the adult population. The picture regarding physical activity is more mixed: Dartford residents are significantly more active than their peers in Gravesham and Thurrock, which latter two have populations less active than England as a whole.

Dartford[12]

8.2.42 In 2018/19, 23.4% of Year 6 Dartford children are obese, compared to just 20.2% in England. Amongst adults, 66.3% are classified as overweight or obese, compared with 62.3% in England. Some 71.5% of adults are physically active, significantly higher than the national average (66.3%).

Gravesham[13]

8.2.43 In 2018/19, 20.4% of Year 6 Gravesham children are obese, similar to the 20.2% in England. Amongst adults, 67.2% are classified as overweight or obese, compared with 62.3% in England. Just 60.2% of adults are physically active, compared with 66.3% in England.

Thurrock[14]

8.2.44 In 2018/19, 22.5% of Year 6 Thurrock children are obese, compared to just 20.2% in England. Amongst adults, 69% are classified as overweight or obese, compared with 62.3% in England. Just 60.9% of adults are physically active, compared with 66.3% in England.

Sexual health

8.2.45 The new STI diagnosis rate in Kent in 2018 was 511 per 100,000 population, and in Thurrock 570 per 100,000 population, both substantially better figures than England's 784 per 100,000 population. However, both the STI testing rate excluding chlamydia, and the detection rate for chlamydia is worse in Kent (14,044 per 100,000 population and 1,497 per 100,000 population) and Thurrock (14,230 per 100,000 population and 1,054 per 100,000 population) than they are in England (18,053 per 100,000 population and 1,975 per 100,000 population).

[12] PHE, Local Authority Health Profile 2019: Dartford
[13] PHE, Local Authority Health Profile 2019: Gravesham
[14] PHE, Local Authority Health Profile 2019: Thurrock

8.2.46 Kent's JSNA[15] on sexual health identifies the key issues relating to sexual health in Kent. These include an increase in rates of syphilis and gonorrhea, mirroring the national trend, a high crude rate of hospital admissions continuing to increase for pelvic inflammatory disease (PID) amongst 15-44 year olds in North and West Kent districts. Dartford and Gravesham are in North Kent. It is also noted, that there is only a single point of access for free termination of pregnancy services in Kent.

8.2.47 Thurrock's JSNA[16] notes that the borough in general performs well on measures of sexual health. Under 18 conception rates have been falling for some time and are now below the England rate (although still above that of East England). Abortion rates continue to fall, but HIV rates continue to rise in line with the national trend.

Mental health

8.2.48 In England nearly one third of GP consultations are related to mental health problems. Approximately one in four people will have a common mental illness during their lifetime and one in six people in England have a mental health problem at any given time (point prevalence). One in seven people will have 2 or more mental health problems at any point in time.[17]

Kent County Council

8.2.49 As discussed above, Dartford and Gravesham do not produce their own JSNAs, but are covered by KCC's assessment.[18] The estimate of people with neurotic disorders in Kent and Medway is approximately 160,000. Neurotic disorders are mixed anxiety and depression, generalised anxiety disorder, depression, phobias, obsessive compulsive disorder, panic disorder. Three quarters of these people will either self help or get better in time, so not all will require NHS services. The latest ONS figures estimate around one quarter or 40,000 people will need treatment with drugs and/or psychological therapies. Revised estimates put this figure at 34,700 for Kent and Medway

8.2.50 Of Kent's population of adults with severe and enduring mental health problems, only 8% are in employment. There are currently gaps in service provision to need, in dual diagnosis (alcohol and mental health), transition services between child and adult mental health services, services tackling maternal depression and maternal mental illness, older people's mental health (excluding dementia) and eating disorders, personality disorders, offenders in the community and veterans.

Thurrock

8.2.51 A complex measure, the Mental Illness Needs Index (MINI) was created in the mid-1990s and updated in 2000 (MINI 2K). The index is derived from a number of socio-economic measures that best explain variation in psychiatric admissions. MII 2K provides a

[15] KCC, 2017, Sexual Health
[16] Thurrock Council, 2012, Joint Strategic Needs Assessment
[17] KCC, 2012, Joint Strategic Needs Assessment
[18] KCC, 2012, Joint Strategic Needs Assessment

standardised score against an England average of one, and is frequently used to refine comparisons of mental health experience between geographical areas. The mean score for Thurrock is 0.91 which is below the national average of 1.00. However, it is clear that there is a wide variation in the distribution of the mental illness needs within Thurrock, with the areas of deprivation having higher MINI 2K scores.

Deprivation

8.2.52 The English Index of Multiple Deprivation[19] (IMD) rank areas based on a range of metrics to map levels of deprivation relative to other areas. The local authorities comprising the Core Study Area are not particularly deprived overall, but are all among the worst 50% of all 317 English local authorities: Dartford is ranked 145th, Gravesham 119th and Thurrock 116th most deprived.

8.2.53 The IMD also provides assessment on a range of sub-domains relating to different domains of deprivation. Areas of concern identified are deprivation connected to:

- Education, skills and training: Gravesham (62nd), Thurrock (24th);
- Crime: Dartford (19th), Gravesham (6th), Thurrock (75th);
- Barriers to housing and services: Dartford (64th), Thurrock (76th); and
- Living environment: Dartford (68th).

8.2.54 Education, skills and training deprivation is driven primarily by a relatively low share staying on in education post-16 and/or going to university later, and by the relatively low skills and English proficiency of residents. barriers to housing and services deprivation is driven primarily by relatively high rates of homelessness and the relative unaffordability of housing. Deprivation in the living environment domain is driven by Dartford's high count of road accidents, and relatively poor air quality.

8.2.55 The study areas[20] used in the assessments tend to perform poorly on the education, skills and training domain of deprivation and on crime. On other domains, the study areas tend to be among the top 60% of the country in terms of deprivation.

[19] MHCLG, 2019, English indices of deprivation
[20] Averaging the IMD decile component units fall into.

Table 8.2.3 IMD decile of relevant geographies (1 = worst decile)

Area	IMD overall	Income	Employment	Education, skills and training	Health deprivation and disability	Crime	Barriers to housing and services	Living environment
PSB	**5**	5	5	4	6	2	4	6
CIA	**5**	5	5	4	6	3	5	6
NSA	**5**	6	6	4	7	4	6	6
CSA	**5**	5	6	3	6	2	5	5

Source: MHCLG, 2019, English Indices of Deprivation 2019

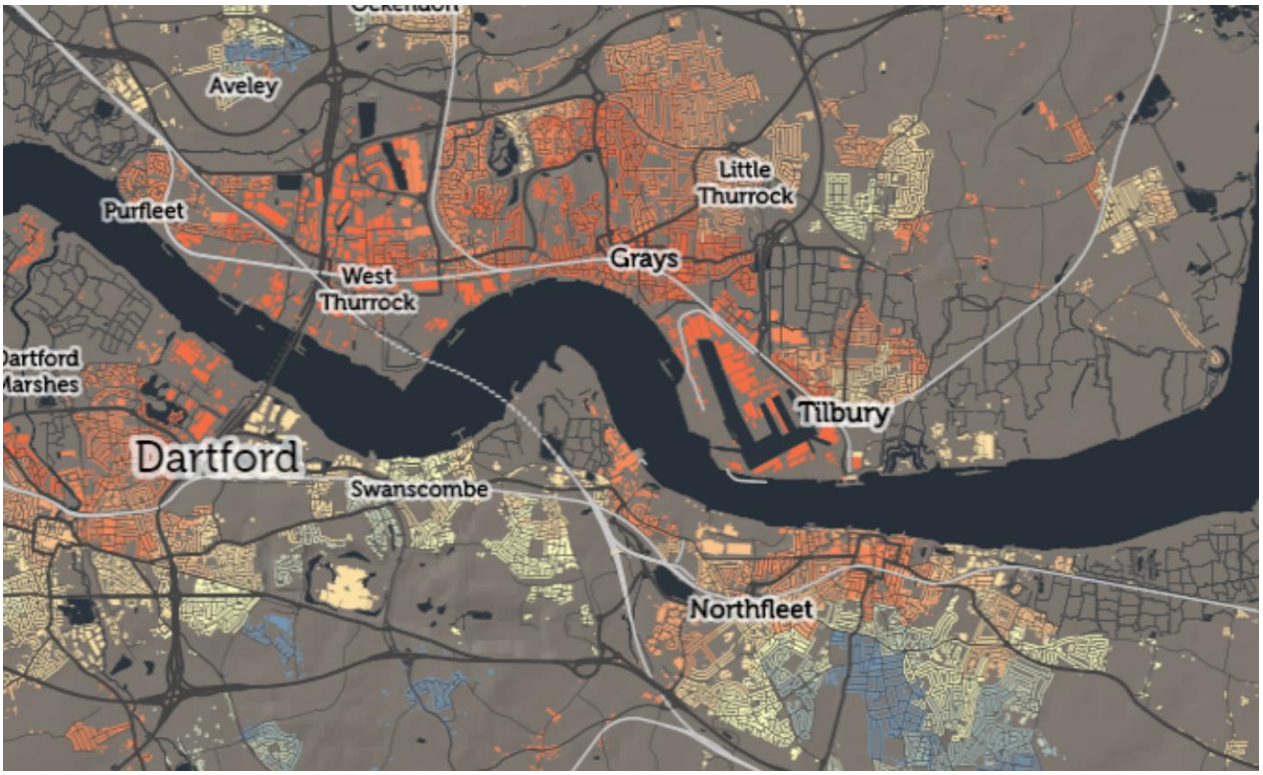
Access to healthy assets and hazards (AHAH)

8.2.56 The Geographic Data Science Lab releases a dataset called AHAH – which is a multi-dimensional index measuring how "healthy" neighbourhoods are, based on the following:

- Access to amenities such as fast food outlets and pubs;
- Levels of air pollutions;
- Access to health services (GPs, hospitals, pharmacies, dentists, leisure services); and
- Access to natural environment (green and blue spaces).

8.2.57 The map below shows the surroundings of the London Resort in terms of their score on the AHAH index. Areas on the north bank of the Thames, in Thurrock, tend to perform worse than areas on the south bank, although Dartford and Gravesham have a fair number of low-rated areas.

Figure 8.2.5 Access to healthy assets and hazards index, 2017



Source: Consumer Data Research Centre

Vulnerable populations

8.2.58 The following populations have been identified in the literature as more exposed and more affected by changes in one or more health determinants:

- **Young people**: children, adolescents, and pregnant women are more sensitive to their physical environment than adults. During the physical and mental development of the human body, environmental factors such as air pollution, noise, odour, and stress have been shown to be associated with relatively worse health outcomes. Barriers to physical activity created by the removal of open space or heavy traffic has greater impacts on young people due to their greater reliance on outdoor and active spaces.

- **Older people**: with age comes a degree of frailty as the body is less able to repair damage and overcome disease. Older people are also at risk of social exclusion, can find it difficult to access health and social services, as well as shops and community facilities.

- **People on low incomes**: significant evidence exists that social grade and income are strongly associated with health outcomes. PHE state that "income and work are two of the most important determinants of health and wellbeing." Often the poorest people experience worse health outcomes as they are exposed to poor quality outdoor

environments, and do not face the same access to nutrition and activity.

- **Ethnic minorities**: ethnic minority groups often have worse overall health outcomes than those in the majority population. There is evidence that the poorer socio-economic position of ethnic minorities is the main factor driving health inequalities for ethnic minorities.

- P**eople with disability or long-term illnes**s: those with long-term illnesses often see their daily activities impacted, and may have a lower capacity to adapt to changes and as a result can be particularly sensitive to changes in their living environment.

- **LGBTQ**+: LGBTQ+ populations can face discrimination and can have worse health outcomes as a result. LGBTQ+ people may be particularly vulnerable to effects related to crime, especially hate crime.

Identifying presence of vulnerable groups

8.2.59 Vulnerable groups have been carefully considered in assessing receptor sensitivity to changes in health determinants. Detailed analysis has been undertaken to identify the vulnerable groups at the relevant geographical levels of each health determinant.

8.2.60 The assessment areas do not always precisely overlap the areas for which statistical data is gathered. Data is gathered for all LSOAs which the PSB, CIA, and NSA overlap, and it is the population share of these wider areas that is here presented. It is assumed that demographic mix of the actual PSB, CIA, and NSA is similar to that of the areas on which the data-gathering exercise has been performed.

Young people

8.2.61 The proportion of pregnant women is not directly assessed in the relevant geographical areas; instead, because statistics on young people include infants, it is assumed that a large young person population share is a good proxy for a large pregnant woman population share.

8.2.62 The PSB, CIA, NSA and CSA are all significantly younger and 0-17 year olds make up a significantly larger share of the population than within the region or the UK as whole. The table below contains the proportion of residents aged 0-17 at the relevant geographical areas.

Table 8.2.4 Young people at relevant geographies, 2018

	Total pop	Young pop	Young %
PSB	26,138	6,629	25%
CIA	69,465	18,354	26%

	Total pop	Young pop	Young %
NSA	284,277	71,476	25%
CSA	388,619	95,506	25%
RCA	24,242,920	5,315,397	22%
NCA	65,851,526	14,051,585	21%

Source: ONS, 2019, Mid-year population estimates 2018-based

Older people

8.2.63 The immediate surroundings of the Site, the PSB and the CIA, and the slightly broader NSA have an older people population share significantly below that of the region or the UK as a whole. The wider CSA also has a smaller older people population share, although the difference for this area is not as large as for the PSB, CIA or NSA. The table below contains the proportion of residents aged 65+ at the relevant geographical areas.

Table 8.2.5 Older people people at relevant geographies, 2018

	Total	65+	65+ %
PSB	26,138	3,838	15%
CIA	69,465	8,162	12%
NSA	284,277	38,762	14%
CSA	388,619	57,889	15%
RCA	24,242,920	4,039,453	17%
NCA	65,851,526	11,581,533	18%

Source: ONS, 2019, Mid-year population estimates 2018-based

People on low incomes

8.2.64 Before housing costs are taken into account, all of the PSB, CIA, NSA, CSA and the Regional level have a lower share of households living in poverty[21] than does England and Wales. However, once housing costs are taken into account, England and Wales performs better on this measure of poverty than any of the other geographies analysed. The immediate surroundings of the Site (the CSA) perform particularly poorly on this measure.

[21] Defined as earning below 60% of the median salary in the area.

Table 8.2.6 People on low incomes at the relevant geographies, 2014

	Households below the poverty line (before housing costs)	Households below the poverty line (after housing costs)
PSB	14%	22%
CIA	15%	25%
NSA	15%	23%
CSA	14%	23%
RCA	14%	22%
NCA	17%	21%

Source: ONS, Small area model-based households in poverty estimates, England and Wales: financial year ending 2014

Ethnic minorities

8.2.65 Up-to-date statistics on ethnic minorities are not available for the small statistical areas which comprise the PSB, CIA and the NSA, and this is therefore omitted from analysis. The CSA and the Region have a higher share of their population made up of ethnic minorities than does the UK as a whole. The table below shows the population share of ethnic minorities at the relevant geographies.

Table 8.2.7 Ethnic minorities at the relevant geographies, 2018

	Total pop	Ethnic minorities	Ethnic minority %
CSA	384,600	79,400	21%
RCA	24,006,500	5,151,300	21%
NCA	65,540,800	9,157,200	14%

Source: ONS, 2019, Annual Population Survey

People with disability or long-term illness

8.2.66 The PSB, CIA, NSA and the CSA have a slightly larger share of their population suffering from limiting disability or long-term illness than does the Region, although these areas still perform better than England and Wales as a whole. The Region is the best performer on this metric. The table below contains the population share made up of people with limiting disabilities or long-term illness at the relevant geographies.

Table 8.2.8 People with disability or long-term illness at the relevant geographies, 2011

	Day-to-day activities limited a lot	Day-to-day activities limited a little	Day-to-day activities not limited
PSB	9%	9%	82%
CIA	7%	8%	84%
NSA	7%	9%	84%
CSA	7%	9%	84%
RCA	7%	8%	85%
NCA	9%	9%	82%

Source: ONS, the 2011 Census

LGBTQ+ populations

8.2.67 The ONS collects data on LGBTQ+ population only at the regional level. English regions tend to have fairly similar population shares who identify as LGBTQ+. It is not possible to know the share of LGBTQ+ populations in the PSB, CIA, NSA and CSA, so the population share of the RCA (2.2%) is used instead; this is marginally higher than the national average (2.1%).

Table 8.2.9 LGBTQ+ populations at the relevant geographies, 2017

	LGBTQ+ population
RCA	2.2%
NCA	2.1%

LOCAL AUTHORITY HEALTH PRIORITIES

8.2.68 The health priorities of the local authorities have been researched, and the relevant JSNAs and Joint Health and Wellbeing Strategies (JHWSs) have been reviewed. Dartford and Gravesham produce no JSNA or JHWS of their own but are covered in KCC's JSNA and JHWS.

Common themes and health priorities

8.2.69 There are several commonalities between Kent's and Thurrock's health priorities, as described in their respective JSNAs and JHWSs. These include:

- the need to reduce health inequalities between those living in the worst conditions, and the most affluent;

- increasing access to services and shifting care priorities towards prevention where possible, and integrating disparate care providers;
- improving social networks to combat isolation and other mental health problems;
- reducing smoking prevalence and obesity rates, as well as increasing physical activity;
- improving the conditions and services available to those with learning disabilities in particular; and
- a concern with air pollution.

8.2.70 The individual priorities of Kent and Thurrock are presented below.

Kent health priorities

8.2.71 Kent's JSNA[22] identifies eight key emerging priorities:

- cancer;
- demographics;
- diabetes;
- growth;
- health Inequalities;
- healthy weight;
- mental health; and
- stroke.

Cancer

8.2.72 Cancer is one of the largest causes of mortality in Kent. Cancer was recorded as the underlying cause of death in 29% of mortality in 2014. This figure is even more pronounced in younger adults with cancer, accounting for 43% of premature mortalities (death under 75 years) in Kent in 2014.

8.2.73 The prevalence of cancer has increased due to a combination of an increasing average life expectancy of the population and an increased occurrence of risk factors for cancer (e.g. obesity). Survival rates have been improved due to better diagnosis and treatment.

[22] KCC, 2016, Joint Strategic Needs Assessment

In Kent the most common cancers in men are: prostate, colorectal and lung cancer; in women: breast, colorectal and lung cancer.

Demographics

8.2.74 The projected growth in population for Kent to 2020 highlights the growth particularly in the two age bands of 65–84 (9.6%) and over 85 (13%). This has implications for both health and social care as these two age cohorts place increasing pressures on services through increasing numbers of patients with long-term conditions needing complex care and treatment from different organisations.

8.2.75 It brings into focus the need for strategies and interventions to support Living Well and Ageing Well to help modify the impact that these individuals will present and to ensure that efforts to maximise life expectancy are achieved. This issue reinforces the need to have robust prevention programmes in place to support investment in behaviour change.

Diabetes

8.2.76 Across Kent, the recorded diabetes prevalence has risen from 4.5% in 2006/07 to 6.2% in 2014/15, an average annual increase of 0.2%. From 2006/07, the emergency diabetes admission rate has increased steadily across Kent from 76.0 admissions per 10,000 population to 131.4 in 2014/15. obesity accounts for 80–85 per cent of the overall risk of developing Type 2 diabetes. Deprivation is strongly associated with higher levels of obesity. Physical inactivity, unhealthy diet, smoking and poor blood pressure control also increase the risk of diabetes or the risk of serious complications for those already diagnosed.

Growth

8.2.77 Primary healthcare required to support population growth to 2031 was mapped, and the analysis of the provision of GP numbers identified that there is a lack of capacity in proposed growth areas. One hundred and forty-six additional GPs and associated premises of 24,100 sq.m and 121 additional dentists and associated premises of 6,000 sq.m will be required.

Health inequalities

8.2.78 Whilst health outcomes have been improving for Kent as a whole, the differences in these outcomes between affluent and deprived populations persist. Current data highlights this - whilst mortality rates are coming down across all deprivation deciles, the gap between the most affluent (the bottom line) and the most deprived (the top line) has not changed over the last 10 years, suggesting that efforts to tackle health inequalities are not yet having an impact on mortality rates.

Healthy weight

8.2.79 The prevalence of obesity varies across Kent, with the highest prevalence rates of adult

obesity to be found in North and East Kent. The percentage of adults classified as overweight or obese (2012) in the County had risen from 63.8% to 64.6% whilst that for children aged 10-11 has dropped from 33.5% to 32.7%. Children aged four - five has also dropped from 22.5% to 20.8%

Mental health

8.2.80 The majority of people with the worst mental health in Kent are aged 35-65 years old. The over 65s also face non dementia related depression and anxiety. There is a strong link between the severity and duration of common mental illness and socioeconomic conditions. At risk groups include perinatal women, offenders and substance misusers.

Stroke

8.2.81 The recorded prevalence of stroke in Kent and Medway has increased from 1.56% in 2006/07 to 1.71% in 2013/14. The rate of change with each passing year was not significantly higher than England at 0.022%. As more people are surviving stroke, an important role is placed upon post stroke care. This includes services such as early supported discharge (within 10 days) and multidisciplinary community rehabilitation services.

8.2.82 Kent's JHWS[23] seeks five key health outcomes:

- every child has the best start in life;
- effective prevention of ill health by people taking greater responsibility for their health and wellbeing;
- the quality of life for people with long term conditions is enhanced and they have access to good quality care and support;
- people with mental health issues are supported to 'live well';
- people with dementia are assessed and treated earlier, and are supported to live well.

8.2.83 For each of the five key health outcomes, KCC's focus will be on four priorities:

- tackle key health issues where Kent is performing worse than the England average;
- tackle health inequalities;
- tackle the gaps in service provision; and
- transform services to improve outcomes, patient experience and value for money.

[23] KCC, Joint Health and Wellbeing Strategy

Public services and community facilities

8.2.84 The priorities identified under this heading apply to potential effect of displacement or change in access affecting public services and community facilities, potential effects from a change in the demand for health services, potential effects from a change in the demand for public services and community facilities, potential effects from changes in community cohesion, potential effects from changes in crime and community safety (including fear of crime).

8.2.85 KCC's JHWS targets a reduction in waiting times for Child and Adolescent Mental Health Services (CAMHS), for Memory Assessment Services (MAS), and an increased uptake of NHS Health Checks, and better cancer screening.

8.2.86 KCC's JSNA recommends improving services for adolescent emotional health.

8.2.87 KCC is aiming to improve social and community networks in order to combat mental health problems.[24] The Council also seeks to improve the coverage of Gypsies, Roma and Travellers in ethnic monitoring relating to health and social care to address their 'invisibility' in public health terms.

8.2.88 KCC's JSNA[25] defines no strategy to improve health outcomes related to crime, although in connection mental health it states that health and wellbeing boards need to offer a joint forum with Crime and Safety Partnerships to understand the needs of offenders.

Housing

8.2.89 The priorities identified under this heading apply to potential health effects from displacement of residential dwellings.

8.2.90 Kent's JSNA examines fuel poverty and finds that being unable to afford to adequately heat a home increases the risk of ill health, hospital admission or possible premature mortality, particularly for vulnerable older people or those with a disability or long-term condition. Emergency support is available at a population level and Public Health have co-funded housing retrofit interventions with the Kent County Council Warm Homes programme, to provide sustainable interventions such as insulation and heating repairs for those over 65 with a long-term health condition, particularly respiratory disease and circulatory conditions.

8.2.91 Kent also targets a reduction in the number of falls; KCC Public Health and DGS CCG are working, together with Kent Fire and Rescue Service's senior management teams, on a trial on falls reduction work. The majority of falls result in hip fractures. In the forthcoming revised needs assessment, the role of housing as part of the Kent Falls Framework is being reassessed to strengthen their working with other stakeholders.

[24] KCC, 2016, Joint Strategic Needs Assessment
[25] KCC, 2016, Joint Strategic Needs Assessment

Employment and training

8.2.92 The priorities identified under this heading apply to potential effects from displacement of commercial uses, potential effect of work and training opportunities created, potential health effects relating to changes in access to work and skills.

8.2.93 KCC's JSNA on the social determinants of health[26] recognises that at a local level the economic environment influences health through the degree of wealth disparity. Relative poverty commonly defined as living on less than 60% of the national median income has been demonstrated to relate to poor health and risk of premature death, arguably through the psycho-social stress of low socio-economic status and poorer quality of social relations.

8.2.94 KCC's JSNA recommends that efforts to reduce health inequalities be focused on the geographic areas of the greatest deprivation and to develop a multiagency response to recognise and act upon the social determinants of health, such as education, housing and green spaces.[27]

Healthy lifestyles

8.2.95 The priorities identified under this heading apply to potential effect of displacement or change in access to open spaces, potential effects associated with open space provision and amenity space, potential effects of the presence of the construction workforce.

8.2.96 KCC's JHWS targets a reduction in the number of pregnant women who smoke, and an increase in the number of people who quit smoking via smoking cessation services, a reduction in conception rates for young women aged under 18, and a reduction in child and adult obesity rates. The Council also targets a reduction in the mortality rate from cardiovascular diseases for the under 75.

8.2.97 It is also a goal to increase levels of physical activity including integrating physical activity into transport and environmental planning and services, improving physical activity assets and facilities in response to local demand. The promotion of behavioural change techniques is recommended. It is further recommended that public health commissioners should continue to commission services that promote healthier lifestyles, smoking cessation, and cholesterol and hypertension management. It is also recommended that all parts of the system take action to ensure that processes are in place to guarantee that the population is advised about how to change behaviour to achieve a healthier diet and take more physical activity. An integrated model for obesity should be developed that includes other related health improvement strands such as emotional health and wellbeing, smoking, and alcohol.

8.2.98 It is recommended that programmes be commissioned to address physical inactivity based on the brief intervention and motivational interviewing model. Use of the natural

[26] KCC, Joint Strategic Needs Assessment: Social determinants of health
[27] KCC, 2016, Joint Strategic Needs Assessment

environment for physical activity and health reasons should also be increased.

8.2.99 KCC aims to reduce inequalities of smoking prevalence across different social and ethnic groups and to target and reduce the number of children and young people who smoke. The Council notes that most people in Kent drink responsibly, around 70%.[28]

Inclusion

8.2.100 The priorities identified under this heading apply to potential health effects associated with the inclusive design, site access and facilities of the London Resort.

8.2.101 KCC's JHWS aims to reduce the gap in the employment rate between those with a learning disability and the overall employment rate. An increase in the percentage of adults with a learning disability who are known to the council, who are recorded as living in their own home or with their family is also sought. An increased employment rate among people with mental illness is a further target.

8.2.102 KCC's JSNA[29] recommends to provide parenting support to parents with a LD (learning disability) by working with children centres to deliver public health messages in an easy read format. Other recommendations centre on the prevention of the development of disabilities following a stroke, or other events.

8.2.103 For diabetes the JSNA notes that effective systems should be in place to ensure that people know what services and treatment is available, especially those aimed at people who are disadvantaged from using services.

Transport

8.2.104 The priorities identified under this heading apply to potential changes to local traffic and transport and changes in use of active travel modes and potential health effects from a change in local traffic and active travel.

8.2.105 KCC's JSNA notes that transport contributes to both positive and negative outcomes for population health. It aims to increase levels of physical activity including integrating physical activity into transport and environmental planning and services, improving physical activity assets and facilities in response to local demand.

Flooding

8.2.106 The priorities identified under this heading apply to potential effect of increased flooding.

8.2.107 KCC does not identify issues relating to flooding as a health priority.

Noise and vibration

[28] KCC, 2016, Joint Strategic Needs Assessment
[29] KCC, 2016, Joint Strategic Needs Assessment

8.2.108 The priorities identified under this heading apply to potential effect of construction resulting in changes in noise and vibration and potential health effects associated with changes in noise and vibration.

8.2.109 KCC does not identify issues relating to noise and vibration as a health priority.[30]

Air quality

8.2.110 The priorities identified under this heading apply to potential effect of construction resulting in changes in air quality and potential health effects associated with changes in air quality.

8.2.111 KCC's JHWS targets a reduction in the mortality from respiratory diseases for those under 75.

8.2.112 KCC's JSNA notes that air quality is influenced by transport, planning and the provision of green spaces. Air pollutants of greatest concern are particulate matter (PM), oxides of nitrogen and ozone.

Electromagnetic field exposure

8.2.113 The priorities identified under this heading apply to potential health effects associated with changes in electromagnetic field exposure.

8.2.114 KCC does not identify issues relating to electromagnetic field exposure as a health priority.

Thurrock health priorities

8.2.115 A theme that runs throughout Thurrock's JSNA product is that of health inequalities – inequalities in life chances, opportunities, and health and wellbeing outcomes of different populations within the borough. Variations in life expectancy are linked to deprivation which is associated with variations in morbidity and mortality from different diseases.

8.2.116 The first two priorities to be tackled are:

- Reducing the overall prevalence of smoking within Thurrock and reducing the difference in smoking prevalence between affluent and deprived areas.

- Reducing the overall prevalence of both adult and child obesity within Thurrock and reducing the difference in obesity prevalence between affluent and deprived areas.

8.2.117 Thurrock's Health and Wellbeing Strategy (HWS)[31] defines the vision for Thurrock as:

[30] KCC, 2016, Joint Strategic Needs Assessment
[31] Thurrock Council, 2016, Health and Wellbeing Strategy

We want Thurrock to be a place where people live long lives which are full of opportunity, allowing everyone to achieve their potential. To achieve this, we have set five goals, which we are all committed to achieving. The goals are ambitious and will require a lot of hard work from Thurrock Council, the NHS, voluntary organisations and communities themselves but we think that by working together, we can achieve these goals and make a real difference to the people of Thurrock.

8.2.118 The five goals defined in the HWS are:

- Opportunity for all: better educated children and residents who can access employment opportunities.
- A healthier environment: places and communities that keep people well and independent.
- Better emotional health and wellbeing: strengthen mental health and emotional wellbeing.
- Quality care, centred around the person: remodel health and care services so they are more joined up and focus on preventing, reducing and delaying the need for care and support.
- Healthier for longer: reduce avoidable ill-health and death.

Public services and community life

8.2.119 The priorities identified under this heading apply to potential effect of displacement or change in access affecting public services and community facilities, potential health effects from displacement of residential dwellings, potential effects from a change in the demand for health services, potential effects from a change in the demand for public services and community facilities, potential effects from changes in community cohesion, and potential effects from changes in crime and community safety (including fear of crime).

8.2.120 Thurrock Council's HSW sets the goal of having communities that are stronger and better connected. A goal of having fewer people feeling socially isolated or lonely is also enshrined in the document. Separately, four new healthy living centres will be built, with GPs, nurses, mental health services, wellbeing programmes, community hubs and outpatient clinics under one roof.

8.2.121 Thurrock Council's JSNA notes that commissioners need to ensure that information and advice about health and care services is made more accessible to enable local people to find out about the range of local services and support.[32]

8.2.122 Access to and the provision of health services, in particular, primary health care services,

[32] Thurrock Council, 2012, Joint Strategic Needs Assessment

have a key role to play in the improvement of the local population's health. Under doctoring appears to be an issue in Thurrock with half of the practices serving weighted practice populations/WTE GP of more than the recommended maximum of 2000.[33]

8.2.123 Thurrock Council's JSNA states that there is a need to increase the profile of hidden crimes, such as violence against women (including honour based abuse and female genital mutilation), loan sharks and hate crime so that victims are not left isolated and at risk of depression.[34] Data is required from A & E, particularly around alcohol and knife crime, with locations so that responses can be effectively targeted.

Housing

8.2.124 The priorities identified under this heading apply to potential health effects from displacement of residential dwellings.

8.2.125 Thurrock Council's JSNA states that the association between housing conditions and physical and mental ill health has long been recognised. Good housing has a key role to play in influencing the overall living standards of a family. Children‟s development and well-being is dependent on tackling all relevant dimensions of poor housing. If a home is overcrowded it can affect health and educational attainment and can impact negatively on life chances. It is also recognised that damp, cold housing is associated with an increase in mental health problems and cold living conditions increase blood pressure, increasing the risk of heart attacks and strokes.

Employment and training

8.2.126 The priorities identified under this heading apply to potential effects from displacement of commercial uses, potential effect of work and training opportunities created, and potential health effects relating to changes in access to work and skills.

8.2.127 Thurrock's HWS sets itself the goal of ensuring that all children make good educational progress and to put more Thurrock residents in employment. Thurrock's JSNA notes that being in employment correlates strongly with good health. Similarly unemployment is damaging to health. The document also highlights that investors are concerned about the low skills base and the lack of professional management expertise within the Borough. Low levels of graduate qualification and poor school performance are identified as reasons for a lack of inward investment in Thurrock.

Healthy lifestyles

8.2.128 The priorities identified under this heading apply to potential effect of displacement or change in access to open spaces, potential effects associated with open space provision and amenity space and potential effects of the presence of the construction workforce.

8.2.129 The two key priorities identified in Thurrock's JSNA are reducing obesity and reducing

[33] Thurrock Council, 2012, Joint Strategic Needs Assessment
[34] Thurrock Council, 2012, Joint Strategic Needs Assessment

the prevalence of smoking.

8.2.130 In Thurrock there are currently 72 maintained parks and open spaces with a combined area of approximately 640 hectares. Thurrock Council notes that Thurrock has low levels of physical activity in both adults and children. Levels of satisfaction with leisure provision in Thurrock are significantly lower than both England and regional rates, and have declined over the last five years.[35]

8.2.131 Thurrock Council's JSNA[36] notes that smoking prevalence is not distributed evenly within Thurrock but largely linked to deprivation levels. Smoking is the leading preventable cause of death in England, and the biggest single cause of inequalities in death rates between rich and poor, accounting for over half of the difference in risk of premature death between social classes. The document states that in order to reduce health inequalities, commissioners should review commissioning arrangements of stop smoking services within Thurrock in order to increase access and quit rates per estimated smoking population in the deprived areas of West Thurrock and South Stifford, Grays Riverside, Tilbury St. Chads, Little Thurrock and Blackshots and Chadwell St. Mary.

8.2.132 The highest substance misused in Thurrock for both adults and young people is alcohol, followed by cannabis.[37] Admissions for alcohol attributable and alcohol specific illnesses are increasing and this trend mirrors the national picture. More work is required to increase the impact of this Department of Health identified „high impact" change, and to widen the screening and early interventions to people with illnesses that are resulting in admissions to hospital. Thurrock's HWS has also set itself the goal of reducing the number of teenage pregnancies.

Inclusion

8.2.133 The priorities identified under this heading apply to potential health effects associated with the inclusive design, site access and facilities.

8.2.134 Thurrock Council's JSNA states that commissioners need to ensure that the outcomes of the learning disability health self-assessment are implemented across Thurrock. It recommends that Council commission the provision of learning disability day opportunities to local social enterprise to optimise support for and put people with learning disabilities at the heart service design and provision.[38]

Transport

8.2.135 The priorities identified under this heading apply to potential changes to local traffic and transport and changes in use of active travel modes and potential health effects from a change in local traffic and active travel.

[35] Thurrock Council, 2012, Joint Strategic Needs Assessment
[36] Thurrock Council, 2012, Joint Strategic Needs Assessment
[37] Thurrock Council, 2012, Joint Strategic Needs Assessment
[38] Thurrock Council, 2012, Joint Strategic Needs Assessment

8.2.136 Thurrock Council's JSNA notes that transport affects the health of the whole population both directly and through pollution of the environment. Thurrock's strategy will improve conditions for vulnerable road users such as pedestrians and cyclists, by making the overall urban environment safer, especially by reducing traffic speeds in residential areas, such as widespread 20mph zones. The Council will also give priority to improving road safety in disadvantaged communities, integrating with wider programmes such as neighbourhood renewal, as well as around schools and major workplaces.

Flooding

8.2.137 The priorities identified under this heading apply to potential effect of increased flooding.

8.2.138 Thurrock Council does not identify issues relating to flooding as a health priority.

Noise and vibration

8.2.139 The priorities identified under this heading apply to potential effect of construction resulting in changes in noise and vibration and potential health effects associated with changes in noise and vibration.

8.2.140 Thurrock Council's JSNA[39] notes that for the period 1/4/2010 to 31/3/2011 there were 1,828 Noise Service requests. No recommendations or further issues are identified.

Air quality

8.2.141 The priorities identified under this heading apply to potential effect of construction resulting in changes in air quality and potential health effects associated with changes in air quality.

8.2.142 Thurrock's HWS sets itself the goal of improving air quality. Thurrock Council's JSNA states that levels of Nitrogen Dioxide in the air have exceeded the agreed air quality mean objective level for NO_2 at the monitoring site at Purfleet for the past three years. There is now also a need for the Council to progress to a Detailed Assessment for Calcutta Road in Tilbury in order to declare an AQMA for nitrogen dioxide.

Electromagnetic field exposure

8.2.143 The priorities identified under this heading apply to potential health effects associated with changes in electromagnetic field exposure.

8.2.144 Thurrock Council identifies no issues relating to electromagnetic field exposure as a health priority.

[39] Thurrock Council, 2012, Joint Strategic Needs Assessment

CONSTRUCTION PHASE

Displacement to land and property as a result of the land take

8.2.145 The London Resort is expected to require a significant amount of land for storage of construction equipment and other uses, which may impact community facilities in the area. Large numbers of construction vehicles or temporary changes to routes may also affect patterns of local traffic and the accessibility of locations. To understand the impact of this, it is important to understand the existing community facilities and their users present in the area.

Potential effect of displacement or change in access affecting public services and community facilities

Barriers to access to housing and services

8.2.146 The CIA ranks within the 5th decile on the IMD's barriers to access to housing and services domain, indicating that access to services while not stellar, is not a particular problem in the area. As discussed above, the relatively low ranking of Dartford and Thurrock is driven by homelessness and the relative unaffordability of housing, and not so much by access to services and facilities.

Anxiety

8.2.147 Anxiety data is measured from responses answering the question "Overall, how anxious did you feel yesterday?".[40] Answers choosing a value between 6-10 are classified as high anxiety scores. Although no breakdown of the sources of anxiety is available, it is expected that a share of this will be social anxiety, which has the capacity to harm the social ties of the individual.

8.2.148 In 2015/16, 19.37% of respondents in England were found to have a high anxiety score; this compares with 19.65% in Thurrock and 21.53% in Kent, indicating that in these areas, anxiety is marginally more prevalent than at the national level.

Use of social services

8.2.149 In Kent the proportion of people who use services who feel safe is 71.2%, and in Thurrock 72.8%, better than England's 69.2%.[41]

8.2.150 Of adult social care users in Kent 52.3% say they have as much social contact as they wish; the same share in Thurrock is 46.3%. The proportion in England is lower, 45.9%. Regarding adult carers, the share who say they have as much social contact as they wish is higher in England (32.5%) than in either Kent (27.3%) or Thurrock (27.5%). Overall, high

[40] NHS, 2.23iv – Self-reported wellbeing – people with a high anxiety score
[41] Public Health England, Local Authority fingertip profiles 2019

proportions of users of social services in both Kent (79.7%) and Thurrock (83.7%) feel they have control over their lives, compared with 76.6% in England.

Existing community facilities

8.2.151 The London Resort could result in the displacement of community uses. The existing community uses are collected here.

Table 8.2.10 Current provision of community facilities

Type	No. of community facilities/services provided	
	CIA	PSB
Community Services[42]	18	2
Community Serving Businesses[43]	39	1
Places of Worship	13	0
Library	1	0
Emergency Services	2	0
Sports Facilities	7	1
Total	**80**	**4**

Sources: Ordnance Survey, 2020, Addressbase Plus; Google Maps; Volterra calculations

8.2.152 The table above shows that four of the 80 community facilities currently on offer within the CIA are located within the PSB.

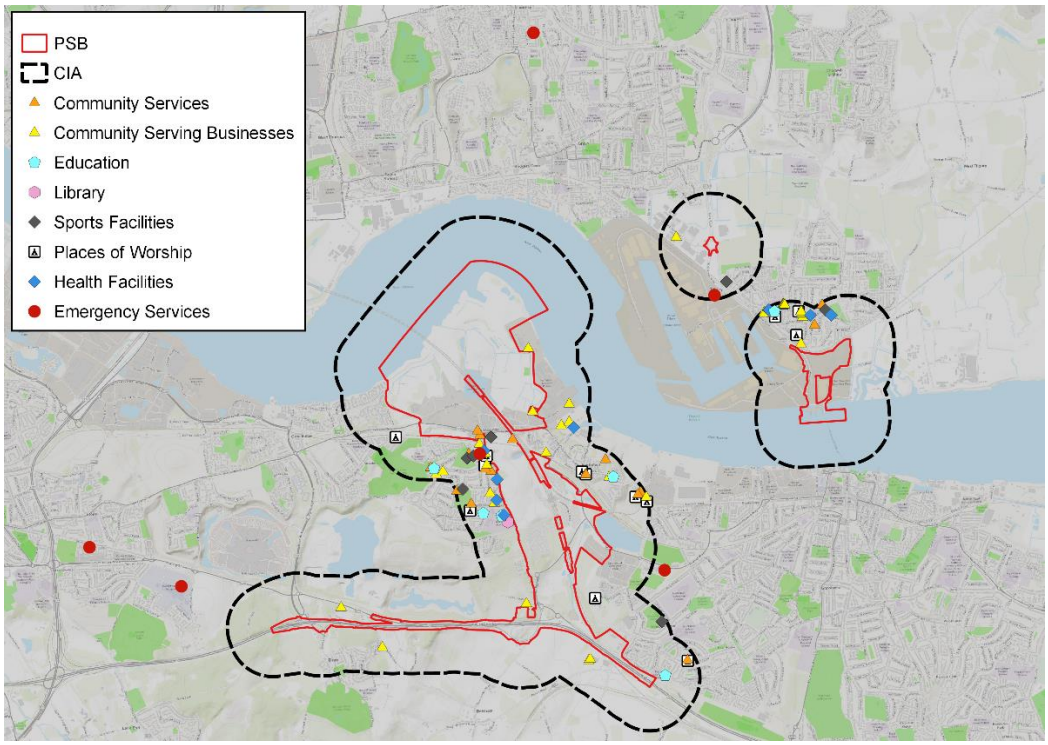
8.2.153 Research suggests that it is best practice for one community centre to be provided for every 7,000 – 11,000 people residing in a community.[44] Earlier research by the same authors suggested that the catchment population required to sustain one community centre, in terms of viability, is approximately 4,000 people.[45] Within the CIA there are eight Public / Village Halls or other community facilities; and the area has a population of 69,500[46]; this means that there is a community centre per roughly 8,700 residents, within the optimum range indicated by research for both financial viability and best practice.

8.2.154 In terms of emergency services, A&E services are located towards the lower western area of the London Resort (further detail can be found at 8.2.254). There are two police stations – one is located in the CIA and on the north side of the river (Tilbury Police Station) and the other is located on the south side of the river on the eastern part of the London Resort (North Kent Police Station), just outside the CIA. There are also three fire

[42] Community Services have been defined as any facility that can be classed as a public/village hall, public convenience centre, church hall/religious meeting place, and community service centre/office.
[43] Community Serving Businesses includes the following entities – post office, market (indoor/outdoor), public house/bar/nightclub, restaurant/cafeteria, shop, and other licensed premise vendor.
[44] Barton, Grant and Guise, 2010, Shaping neighbourhoods for local health and global sustainability
[45] Barton, Grant and Guise, 2003, Shaping Neighbourhoods: A Guide for Health, Sustainability and Vitality
[46] As discussed earlier, a slightly larger area than the CIA is used for the collection of statistics because of data limitations. The population estimate is therefore an overestimate of the real CIA population.

stations in the vicinity of the London Resort – one is within the CIA whilst the other two are located on either sides of the river but lie outside of CIA boundary. See Figure 8.2.6.

Figure 8.2.6 Community Facilities / Services within the PSB and CIA



Source: Ordnance Survey Addressbase Premium; Google Maps

Future baseline

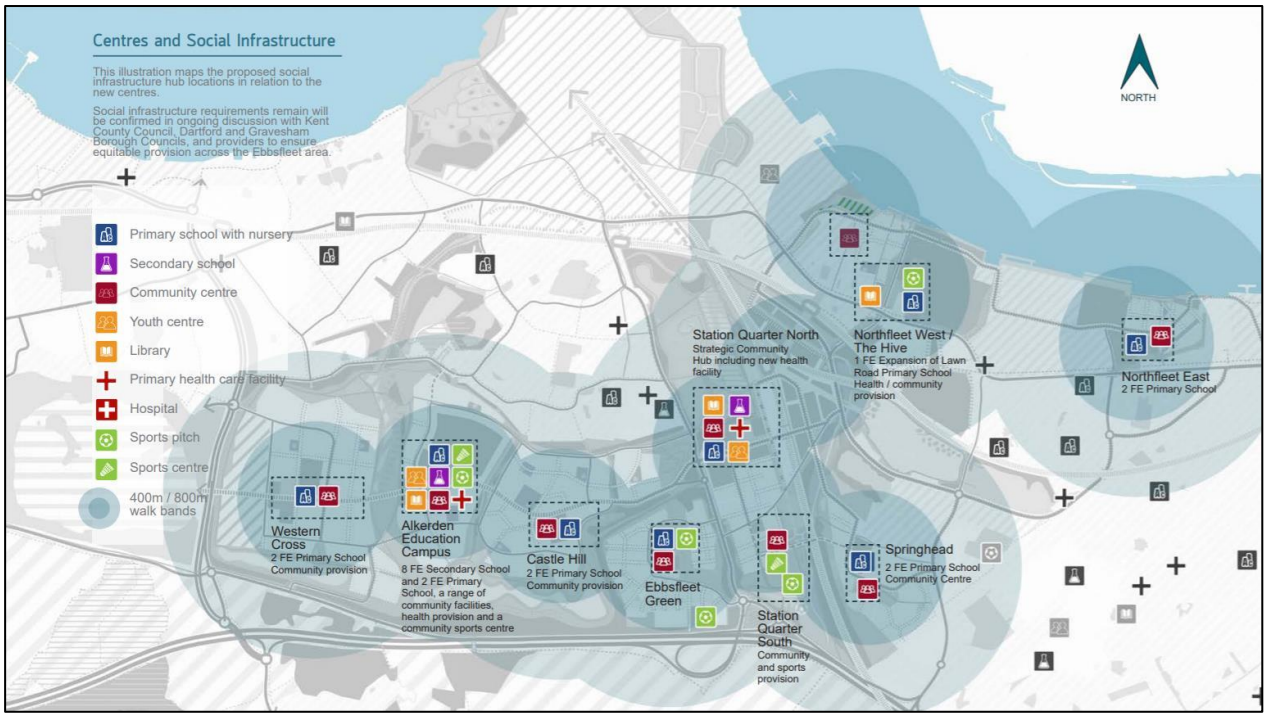
8.2.155 The Dartford Borough Council Infrastructure Delivery Plan[47] states that there is to be a new hub facility for lifelong learning – including library provision – at Eastern Quarry within the Ebbsfleet Garden City in order to meet new demand arising from development in the area. This facility, which will be within the CIA, is to be delivered by 2022.

8.2.156 The EDC Implementation Development Framework outlines, for the six existing development proposals with consent, that there is maximum consent for approximately 70,000 sqm of community floorspace. Of this, 50,000 sqm is at Eastern Quarry (along the bottom of the CIA) and 21,000 sqm is in Ebbsfleet Central (in the centre of the CIA).[48]

8.2.157 Figure 8.2.7 outlines the EDC framework for planned future uses, many of which will fall within the CIA.

[47] Dartford Borough Council, 2019, Infrastructure Delivery Plan
[48] Ebbsfleet Development Corporation, Ebbsfleet Implementation Framework, 2017

Figure 8.2.7 Centres and social infrastructure in the EDC



Source: Ebbsfleet Development Corporation, 2017

Potential effect of displacement or change in access to open spaces

8.2.158 As noted in the section above on obesity and physical activity, inactivity and excess weight are significant problems across Dartford, Gravesham and Thurrock.

Exercise

8.2.159 In Kent (containing Dartford and Gravesham) 24.4% of the 16+ population is a member of a sports club, and in Thurrock 21.9%. Overall, sports club membership in the CIA is therefore likely slightly higher than the national average of 22%.

8.2.160 The estimate of the population who utilise outdoor spaces for exercise/health reasons in Kent is 18.7%, and in Thurrock 36.9%, compared with the national share of 17.9%. Overall, while physical inactivity seems to be a problem for the area as identified above, good utilisation of sports clubs and outdoor spaces indicates that a lack of facilities is not the driver for this outcome.

8.2.161 As discussed in the earlier section on obesity, obesity and a lack of physical activity are considerable problems within the authorities within which the CIA falls. The under 75 mortality rate from cardiovascular diseases considered preventable is 53 per 100,000

population in Thurrock, much worse than England's 45.3 per 100,000 population, and 39.3 per 100,000 population in Kent, better than in England.

Open space provision in the CIA

8.2.162 **Appendix 7.1: Detailed baseline** found 39 open spaces within the CIA, one of which is situated within the PSB. This open space (OS36) has been identified as a playing field along Manor Way, and it will be retained. It is highlighted by red text in Table 8.2.11. The 39 open spaces have a total area of 47 ha.

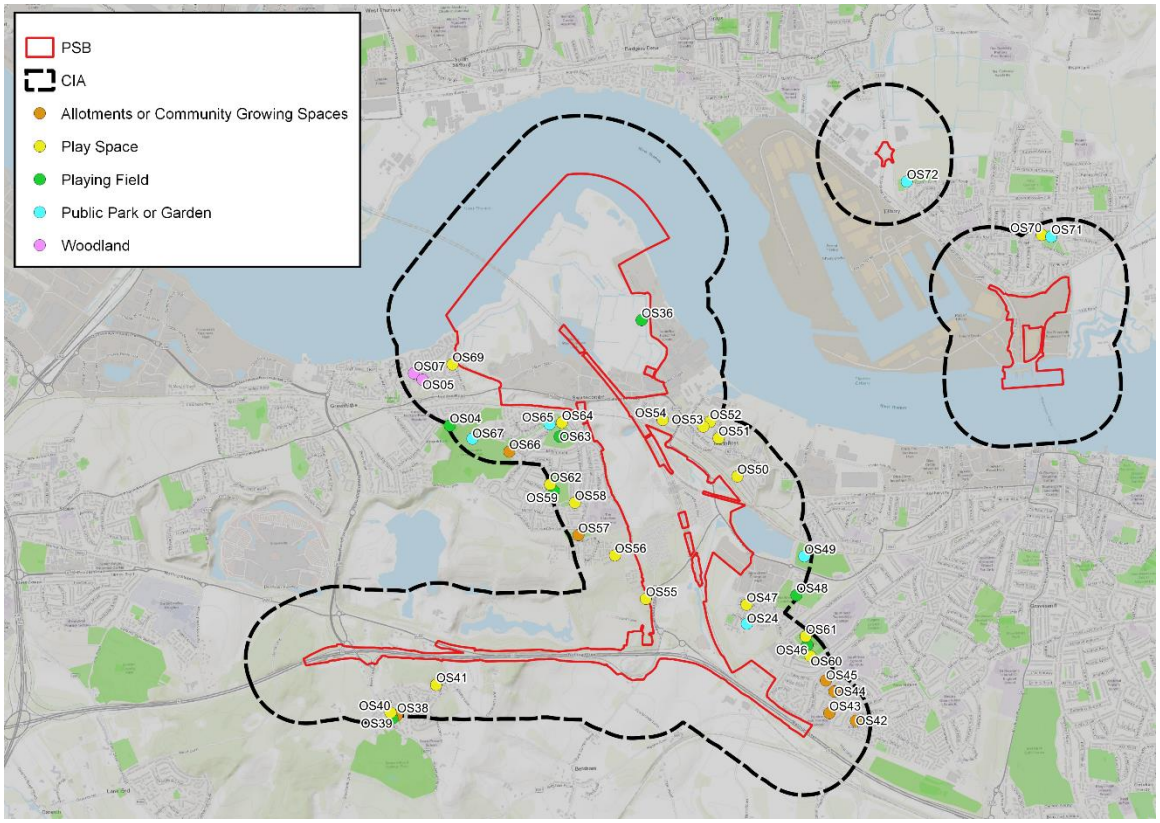
8.2.163 It should be noted that this open space definition does not include the three marshes which overlap with the PSB, which are discussed later on in this section. The 39 open spaces that have been identified are illustrated in Figure 8.2.8.

Table 8.2.11 Open spaces within the PSB and CIA

ID	Name	Type of Open Space
OS04	Knockhall Recreational Ground	Playing Field
OS05	Ingress Abbey Lawns and Boulevard	Woodland
OS07	R/O Ingress Abbey	Woodland
OS24	Penn Green	Public Park or Garden
OS36	Manor Way	Playing Field
OS38	n/a	Allotments or Community Growing Spaces
OS39	n/a	Playing Field
OS40	n/a	Play Space
OS41	n/a	Play Space
OS42	n/a	Allotments or Community Growing Spaces
OS43	n/a	Allotments or Community Growing Spaces
OS44	n/a	Allotments or Community Growing Spaces
OS45	n/a	Allotments or Community Growing Spaces
OS46	Wombwell Park	Playing Field
OS47	n/a	Play Space
OS48	n/a	Playing Field
OS49	Northfleet Urban Country Park	Public Park or Garden
OS50	n/a	Play Space
OS51	n/a	Play Space
OS52	n/a	Play Space
OS53	n/a	Play Space
OS54	n/a	Play Space
OS55	n/a	Play Space
OS56	n/a	Play Space
OS57	n/a	Allotments or Community Growing Spaces
OS58	n/a	Play Space
OS59	Swanscombe Park	Playing Field
OS60	n/a	Play Space
OS61	n/a	Play Space
OS62	Swanscombe Park Playground	Play Space

ID	Name	Type of Open Space
OS63	Broomfield Park	Playing Field
OS64	Broomfield Park Playground	Play Space
OS65	Broomfield Park	Public Park or Garden
OS66	n/a	Allotments or Community Growing Spaces
OS67	Swanscombe Heritage Park	Public Park or Garden
OS69	n/a	Play Space
OS70	n/a	Play Space
OS71	Anchor Fields Park	Public Park or Garden
OS72	n/a	Public Park or Garden

Figure 8.2.8 Open space within the PSB and CIA



Contains Ordnance Survey data © Crown copyright and database right 2019

Sources: OS Open Greenspace; Google Maps

Marshes

8.2.164 In addition to the open spaces identified, there are three marshes which overlap with the PSB. These are: Black Duck Marsh, Botany Marshes and Broadness Salt Marsh.

8.2.165 Black Duck Marsh is relatively inaccessible due to water levels, although the northern side of the marsh has numerous pathways along the river and flood embankments that

are frequently used by local people taking walks through the residential area of Ingress Park.

8.2.166 Botany Marsh is a wildlife reserve managed by the Kent Wildlife Trust and primarily funded by the industrial owners, Cemex. It consists of open waterbodies, reedbeds and aquatic areas, scrub, wet woodland and shingle areas. A network of pathways provide access around the eastern perimeter and into the main marshland areas in the interior of the reserve (although it appears flooding is an issue that is impeding access).

8.2.167 Broadness Salt Marsh on the northern peninsula is currently remote in character and flanked to the east by heavy industrial uses and to the south by further scrubby areas and wetland. The area has been artificially raised by landfill and industrial waste and is not publicly accessible.

8.2.168 Black Duck Marsh and Botany Marshes are accessible by official Public Rights of Way (PRoW)s to the wider area. These PRoWs are reasonably well used. Broadness Salt Marsh is not accessible through official paths, though it is understood that some people do use unofficial paths.

PROWs

8.2.169 The initial PRoW and route assessment[49] finds that there are nine PRoWs and routes that will be affected by the London Resort.

8.2.170 All remaining PRoW and routes that are not discussed in this baseline are at this stage assumed to be retained through both the construction and operation phase and are not considered to face significant impacts as a result of the London Resort.

8.2.171 This assessment is a work in progress and the route alignments are still being refined. The assessment is subject to change and will be reviewed in the ES.

Future baseline

8.2.172 The Ebbsfleet Implementation Framework will be used by the EDC to shape and support its plans. It has the ambition for the garden grid and major parks to focus on delivering an integrated blue and green network, connecting the city's parks and open spaces into a unified network which allows residents to travel across the city within green corridors. It also aims for seven city parks to be developed from existing open spaces within Gravesham and Dartford areas, providing areas for sports, play and informal recreation, as well as long distance views and ecological enhancement. Finally, it has the ambition that Swanscombe Peninsula Park, currently made of three marshes (Botany Marsh, Black Duck Marsh and Broadness Marsh), will be consolidated into one coherent ecological

[49] This is informed by an initial PRoW and routes assessment by EDP. The assessment currently deals only with those routes affected on the Peninsula. The remaining routes are being reviewed in due course, with limited interventions expected. All remaining rights of way that are not discussed in this baseline are at this stage assumed to be retained through both the construction and operation phase and are not considered to face significant impacts as a result of the London Resort.

reserve. The proposals for the marshes being developed for this project by the Applicant will give consideration to these ambitions.

8.2.173 8.2.173 and 0 display the EDC framework for the garden grid and major parks respectively.

Figure 8.2.9 Garden grid

Source: EDC, Ebbsfleet Implementation Framework, 2017

Figure 8.2.10 Major parks

Source: EDC, Ebbsfleet Implementation Framework, 2017

Potential effects from displacement of commercial uses

8.2.174 **Appendix 7.2: Detailed baseline** of socio-economics estimates the employment currently supported by the site. It estimates that the current uses support between 1,330 FTEs across c.70,100 sqm of space, across a range of uses types. Further work will be done to refine this estimate and understand the existing uses in more detail, before DCO.

Numbers unemployed/claimant count

8.2.175 In 2018, 83% of working age residents in the Core Study Area were economically active, higher than the sub-regional, regional and national Areas (80%, 80% and 78% respectively). Additionally, 80% of working age Core Study Area residents were in employment – higher than sub-regional Area (77%), regional area (77%) and the UK (75%).

Table 8.2.12 Labour market characteristics, January to December 2018

	Working age pop	Economically active		Employed	
CSA	243,600	201,900	83%	193,900	80%
SRCA	2,113,500	1,692,200	80%	1,624,900	77%
RCA	15,342,900	12,246,200	80%	11,743,200	77%
UK	41,250,300	32,308,100	78%	30,933,500	75%

Source: ONS, Annual Population Survey, 2018

8.2.176 In 2018, there were 7,900 unemployed people in the Core Study Area, equivalent to 3.9% unemployment rate. This is better than the the SRCA (4.0%), RCA (4.1%) and the NCA (4.3%).

Table 8.2.13 Unemployment and unemployment rate, January to December 2018

	Unemployed	%
CSA	7,900	3.9%
SRCA	67,300	4.0%
RCA	503,100	4.1%
UK	1,374,600	4.3%

Source: ONS, model-based estimates of unemployment, 2018

8.2.177 In 2019, only 33% of CSA residents were qualified to NVQ4+ level, comparable to the SRCA (35%) but lower than the RCA (46%) and the UK (40%). Of all CSA residents, 9% had no qualifications- slightly higher than the SRCA and UK levels (8%) and higher than the RCA (7%). These imply that residents of the CSA are qualified to a lesser level than other geographical comparators.

Table 8.2.14 Resident qualifications, January to December 2019

	CSA	SRCA	RCA	UK
NVQ4 or above	33%	35%	46%	40%
NVQ3 or above	52%	54%	62%	58%
NVQ2 or above	72%	73%	78%	76%
NVQ1 or above	83%	85%	87%	86%
Other Qualifications	7%	6%	7%	7%
No Qualifications	9%	8%	7%	8%

Source: ONS, Annual Population Survey, 2019

8.2.178 The table below shows qualifications of the whole workforce across the various study areas, not specific to construction (which is detailed in the following section), from the Census 2011, which is the most recent reliable and comprehensive source available. This shows that 23% of workers in the CSA are qualified to level 4 and above – far lower than the RCA (40%) and England (35%). Workers in the CSA are generally qualified to a less high level than the regional and national comparators.

Table 8.2.15 Workplace qualifications, 2011

	No qualifications	Level 1	Level 2	Level 3	Level 4 and above	Apprenticeships and other qualifications
CSA	13%	19%	20%	14%	23%	11%
RCA	9%	13%	15%	13%	40%	10%
England	10%	14%	17%	15%	35%	9%

Source: Census, 2011

Future baseline - businesses

8.2.179 The estimates of current workforce within the PSB are likely to be conservative in terms of job numbers which might be displaced. All users within the red line are aware of the status of the project, and within the estimates full occupancy is already assumed. It is therefore viewed unlikely that any additional workforce over and above the existing baseline estimated could be supported by the present uses, and so the future baseline position is assumed to remain the same as the current baseline. The effects are therefore assessed against the current baseline levels.

8.2.180 The EDC Implementation Development Framework outlines, for the six existing development proposals with consent, that there is maximum consent for over 600,000 sqm of office floorspace. Of this, 120,000 sqm is at Eastern Quarry (along the bottom of the CIA) and 450,000 sqm is in Ebbsfleet Central (in the centre of the CIA). In Northfleet Embankment West, 46,000 sqm is allocated to B1 (office), B2 & B8 (industrial). In Northfleet Embankment East, 87,550 is allocated across B1, B2 & B8. In terms of retail space, there is expected to be a maximum of 28,000 sqm delivered across five of the six proposals (26,000 sqm at Eastern Quarry) and 147,000 sqm across an (undefined) split of retail, hotels and leisure in Ebbsfleet Central.[50]

8.2.181 In the future baseline it is therefore likely that in terms of quantum, the new floorspace delivered will more than offset the 70,100m2 (NIA) of floorspace within the PSB which is lost as a direct result of the London Resort. However it is known that some of the uses currently on the site are bespoke to the location (some are known as 'bad neighbour' uses), and therefore in order to appropriately assess the loss of floorspace as a result on the London Resort, the loss of the 70,100m2 (NIA) of floorspace within the PSB is considered.

Potential health effects from displacement of residential dwellings

8.2.182 Within the PSB there is one building which is identified as residential. This is a property on the corner of London Road and Pilgrim's Road which is understood to form three dwellings. Further work is being done to understand in more detail the occupancy of

[50] Ebbsfleet Development Corporation, Ebbsfleet Implementation Framework, 2017

these residential units.

8.2.183 Within the PSB only 24% of households have no access to a van or car; this is lower than the RCA (27%) or the NCA (26%). The heightened mobility the high rates of vehicle ownership provide will help displaced residents adapt to new locations, if they choose to stay in the area.

Potential changes to local traffic and transport and changes in use of active travel modes

8.2.184 A high proportion of households within the NSA have access to a car or van, with only 22% indicating no access to a car or van in 2011. This compares to 27% in the region and 26% nationally.[51] People in the local area travel on average further for work: 45% travel more than 10 km to work, significantly higher than in the region (34%) and nationally (32%).

8.2.185 As discussed earlier, obesity and a lack of physical activity are considerable problems within the authorities within which the NSA falls. The under 75 mortality rate from cardiovascular diseases considered preventable is 53 per 100,000 population in Thurrock, much worse than England's 45.3 per 100,000 population, and 39.3 per 100,000 population in Kent, better than in England.

8.2.186 Refer to the traffic and transport baseline information presented in the operational section.

Potential effect of increased flooding

8.2.187 **Chapter 17: Water resources and flood risk** has undertaken an assessment of flood risk in the area. Parts of the Project Site fall into all of Flood Zones 1-3. The northern part of the Swanscombe Peninsula is located within Flood Zone 2 with a large band across the centre of the peninsula located within Flood Zone 3. The Access Corridor is located almost entirely within Flood Zone 1. The Essex Project Site is located entirely within Flood Zone 3 and benefits from defences. Whilst the Project Site currently receives protection from a storm surge up to the 1 in 1000-year flood event, climate change is predicted to result in sea level rises and therefore an increased risk of tidal flooding to the Project Site. Chapter 17: Water resources and flood risk has identified site users as sensitive receptors to flood risk. Site users have a high sensitivity to flood risk.

Construction activity

8.2.188 The London Resort is expected to support a large construction workforce. To understand the impact of this, it is important to understand the existing construction employment and construction workforce availability, as well as baseline levels of noise, vibration and air pollution.

Potential effect of construction resulting in changes in noise and vibration

[51] ONS, Census 2011

8.2.189 Local authority-level statistics on sleep and night-time disturbance are not publicly reported. Nevertheless, lack of sleep and interrupted sleep are serious national health problems. While the National Sleep Foundation in the USA recommends between 7 and 9 hours of sleep for the average adult[52], the 2017 Great British Bedtime Report of the Sleep Council in the UK has revealed that almost three-quarters (74%) of Brits sleep less than 7 hours per night.[53] Some 12% sleep less than 5 hours.

8.2.190 The rate of noise complaints registered in Dartford in 2018/19 was 8.0 per 1,000 population, in Gravesham 4.6 per 1,000 population and in Thurrock 9.2 per 1,000 population. The national average was 6.8 per 1,000 population. As these three local authorities contain the NSA within their area, the NSA is expected to register broadly similar, or slightly higher numbers of noise complaints per resident than occur nationally.[54]

8.2.191 Within Kent the proportion of the population exposed to road, rail, and air transport noise of 65 dB(A) or more during daytime is 4.9%, in Thurrock 2.9%, both better than the national rate of 5.5%. The proportion of the population in Kent exposed to road, rail, and air transport noise of 55 dB(A) or more during night-time is 8.1%, in Thurrock 5.1%, both better than the national rate of 8.5%.[55]

8.2.192 Between December 2014 and February 2020, Buro Happold, on behalf of the Applicant, conducted multiple noise surveys in and around the Kent Project Site to establish the baseline ambient noise levels around the Proposed Development. A further noise survey is planned to assess the baseline conditions around Tilbury Town, north of the River Thames at the Essex Project Site. This has however been postponed due to the COVID-19 pandemic.

8.2.193 At each noise survey location there was found to be no tactile evidence of vibration due to road traffic or other sources, during site visits at the Kent Project Site. As such, vibration is not considered to be a significant issue at the Kent Project Site. The COVID-19 pandemic has impacted the suitability of conducting additional noise survey measurements around the Project Site, with lockdown conditions not considered to be representative of a typical noise environment. To support preliminary assessments of the potential noise impact, due to increased traffic flows resulting from the London Resort, baseline conditions have utilised road traffic statistics and $L_{Aeq,16hrs}$ noise level data. Future assessments will be conducted, and presented in full in the ES.

Potential effect of construction resulting in changes in air quality

8.2.194 The picture on respiratory health is generally negative. The standardised mortality ratio

[52] National Sleep Foundation, National Sleep Foundation Recommends New Sleep Times [available at: https://www.sleepfoundation.org/press-release/national-sleep-foundation-recommends-new-sleep-times]
[53] Sleep Council, 2017, Great British Bedtime Report
[54] PHE, Public Health Profiles
[55] PHE, Public Health Profiles

measuring deaths at all ages from respiratory diseases is 101.5 in Kent and 122.3 in Thurrock (where 100 is the national figure). For those aged under 75, the Kentish mortality rate from respiratory diseases (33.3 per 100,000) is slightly better than the English rate (34.7 per 100,000), but Thurrock's rate is significantly worse (36.8 per 100,000). For those over the age of 65, both authorities perform worse than the nation.[56]

8.2.195 The literature review found that exposure to air pollution increases the risk of lung cancer. As discussed earlier, lung cancer is a particular problem in both Kent and Thurrock.

8.2.196 In both Kent and Thurrock, however, admissions for respiratory tract infections in children aged under 5, as well as admission rates for asthma for children aged 0-18 are lower than the national average.

8.2.197 The air quality environment around the Project Site is varied. There is an extensive air quality monitoring network in close proximity to the Project Site, with three monitoring sites situated within the order of limits. Nearby roadside monitoring sites located adjacent to London Road exceeded legal limits of NO_2 in the most recent reporting year. Nearby urban background air quality monitoring sites (which are located away from significant emission sources such as major roads) monitored NO_2 concentrations below legal limits.

8.2.198 Where national air quality limits are exceeded, local authorities should declare these areas as Air Quality Management Areas (AQMAs). These areas are typically located where there are significant sources of air pollution along with relevant human exposure. Part of the Project Site is located within the Northfleet Industrial Area AQMA (Gravesham Borough Council) and also in close proximity to the Dartford AQMA, which has been declared for nitrogen dioxide (NO_2) and particulate matter (PM_{10}) air quality objective exceedances.

8.2.199 Both human and ecological receptors are considered within the air quality chapter of the PEIR. The impact of the London Resort will be predicted at existing receptor locations as well as at proposed onsite receptor locations in order to assess exposure of future site occupants to poor air quality. Receptors include; residential properties, amenity spaces, hospitals, care homes and schools. For a full overview of the receptors that will be considered, and the air quality objectives relevant for those receptors, refer to Table 16.3 within **chapter 16, air quality**.

Future baseline

8.2.200 Defra provide estimation of background air pollution data for all major pollutants for 1km grid squares across the UK; the website includes projections for future years up to 2030. Future year projections show all pollutant concentrations decreasing due to: improvements in emission control measures from point sources and industrial processes, improvement in emission abatement technology in the transport sector and local policies

[56] PHE, Local authority fingertip profiles

aimed at improving air quality (examples in London include the Ultra-Low Emission Zone and Air Quality Neutral requirements for future developments).

Potential effects of the presence of the construction workforce

8.2.201 The London Resort is expected to support a large construction workforce. The presence of a large construction workforce can be intimidating for some, and thus detrimental to social wellbeing – even if, as the literature review discusses, the stereotypical image of the anti-social construction worker has little basis in reality, and anti-social behaviour does not tend to become a problem around construction sites.

8.2.202 A range of lifestyle factors could be affected by the presence of a construction workforce:

- smoking;
- alcohol use; and

8.2.203 The ONS has found that smoking prevalence among workers in manual occupations was 25.5% in 2018, far above the national prevalence of 14.7%.[57] Researchers in the US have found that in that country construction workers had the highest pooled prevalence of smoking, at a rate of 38.8% in 2004.[58]

8.2.204 Note that based on analysis of survey results by University College London (UCL) and Action on Smoking and Health (ASH) as many as one million smokers may have quit during the coronavirus pandemic. This is the short term quit rate and it remains to be seen if this translates into longer term quit success, however.[59]

8.2.205 As identified earlier, the CSA is performing relatively well on metrics of sexual health, with low rates of new STI diagnoses, low abortion rates and low rates of teenage pregnancy.

8.2.206 As discussed in the earlier section on obesity, obesity and a lack of physical activity are considerable problems within the authorities within which the CIA falls. The under 75 mortality rate from cardiovascular diseases considered preventable is 53 per 100,000 population in Thurrock, much worse than England's 45.3 per 100,000 population, and 39.3 per 100,000 population in Kent, better than in England.

Construction worker numbers

8.2.207 In 2019, there were 17,300 working age residents in the Core Study Area that were employed in construction. These accounted for 8.5% of the total residential workforce; a smaller representation than in the SRCA (9.3%) but larger than the RCA (7.4%) and the

[57] ONS, 2019, Adult smoking habits in the UK:2018
[58] D. Lee et al., 2007, Smoking rate trends in U.S. occupational groups: the 1987 to 2004 National Health Interview Survey
[59] ASH, 2020, A million people may have stopped smoking since the COVID pandemic hit Britain [accessible at: https://ash.org.uk/media-and-news/press-releases-media-and-news/pandemicmillion/]

NCA (7.2%).

Table 8.2.16 Working age residents employed in construction, January to December 2019

	Working Age Residents Employed in Construction	Total Workforce	% of Employed Residents Working in Construction
CSA	17,300	203,000	8.5%
SRCA	161,000	1,723,100	9.3%
RCA	913,700	12,396,300	7.4%
NCA	2,335,900	32,551,900	7.2%

Source: ONS, Annual Population Survey, 2019

Construction business counts

8.2.208 In 2019, there were 3,200 construction firms in the Core Study Area, accounting for 22% of all firms. This is a higher proportion than the Sub-Regional Area (19%) and far higher than the regional and national comparators (13%).

Table 8.2.17 Construction business counts, 2019

	Construction Firms	All Firms	Proportion of all Firms
CSA	3,200	14,800	22%
SRCA	26,600	143,500	19%
RCA	154,700	1,208,900	13%
NCA	343,700	2,718,400	13%

Source: ONS, UK Business Counts, 2019

Future baseline

8.2.209 In 2019, the Construction Skills Network estimated that 168,500 UK construction jobs would be created between 2019 and 2023, reaching 2.79 million in 2023. This equates to 0.5% annual growth, in line with the whole economy average.[60] Table 8.2.18 below displays the growth in each relevant region.

Table 8.2.18 Construction employment growth 2019-2023

	Construction jobs required (2019 to 2023)	Total construction jobs 2023	Growth (2019 – 2023)	Annual growth	2024
South East	13,200	429k	3.9%	0.8%	432k

[60] Construction Skills Network forecasts 2019-2023, 2019

	Construction jobs required (2019 to 2023)	Total construction jobs 2023	Growth (2019 – 2023)	Annual growth	2024
East of England	24,550	250k	2.0%	0.4%	251k
Greater London	17,800	453k	4.8%	0.9%	457k
UK	168,500	2.79m	2.6%	0.5%	2.8m

Source: CITB, Construction Skills Network forecasts 2019-2023, 2019; Volterra calculations.

8.2.210 Further work will be done for the DCO submission to consider the possible construction workforce requirements of the Ebbsfleet Garden City and Lower Thames Crossing, as it will be important to consider the combined impact of these three major developments within the future baseline to inform the assessment

Potential effect of work and training opportunities created

8.2.211 The construction activity associated with the London Resort will generate a significant level of employment. As detailed in **Appendix 8.3: Literature Review** low incomes and unemployment have significant detrimental effects on health.

8.2.212 **Appendix 7.1: Detailed baseline** for land Use and socio-economics details the employment profile of the Core Study Area, where the potential effects of work and training opportunities created is assessed. The findings are only summarised here.

Number of workers

8.2.213 In 2019, 83% of working age residents in the Core Study Area were economically active, higher than the sub-regional, regional and national Areas (80%, 80% and 78% respectively). Additionally, 80% of working age Core Study Area residents were in employment – higher than sub-regional Area (77%), regional area (77%) and the UK (75%).

Table 8.2.19 Labour market characteristics, January to December 2018

	Working age pop	Economically active		Employed	
CSA	243,600	201,900	83%	193,900	80%
SRCA	2,113,500	1,692,200	80%	1,624,900	77%
RCA	15,342,900	12,246,200	80%	11,743,200	77%
UK	41,250,300	32,308,100	78%	30,933,500	75%

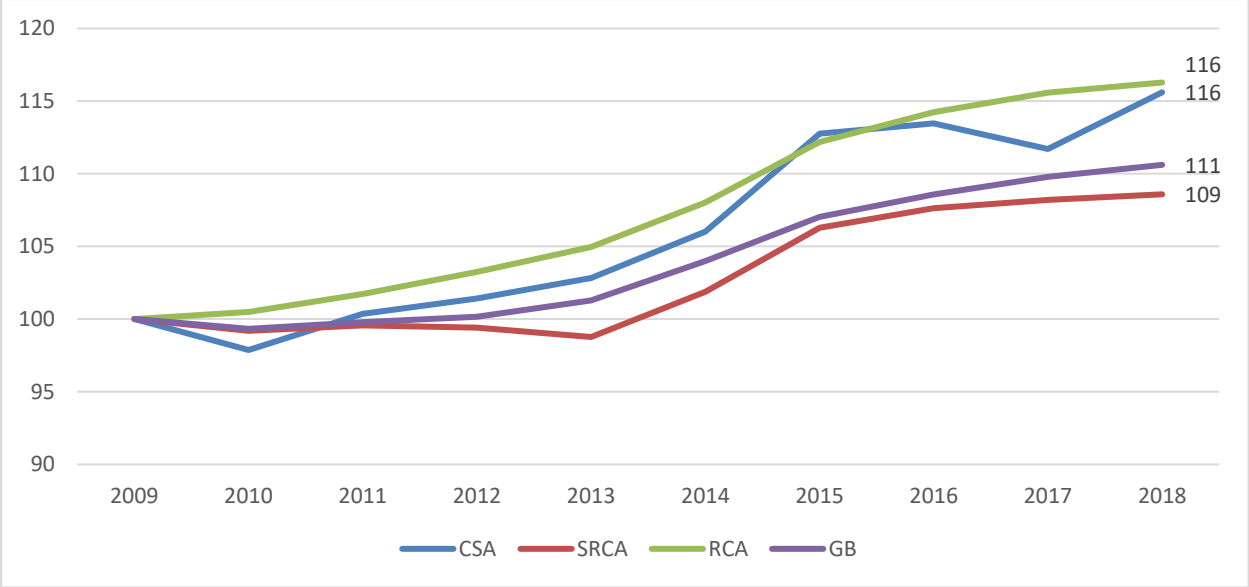
Source: ONS, Annual Population Survey, 2018

Employment growth

8.2.214 The figure below displays an index of employment growth across the study areas. Since 2015, all areas have grown reasonably similar amounts, although the Core Study Area did experience a dip in 2017 which was not seen in other areas. This was mostly driven

by Dartford, who recorded 5,000 less jobs in 2017 than in 2016. Half of these Dartford losses (2,500 jobs) were recovered in 2018.

Figure 8.2.11 Index of employment growth 2009 to 2018



Source: ONS, Business Register and Employment Survey, 2018

Numbers unemployed/claimant count

8.2.215 In 2018, there were 7,900 unemployed people in the CSA, equivalent to 3.9% employment rate. This is below that in the SRCA (4.0%), RCA (4.1%), and NCA (4.3%).

Table 8.2.20 Unemployment and unemployment rate, January to December 2018

	Unemployed	%
CSA	7,900	3.9%
SRCA	67,300	4.0%
LCA	251,700	4.6%
RCA	503,100	4.1%
UK	1,374,600	4.3%

	Unemployed	%
CSA	7,900	3.9%
SRCA	67,300	4.0%
RCA	503,100	4.1%
UK	1,374,600	4.3%

Source: ONS, model-based estimates of unemployment, 2018

8.2.216 A young person not in education, employment or training (NEET) provides a potential source of workforce for the London Resort. NEETs are a market which may benefit from the employment and skills initiatives offered by the London Resort. Data is not available at the CSA level, therefore SRCA is used to proxy the NEET availability. In the three months to February 2019, there was an average of 3,720 16 to 17 year olds in the SRCA that were classified as NEET. The majority of these were in Kent (2,070). The count of NEETs as a proportion of 16 to 17 year olds was 5.1%, slightly higher than the RCA (4.9%) and slightly lower than England (5.5%). The proportional representation of NEETs is noticeably higher in Medway (6.9%) and Kent (6.4%).

Table 8.2.21 NEETs 2018-2019

	NEETs (aged 16 to 17)	NEETS (as a proportion of 16 to 17 year olds)	Of which known to be NEET	Of which activity not known
SRCA	3,720	5.1%	2.6%	2.5%
Kent	*2,070*	*6.4%*	*2.8%*	*3.6%*
Medway	*440*	*6.9%*	*2.8%*	*4.1%*
Thurrock	*60*	*1.6%*	*1.6%*	*0.0%*
Essex	*1,150*	*3.7%*	*2.4%*	*1.3%*
RCA	23,410	4.9%	2.3%	2.7%
NCA	61,830	5.5%	2.6%	2.9%

Source: Department for Education, NEET and participation: local authority figures, 2019

Skills in the CSA

8.2.217 The London Resort will provide a significantly valuable opportunity to raise the qualifications of construction workers, providing upskilling and training opportunities. To assess the impact of this, the existing construction labour market, skills and training should be understood.

8.2.218 The qualification levels of the workforce within specific industries are not available. The qualifications of the whole resident workforce therefore provide an indication of likely construction qualifications, since construction workers make up part of the overall residential population. In 2019, only 33% of CSA residents were qualified to NVQ4+ level, comparable to the SRCA (35%) but lower than the RCA (46%) and the UK (40%). Of all CSA residents, 9% had no qualifications- slightly higher than the SRCA and UK levels (8%) and higher than the RCA (7%). These imply that residents of the CSA are qualified to a lesser level than other geographical comparators.

Table 8.2.22 Resident qualifications, January to December 2019

	CSA	SRCA	RCA	NCA
NVQ4 or above	33%	35%	46%	40%
NVQ3 or above	52%	54%	62%	58%
NVQ2 or above	72%	73%	78%	76%
NVQ1 or above	83%	85%	87%	86%
Other Qualifications	7%	6%	7%	7%
No Qualifications	9%	8%	7%	8%

Source: ONS, Annual Population Survey, 2019

Future baseline – construction employment

8.2.219 In 2019, the Construction Skills Network estimated that 168,500 UK construction jobs would be created between 2019 and 2023, reaching 2.79 million in 2023. This equates to 0.5% annual growth, in line with the whole economy average.[61] The table below displays the growth in each relevant region.

Table 8.2.23 Construction employment growth 2019-2023

	Construction jobs required (2019 to 2023)	Total construction jobs 2023	Growth (2019 – 2023)	Annual growth
South East	13,200	429k	3.9%	0.8%
East of England	24,550	250k	2.0%	0.4%
Greater London	17,800	453k	4.8%	0.9%
UK	168,500	2.79m	2.6%	0.5%

Source: Construction Skills Network forecasts 2019-2023, 2019

Operational Phase

Potential health effects associated with changes in noise and vibration

8.2.220 As discussed in the baseline for the noise and vibration effects related to construction activities, the vast majority of British adults do not get their recommended amount of sleep.

8.2.221 Refer to the potential effects of changes in noise and vibration during the construction phase for statistics on the health baseline relating to this effect. More detail on the noise baseline will be provided in the ES.

Potential health effects associated with changes in air quality

8.2.222 As discussed in the baseline for the air quality impacts related to construction activities, the mortality rate from respiratory diseases in Kent and Thurrock is higher than across England, although hospital admissions for respiratory tract infections for those under 5

[61] Construction Skills Network forecasts 2019-2023, 2019

and for asthma under 18 are lower in the two areas than nationally.

8.2.223 The construction baseline for air quality effects also presents baseline information relating to existing and future conditions of air quality in the study area. The future baseline air quality in the area is expected to be improved for all pollutants, as a result of improvements in emission control measures from point sources and industrial processes, improvement in emission abatement technology in the transport sector and local policies aimed at improving air quality, as discussed under the baseline air quality conditions related to the construction effects.

Potential health effects from a change in local traffic and active travel

8.2.224 As discussed in the baseline for the impacts on local traffic and active travel expected during the construction phase, most of the CSA suffers from high rates of obesity and high rates of physical inactivity. The picture is more mixed regarding mortality from cardiovascular diseases, with Kent performing better, and Thurrock worse than the national average.

8.2.225 Many of the local transport networks are expected to remain unchanged and operate in a similar manner as during the construction period. However, a multitude of transport network changes is planned in the region, which will affect the Kent North Thames Coast within which the London Resort is situated.

8.2.226 The host LPA's core strategies envisage that some development would occur at the site, accessed from London Road, with associated travel demand and transport infrastructure. Existing commitments forming part of the Ebbsfleet Garden City and Lower Thames Crossing are also considered.

8.2.227 There are a number of schemes being delivered in proximity to the London Resort that will affect the future baseline, including recently approved upgrades to both the Bean and Ebbsfleet junctions along the A2(T) and the delivery of the Lower Thames Crossing which will see significant reductions in traffic along the A2(T) once complete.

8.2.228 For the full transport baseline, please refer to **chapter 9: transport**

Potential health effects associated with changes in electromagnetic field exposure

8.2.229 It has not been possible to assess the baseline for this effect due to a lack of relevant information. This baseline remains under review and more detail will be provided at the ES stage should it become available.

Potential health effects associated with the inclusive design, site access and facilities of the London Resort

8.2.230 In 2011 there were 4,401 residents in the CIA who were economically active and suffering

from a long-term illness or disability.[62] The unemployment rate for this group was 13%, compared to the non-disabled population's 8%. Rates of economic inactivity are far higher at 83%, compared with the non-disabled population's 22%.

8.2.231 Using a different measure of disability and more recent data from 2019, it is estimated that in Dartford, Gravesham and Thurrock within which three local authorities the CIA lies, 20% of employed residents were disabled, and 23% of the total 16 to 64 residential population.[63] By comparison, in the RCA 14% of employed residents were disabled and made up 19% of the 16 to 64 residential population, and in the NCA 16% of employed residents were disabled and made up 21% of the 16 to 64 residential population. Even taking into account its larger share of disabled residents, the CIA is doing better in terms of the inclusion of disabled people in the workplace, calculated as the proportion of disabled residents in employment.

8.2.232 Several major theme parks across the UK are known to provide services and facilities that cater to those who may be disabled.[64] In general, Alton Towers, Chessington World of Adventure, Thorpe Park and Legoland (to name a few) all offer some version of an accessibility and restriction guide which outlines all the relevant information on rides, services, and health facilities for those who are disabled. Alton Towers, for example, provides hotel accommodation that enables visitors to access buttons that turn off colour changing lights and sounds in the lift for those who may be sensitive these effects. At Legoland, on-site wheelchairs are available for disabled visitors.

EXISTENCE OF THE LONDON RESORT

8.2.233 Once operational, the London Resort has the potential to impact on the health of residents, workers and visitors through a variety of channels.

Potential health effects relating to changes in access to work and skills

8.2.234 In 2018, the CSA had a residential population of approximately 388,600. It had grown 12% since 2008; faster than the SRCA (9%), RCA (10%) and UK comparator (7%).

Table 8.2.24 Population and population growth, 2008 and 2018

	2008	2018	% growth
CSA	347,000	388,600	12%
SRCA	3,208,300	3,496,800	9%
RCA	21,946,900	24,242,900	10%
NCA	61,823,800	66,435,600	7%

Source: ONS, Mid-year population estimates, 2018

[62] ONS, Census 2011
[63] ONS, 2020, Annual Population Survey
[64] Retrieved from UK Accessible Theme Parks, Firefly, 2018. (URL: https://www.fireflyfriends.com/uk/blog/uk-accessible-theme-parks/)

8.2.235 The table below shows that 63% of the CSA residential population are of working age (16 to 64 years); on par with the UK level, slightly lower than the RCA (64%) and slightly higher than the SRCA (61%). Only 15% of the CSA population are aged over 65; lower than the SRCA (20%), RCA (17%) and UK (18%).

Table 8.2.25 Population age structure, 2018

	0 to 4	5 to 11	12 to 17	18 to 64	65+	16 to 64
CSA	28,400	38,900	28,100	235,200	57,900	244,100
	7%	10%	7%	61%	15%	63%
SRCA	6%	9%	7%	59%	20%	61%
RCA	6%	9%	7%	61%	17%	64%
NCA	6%	9%	7%	61%	18%	63%

Source: ONS, Mid-year population estimates, 2018

Economic activity of residents

8.2.236 In 2018, 83% of working age residents in the CSA were economically active, higher than the SRCA, RCA and UK (80%, 80% and 78% respectively). Additionally, 80% of working age CSA residents were in employment – higher than SRCA (77%), RCA (77%) and the UK (75%).

Table 8.2.26 Labour market characteristics, January to December 2018

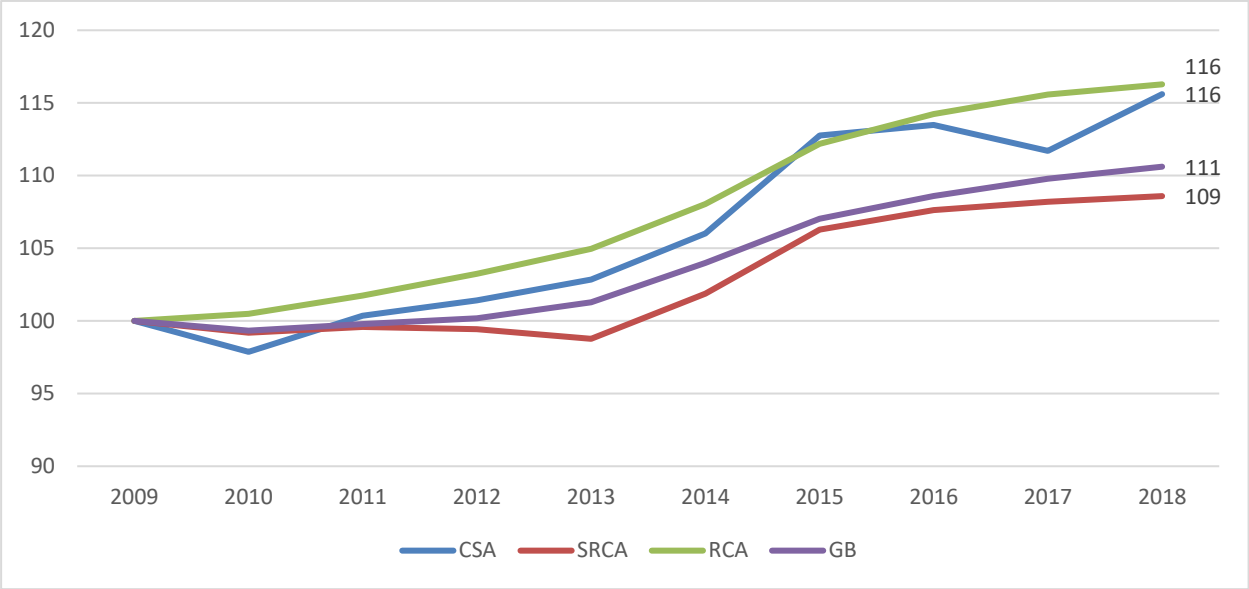
	Working age pop	Economically active		Employed	
CSA	243,600	201,900	83%	193,900	80%
SRCA	2,113,500	1,692,200	80%	1,624,900	77%
RCA	15,342,900	12,246,200	80%	11,743,200	77%
UK	41,250,300	32,308,100	78%	30,933,500	75%

Source: ONS, Annual Population Survey, 2018

8.2.237 The figure below displays an index of employment growth across the study areas. Since 2009, the CSA and RCA have grown by 16%, slightly faster than GB (11%) and SRCA (9%).[65] The CSA did experience a dip in 2017 which was not seen in other areas. This was mostly driven by Dartford, which recorded 5,000 less jobs in 2017 than in 2016. Half of these Dartford losses (2,500 jobs) were recovered in 2018.

[65] The Business Register and Employment Survey 2009 to 2015 did not include VAT/PAYE businesses. Since then, however, the lead definition has changed and so the 2015 to 2018 series does include these businesses. The difference between the two 2015 values in each series is c. 1%. Although the two series cannot therefore be directly equated, both have been shown for trend comparison purposes.

Figure 8.2.12 Index of employment growth 2009 to 2018 (2009 = 100)



Source: ONS, Business Register and Employment Survey, 2009 to 2018

Number and proportion of workers by industry

8.2.238 The table below shows that, of the 163,000 workers in the CSA, retail has the highest proportion of employment at 15%; far higher than the SRCA (11%0, RCA (9%) and GB (9%) levels. Similarly, a high proportion of workers are employed in transport and storage (12%) compared to the other geographical comparators (5% to 6%). On the other hand, the CSA has a smaller proportion of its workforce employed in professional, scientific and technical industries (4%) than the SRCA (7%), RCA (11%) and GB (9%).

Table 8.2.27 Employment by industry, 2018

	CSA		SRCA	LCA		RCA	GB
Agriculture, forestry & fishing (A)	1,000	1%	2%	2,500	0%	1%	2%
Mining, quarrying & utilities (B, D and E)	2,400	1%	1%	46,500	1%	1%	1%
Manufacturing (C)	8,800	5%	7%	151,000	3%	5%	8%
Construction (F)	12,800[66]	8%	7%	221,500	5%	5%	5%
Motor trades (Part G)	4,800	3%	3%	57,500	1%	2%	2%
Wholesale (Part G)	6,500	4%	4%	154,500	3%	4%	4%
Retail (Part G)	24,500	15%	11%	414,000	8%	9%	9%

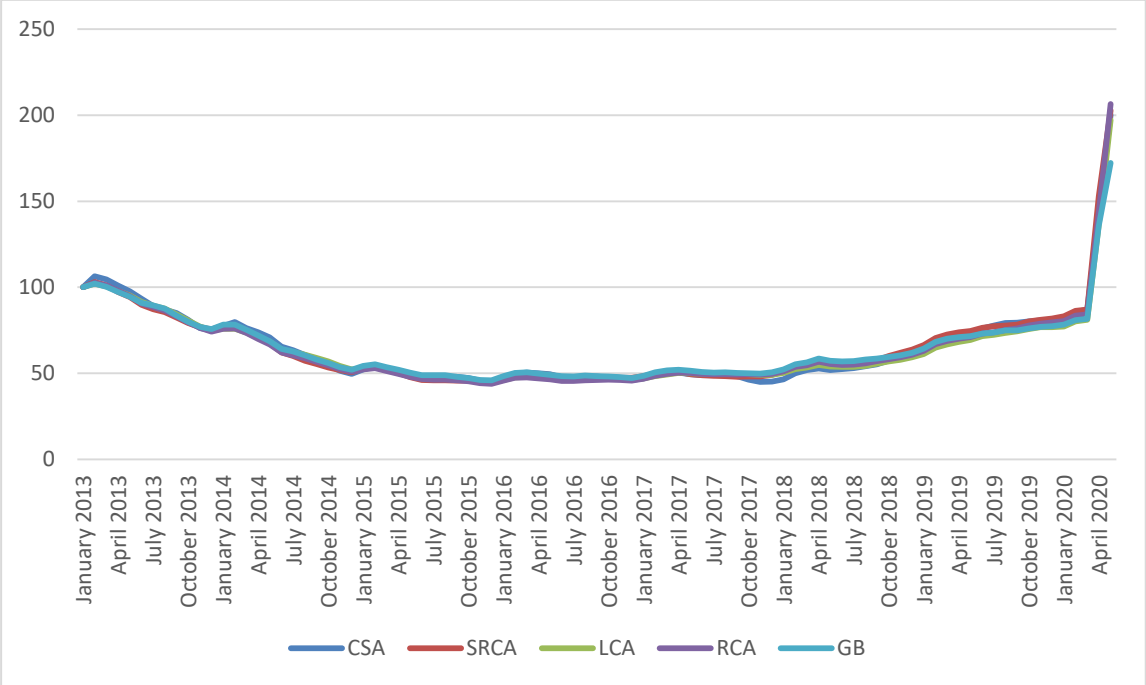
[66] Note that this does not match the 13,000 reported in Table 7.3 due to rounding in the original BRES dataset

	CSA		SRCA	LCA		RCA	GB
Transport & storage (inc postal) (H)	18,800	12%	6%	196,000	4%	5%	5%
Accommodation & food services (I)	11,000	7%	7%	381,500	8%	8%	8%
Information & communication (J)	3,300	2%	3%	329,000	7%	6%	4%
Financial & insurance (K)	1,500	1%	3%	379,000	8%	4%	3%
Property (L)	1,800	1%	2%	120,000	2%	2%	2%
Professional, scientific & technical (M)	7,300	4%	7%	675,000	14%	11%	9%
Business administration & support services (N)	19,800	12%	8%	509,000	10%	10%	9%
Public administration & defence (O)	3,800	2%	3%	164,500	3%	4%	4%
Education (P)	13,300	8%	10%	364,500	7%	8%	9%
Health (Q)	16,800	10%	13%	497,000	10%	11%	13%
Arts, entertainment, recreation & other services (R,S,T and U)	4,600	3%	4%	227,500	5%	5%	5%
Total	163k	100%	1.4m	**4.9m**	**100%**	12m	31m

Source: ONS, Business Register and Employment Survey, 2018

8.2.239 The figure below shows the index of claimants over time. It is clear that the recent pandemic has caused a large spike since January 2020. The pattern has been similar across all geographies. In this way, it is deemed that the most recent data is not necessarily the most representative of the workforce; rather, it reflects an unexpected shock. Therefore, the following analysis on claimants will present data for average counts from each month in 2019.

Figure 8.2.13 Index of all claimants, January 2013 = 100



Source: ONS, Claimant Count, 2020

8.2.240 The table below shows that, in 2019 on average the CSA had 6,000 claimants of job seekers allowance. This represented 2.6% of the 16-64 population; higher than SRCA (2.4%) and RCA (2.2%) but slightly lower than the NCA (2.7%)

Table 8.2.28 Claimants as a proportion of 16-64 population, December 2019

	CSA	SRCA	RCA	GB
All claimants	6,000	51,000	344,000	1,101,000
Proportion of 16-64 year olds	2.6%	2.4%	2.2%	2.7%

Source: ONS, Claimant Count, 2020; ONS, 2018 Mid-year population estimates

8.2.241 The table below shows that both residence-based and workplace-based earnings in the CSA are higher than their corresponding national averages. However, a discrepancy arises between the two types of analysis when the CSA is compared to the SRCA and RCA.

8.2.242 Residence-based analysis reveals that annual incomes in the CSA are lower than annual incomes across the SRCA and RCA, whereas workplace-based analysis shows that annual incomes in the CSA are higher than incomes across the SRCA and RCA.

Table 8.2.29 Annual earnings across study areas, 2019

	Median annual earnings	
Study Area	**Residence based analysis**	**Workplace based analysis**
CSA	£32,000	£32,400
SRCA	£32,200	£29,900
RCA[67]	£32,600	£31,200
NCA	£30,500	£30,400

Source: Annual Survey of Hours and Earnings, 2019

Apprenticeship starts (per 1,000 workers, by industry, by age, by level)

8.2.243 In the academic year 17/18, there were 2,490 apprenticeship starts in the CSA. This is a smaller number of starts than seen in any of the other academic years; a pattern seen across all geographies. The 17/18 CSA starts equated to 15.3 starts per 1,000 workers – on par with rates seen in the SRCA and SE LEP (15.1), slightly higher than England (14.0) and far higher than the RCA rate (10.1) which is mainly brought down by London, who only has 7.2 starts per 1,000 workers.

8.2.244 In 17/18, there were 1,630 achievements in the CSA. Over the period 14/15 to 17/18, the CSA saw an annual average achievement rate of 58%, which is on par with all geographies.

Table 8.2.30 Apprenticeship starts and average annual achievement rates, academic years 14/15 to 17/18

	14/15	15/16	16/17	17/18			
	Starts	**Starts**	**Starts**	**Starts**	**Starts per 1,000 workers**	**Achievements**	**Annual average achievement rate (14/15 to 17/18)**
CSA	2,980	2,930	2,910	2,490	15.3	1,630	58%
SRCA	26,960	27,100	26,340	21,320	15.1	14,410	57%
SE LEP	31,940	32,440	31,610	25,240	15.1	17,270	57%
RCA	151,960	154,520	149,580	121,000	10.1	83,150	57%
England	500,090	509,430	495,070	376,030	14.0	276,350	58%

Source: Department for Education, Apprenticeships and traineeships data, 2019; ONS, Business Register and Employment Survey, 2018

[67] London has been excluded from the RCA to avoid positively skewing the earnings data.

8.2.245 The table below shows that 34% of CSA starts in 17/18 were in business administration and law, which is the industry with the highest proportion of starts across all comparison areas. All geographies only have 2% of starts in leisure, travel and tourism.

8.2.246 All industries vary slightly in their average annual achievement rates, with the highest tending to be leisure, travel and tourism and the lowest in construction, planning and the built environment.

Table 8.2.31 Apprenticeship starts and average annual achievement rates by industry, academic year 17/18

		Business, Administration and Law	Construction, Planning and the Built Environment	Engineering and Manufacturing Technologies	Health, Public Services and Care	Leisure, Travel and Tourism	Retail and Commercial Enterprise	Other*
Starts	CSA	860	140	450	460	60	330	230
% starts	CSA	34%	6%	18%	18%	2%	13%	9%
	SRCA	30%	7%	16%	23%	2%	14%	8%
	SE LEP	30%	7%	15%	24%	2%	14%	8%
	RCA	31%	5%	14%	23%	3%	14%	9%
	England	30%	6%	16%	24%	2%	14%	8%
Achievements	CSA	490	70	260	440	60	180	140
Average Annual Achievement Rate (14/15 to 17/18)	CSA	56%	48%	53%	60%	65%	62%	63%
	SRCA	55%	44%	57%	55%	69%	63%	62%
	SE LEP	55%	44%	57%	55%	70%	63%	62%
	RCA	53%	47%	63%	54%	70%	61%	61%
	England	56%	51%	61%	55%	72%	61%	60%

*Source: Department for Education, Apprenticeships and traineeships data, 2019. *Note: 'Other' industries consist of: Agriculture, Horticulture and Animal Care, Arts, Media and Publishing, Education and Training, Information and Communication Technology and Science and Mathematics.*

Future baseline – population and employment

8.2.247 The CSA is due to experience significant population growth over the next 20 years, with a higher cumulative growth than England at each assessment year. This is likely due to the substantial development planned in the area, most notably Ebbsfleet Garden City.

Table 8.2.32 Projected population growth between 2018 and 2038

		2018	2022	2023	2025	2026	2030	2038
All ages	CSA	389,000	405,000	409,000	415,000	418,000	429,000	447,000
			4%	5%	7%	8%	10%	15%
	LCA	8,360,000	8,603,000	8,652,000	8,736,000	8,774,000	8,919,000	9,204,000
			3%	4%	5%	5%	7%	10%
	England	55,977,000	57,282,000	57,558,000	58,060,000	58,297,000	59,182,000	60,766,000
			2%	3%	4%	4%	6%	9%
16 to 64	CSA	244,000	253,000	256,000	260,000	262,000	268,000	277,000
			4%	5%	7%	7%	10%	13%
	LCA	5,472,000	5,606,000	5,634,000	5,680,000	5,697,000	5,760,000	5,837,000
			2%	3%	4%	4%	5%	7%
	England	35,049,000	35,522,000	35,624,000	35,812,000	35,880,000	36,043,000	36,066,000
			1%	2%	2%	2%	3%	3%

Source: ONS, Population projections - local authority based by single year of age, 2018

8.2.248 Based on the forecasts below employment in the CSA is expected to grow by an average rate of 1.3% a year, which is higher than the national annual growth rate (0.5%). The do-nothing projections are under review and updated projections will be presented in the ES if better and consistent forecasts are identified through further research or consultation.

Table 8.2.33 Do nothing employment projections by assessment year

Area	Source for Forecast	Implied compound annual growth rate	2018	2022	2023	2025	2026	2030	2038
Thurrock	Forecast growth in labour force in the 2017 SHMA (2014 – 2037).[68]	1.1%	68,000	71,000	72,000	73,000	74,000	77,000	84,000
Gravesham	Forecast jobs growth from the North Kent SHENA(2012-2028).[69]	0.9%	33,000	34,000	34,000	35,000	35,000	37,000	39,000

[68] Turley Economics (2017), Addendum to the South East Strategic Housing Market Assessment. Table 3.2.
[69] GVA (2017), North Kent Strategic Housing & Economic Needs Assessment: Employment Land Needs Assessment. Table 24.

Area	Source for Forecast	Implied compound annual growth rate	2018	2022	2023	2025	2026	2030	2038
Dartford	Forecast jobs growth in Dartford between 2013 and 2031.[70]	1.8%	61,000	66,000	67,000	69,000	71,000	76,000	88,000
CSA	Sum of the above	1.3%	162,000	171,000	173,000	178,000	180,000	190,000	211,000
National	Forecast jobs growth from the OBR between Q1 2018 and Q1 2024.[71]	0.5%	32.3m	32.9m	33.0m	33.4m	33.5m	34.1m	35.4m

8.2.249 These projections have been sense checked against the Ebbsfleet proposals and they appear broadly consistent with the anticipated employment growth planned within the EDC.

Potential effects from a change in the demand for health services

8.2.250 Existing healthcare provision should be collected so that the relative additional strain on healthcare provision can be determined.

Table 8.2.34 GPs in the CIA

GP Name	Borough	Total Patients	Total GP FTEs	Patients per GP FTE
Tilbury Health Centre	Thurrock	11,500	2.5	4,600
Swanscombe Health Centre	Dartford	20,400	5.9	3,400
Sai Medical Centre	Thurrock	10,300	1.0	10,300
Total – CIA	**-**	**42,200**	**9.4**	**4,500**
CSA		**420,700**	**178.0**	**2,400**

Source: NHS Digital – GP Workforce Statistics March 2020

8.2.251 Data on GP provision across the CIA shows that there are two GP practices situated within a 500m radius of the site, both of which are located on the north side of the river, whilst one other GP which lies just outside the CIA boundary is located on the south side. Across all three GPs, a total of approximately 42,000 patients are currently registered, and are served by 9.4 FTE practitioners. Consequently, a ratio of 4,473 patients for every GP FTE is estimated.

[70] https://www.kent.gov.uk/__data/assets/pdf_file/0017/50345/Understanding-Kent-and-Medways-growth-requirements-GIF.pdf

[71] https://obr.uk/forecasts-in-depth/the-economy-forecast/labour-market/

8.2.252 Additionally, two pharmacies have been identified within the CIA. These pharmacies fall just outside the PSB and are Ackers Chemists Ltd and Swan Valley Pharmacy.

8.2.253 There are four NHS registered dental surgeries that are situated within the CIA. Across all four surgeries, a total of 14 dental practitioners carry out these dental services. NHS information on each surgery also indicates that only one of these practices is not taking in new patients.

Table 8.2.35 Dental practices within the CIA

Dental practice name	No. of practitioners	Taking in new patients ?
Alignedent NK Ltd	5	Yes
Hews House	1	No
Elite Dental Studio	4	Yes
Patiali Limited	4	Yes
Total	**14**	**-**

Source: NHS Dental Statistics, 2019-20

Emergency healthcare

8.2.254 The nearest A&E to the site (falling within the CIA) is Darent Valley Hospital, which is part of the Dartford and Gravesham NHS Trust. The Dartford and Gravesham Trust also covers Queen Mary's Hospital and Erith & District Hospital, but these do not offer A&E services.

8.2.255 The table below shows the number of A&E attendances in 2018/19 and the percentage of A&E visits that were admitted, transferred or discharged within 4 hours at the Dartford and Gravesham Trust. This is compared to that of the three other NHS Trusts falling under the Kent and Medway CCG that have Accident and Emergency (A&E) departments. Dartford and Gravesham Trust is performing better than two of the other Trusts and slightly better than the national average for England, with 87% of people being attended to in under 4 hours. No trusts hit the NHS target of 95% of A&E patients seen within 4 hours, however it can be seen that this is also the case at the national level, demonstrating countrywide constraints.

Table 8.2.36 A&E attendances and performance

NHS trust name	A&E attendances 2018-19	Percentage admitted, transferred or discharged in 4 hours or less 2018-19
Dartford and Gravesham NHS Trust	**132,300**	**87%**
East Kent Hospitals University NHS Foundation Trust	221,400	70%

Maidstone and Tunbridge Wells NHS Trust	183,400	91%
Medway NHS Foundation Trust	125,900	80%
England	**22,367,800**	**84%**

Source: NHS Digital, 2018/19 - Provider level analysis for HES Accident and Emergency Attendances

Future baseline – healthcare

8.2.256 The Dartford Borough Council Infrastructure Delivery Plan[72] states that a new primary healthcare facility is to be provided within Ebbsfleet Garden City (EGC), although it is unsure of the timing of the delivery. This will help to meet some of the additional demand that new residents at EGC will impose. Furthermore, a new primary healthcare facility is being provided at Stone / Greenhithe area (just outside the CIA) providing new facilities for three GP practices in order to meet demand from new housing development nearby. This will be delivered by 2022. The Plan also mentions the potential expansion at Darent Valley Hospital in response to demand from development, but this is uncertain.

Potential effects from a change in the demand for public services and community facilities

8.2.257 As discussed under the construction phase, high levels of anxiety are a problem in Kent and Thurrock. This includes social anxiety, which has the capacity to harm the social ties of the individual, and to hinder the reestablishment of social connections after a disruption.

8.2.258 The users of social services have more often reported feeling safe than across England, and the overwhelming majority feel they have control over their lives. Higher proportions of social care users report having as much social contact as they wish than nationally, and lower proportions of carers.

8.2.259 The baseline presented for the construction phase showed that the CIA contains 80 community facilities, 4 of which are on land which will be needed for the London Resort. The earlier baseline also suggested that the levels of provision of community centres is within the band identified as optimal by researchers.

Potential effects associated with open space provision and amenity space

8.2.260 As detailed in the earlier baseline on the construction phase's displacement of open space, obesity and physical inactivity are significant problems across Dartford, Gravesham and Thurrock. These are the local authorities which contain the CIA. At the same time, sports club membership was found to be higher than nationally, and a higher proportion utilise outdoor spaces for exercise or health reasons.

8.2.261 As noted in the section above on obesity and physical activity, inactivity and excess

[72] Dartford Borough Council, 2019, Infrastructure Delivery Plan

weight are significant problems across the Dartford, Gravesham and Thurrock, which local authorities encompass the CIA.

8.2.262 Open space provision in the CIA is 47 ha.

Potential effects from changes in community cohesion

8.2.263 There is some evidence that overcrowded housing and a lack of private space can negatively impact the formation and development of social ties.[73] The picture regarding overcrowding is mixed: Kent performs significantly better than the nation, with 3.6% of households overcrowded compared to 4.8% nationally, but the figure is 5.6% in Thurrock.

8.2.264 The percentage of the population living within LSOAs which score in the poorest performing 20% for: access to retail services, access to health services, and physical environment is 31.7% in Dartford, 17.5% in Gravesham and 30.6% in Thurrock, presenting a mixed picture for the CIA which is contained in these areas when compared to the national rate.[74] As discussed in the section on deprivation, the CIA on average ranks within the top 60% of the country, although crime and its corrosive effects on community cohesion could be a problem (see following section).

8.2.265 While no direct data on the strength of community cohesion is available at the level of the CIA, the Community Life Survey[75] indicates that only 70% of Londoners or those from the South East meet up with friends in person at least once a week, compared with 74% in the East of England and nationally. Therefore 71% of the RCA population is estimated to meet up at least once a week with friends. London also has the lowest proportion of people agreeing that there are people who would be there for them if they needed help (93%, compared with 95% nationally), while the South East and East of England perform relatively well on this measure (96% for both; RCA: 95%). London has the lowest proportion agreeing that if they wanted company or to socialise there are people they could call on (89%, compared with 91% nationally) of all English regions; the South East and East of England figure is 92% (RCA: 91%). Those living in urban areas are more likely to feel lonely (6%, compared with 4% in rural areas) and those living in the most deprived areas tend to feel lonelier than those in the least deprived areas (8% compared with 4%).

Potential effects from changes in crime and community safety

8.2.266 Crime and the fear of crime may result in lower rates of physical activity and higher rates of mental distress. As discussed in earlier sections, the local authorities which contain the CSA tend to have problems with the physical inactivity of their residents, as well as higher rates of anxiety. The section on deprivation has also highlighted that the CSA is

[73] International Development Research Centre, 1999, Social and Psychological Effects of Overcrowding in Palestinian Refugee Camps
in the West Bank and Gaza - Literature Review and Preliminary Assessment of the Problem
[74] Public Health England, Local authority fingertip profiles
[75] Department for Digital, Media, Culture & Sport, 2019, Community Life Survey 2018-19

within the bottom 20% of the country on the crime domain.

8.2.267 The table below shows that there were 114 crime incidents per 1,000 population in 2019 in the CSA, a 35% higher prevalence of crime than the average across England and Wales (84 per 1,000). The type of crime with the highest rate in the CSA was violence without injury (20 per 1,000) far higher than the national rate of 11 for the same type of crime. For many types of crime, the CSA is on par or only slightly higher than England and Wales, however criminal damage and arson, shoplifting, stalking and harassment, vehicle offences and violence without injury are all higher in the CSA than the national rate.

Table 8.2.37 Crime incidents per 1,000 population, year ending December 2019

	CSA	England and Wales
All other theft offences	9	8
Bicycle theft	1	1
Burglary	7	6
Criminal damage and arson	13	9
Death or serious injury caused by illegal driving	0	0
Drug offences	2	3
Homicide	0	0
Miscellaneous crimes against society	3	2
Non-residential burglary	2	2
Possession of weapons offences	1	1
Public order offences	9	7
Residential burglary	5	4
Robbery	1	1
Sexual offences	3	3
Shoplifting	9	6
Stalking and harassment	12	8
Theft from the person	1	2
Vehicle offences	12	7
Violence with injury	10	9
Violence without injury	20	11
Total	114	84

Source: ONS Crime Statistics, 2019

8.2.268 Data from the 2019 Index of Multiple Deprivation shows that Dartford, Gravesham and Thurrock collectively rank within the top 25% most deprived areas when it comes to crime.[76] Individually, Dartford and Gravesham respectively rank as the 6th and 19th most deprived local authorities in terms of crime (out of 317 local authorities), whereas Thurrock ranks 75th on that list. In comparison to other local authorities, the CSA

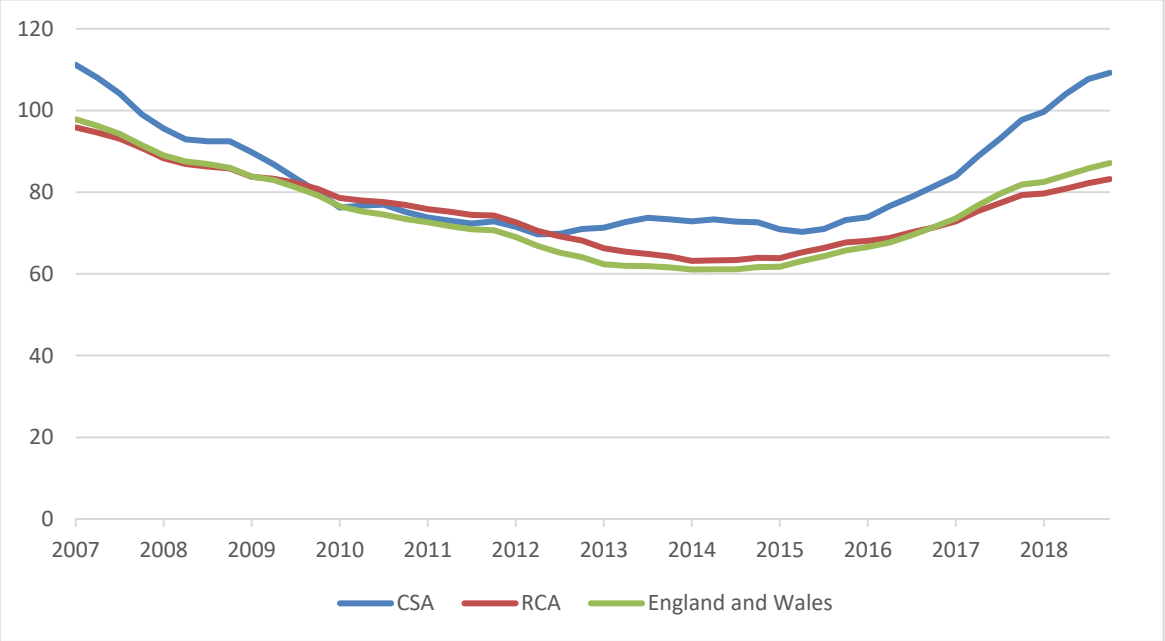
[76] Index of Multiple Deprivation, 2019 MHCLG

therefore performs particularly poorly when it comes to crime.

Crime over time

8.2.269 Over time, the figure below shows that whilst crime levels per 1,000 population in the CSA has generally moved in the same direction as the corresponding trends exhibited by both the RCA and nationally, there has been a relatively faster increase in the rate of crime in the CSA since 2016 than other comparators.

Figure 8.2.14 Number of crimes per 1,000 population, 2007 – 2018



Source: ONS Crime Statistics, 2018 – Police Force Area Data Tables