



Essex County
Fire & Rescue Service

Strategic Assessment of Risk

Societal Risk

About

We must continuously improve our understanding of our communities to keep people as safe as possible. The publication of the 2021 census data helps to inform our understanding of the changes in population makeup, age distribution and population growth rates.

Vulnerable or disadvantaged individuals will often have issues that are linked, making them vulnerable to fire, crime, anti-social behaviour and health inequalities. We continue to work on improving our engagement with underrepresented and minority groups, whilst improving our inclusive workplace, challenging discrimination, and addressing existing inequalities.

Within this chapter of the Strategic Assessment of Risk, the following areas will be considered:

- Population Demographics
- Health and Wellbeing
- Crime Trends and Analysis

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POPULATION DEMOGRAPHICS

Essex, Thurrock and Southend have a combined population of 1.86 million people, which is 3.3% of the population of England, and an increase of 6.8% since the 2011 census.

The Office for National Statistics projects an increase in the populations of Essex, Thurrock and Southend of 298,700 between 2016 and 2036. This growth is predicted to occur disproportionately, with the greatest growth in population occurring in Colchester, Basildon and Thurrock. Whilst Maldon and Castlepoint are anticipated to have the smallest growth in population.

POPULATION CHANGES

The following graphs (Figures 1 to 8) provide an overview of key areas of population demographics within Essex, Thurrock and Southend, and how these have changed in the past 10 years. These provide indicative data of how the population may continue to change in the future and how the Service may need to adapt to respond to the evolving needs of the population.

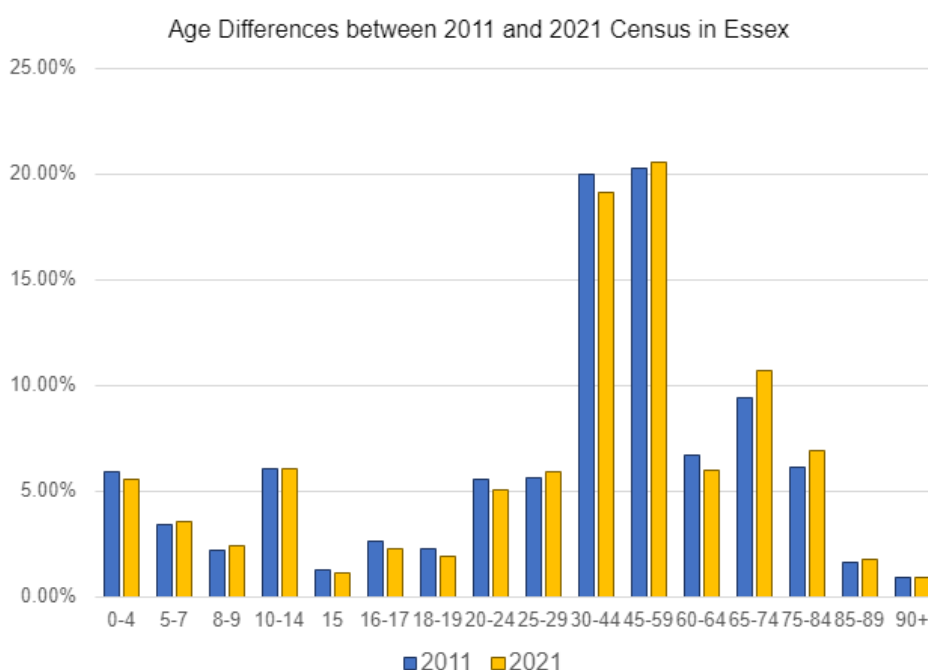


Figure 1

In Figure 1 above, we can see that the largest population increase in age is for those aged 65-74. This is followed by those aged 75-84 and in conjunction with other population increases in age categories shows that those aged 45 to 89 are the predominant population across Essex.

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Whilst there is a slight increase in those aged 5-9, the number of people of secondary school and further education age are lower than previous which will lead to a reduction in working adults over the next 10 years. This will be compounded by the current level of people aged 30-44 which is the greatest decrease since the 2011 census.

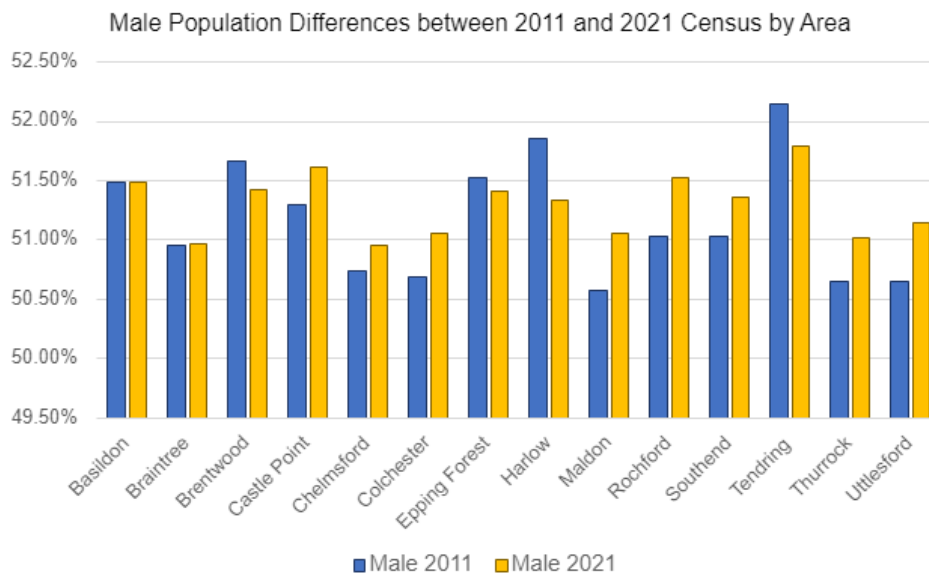


Figure 2

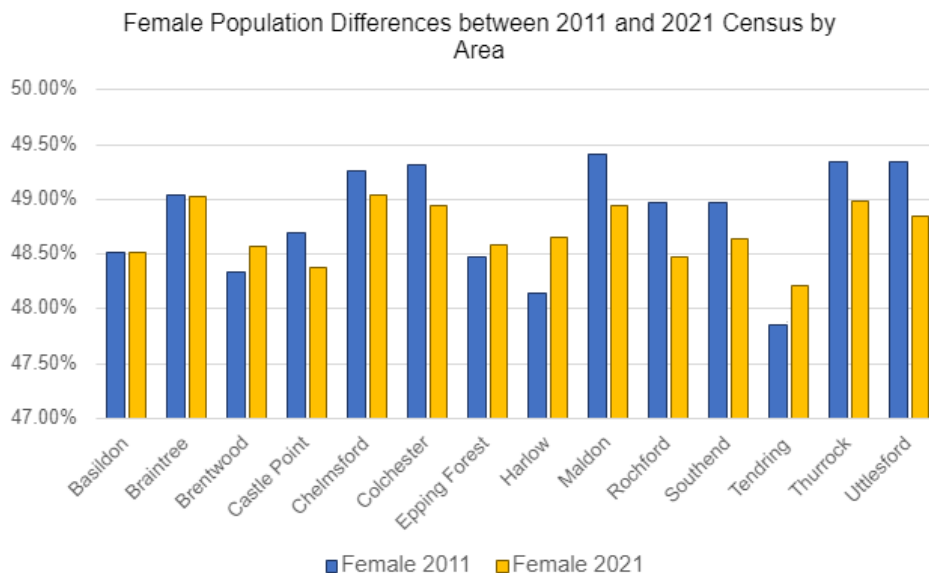


Figure 3

In Figures 2 and 3 above, there is consistent representation of male to female ratios in the population figures. Where Brentwood, Epping Forest, Harlow and Tendring have seen an increase in the female population this is countered by a decrease in

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the male population. Accordingly in Castle Point, Colchester, Maldon, Rochford, Southend, Thurrock and Uttlesford the reverse is true. Whilst in Basildon and Braintree both male and female population figures have remained consistent.

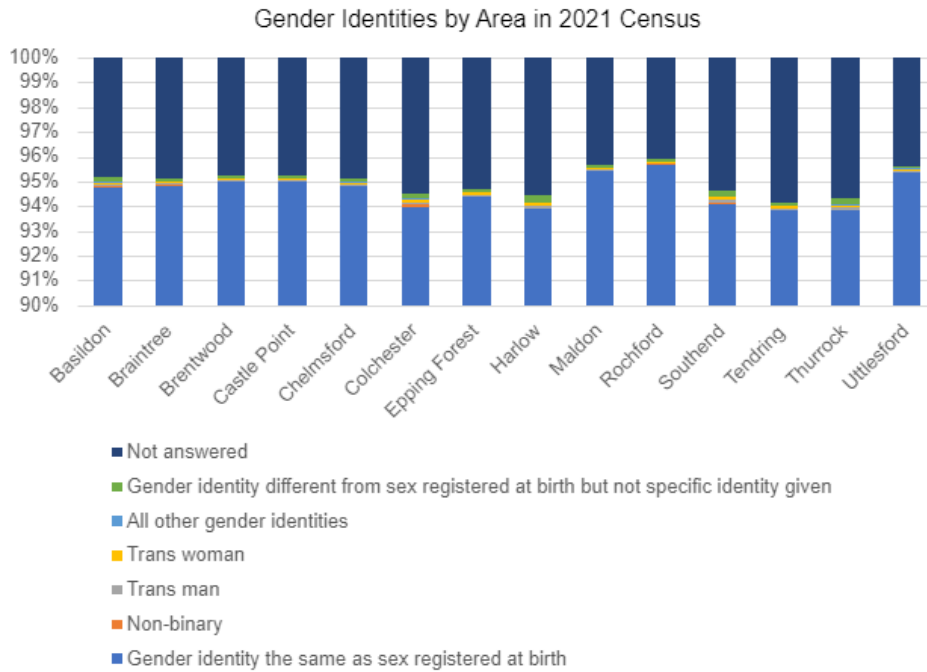


Figure 4

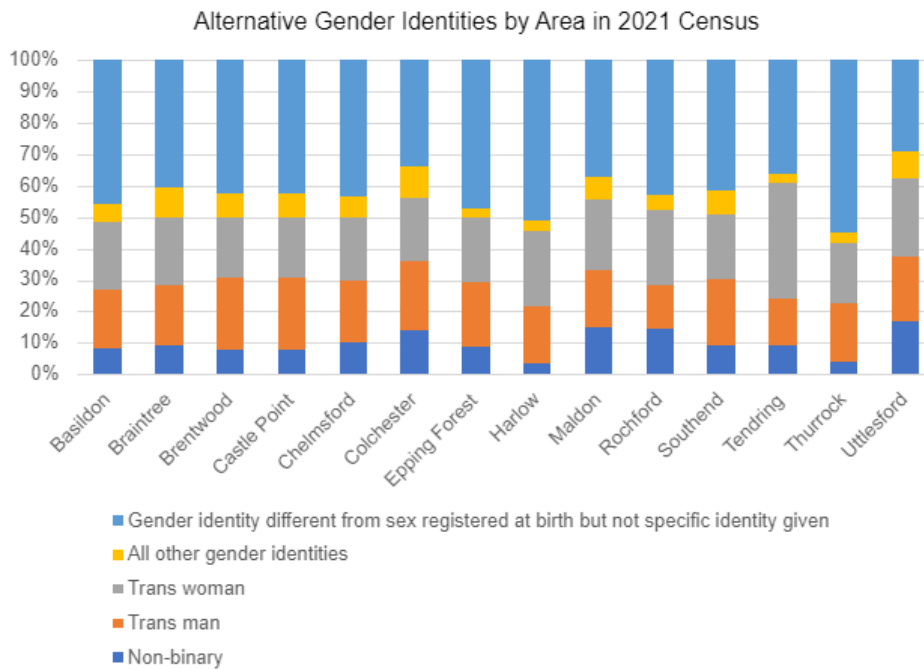


Figure 5

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New to the 2021 Census is the category for gender identities, taking into consideration some of the major gender identities in use at the moment. As can be seen in Figure 4 the majority of people within Essex have either maintained the same gender identity as assigned at birth or have chosen not to answer. Whilst in Figure 5 taking both these top two answers out of the graph shows the variation in alternative gender identities where these have been selected. What this shows is a relatively even divide between trans identities and a wide range of other gender identities.

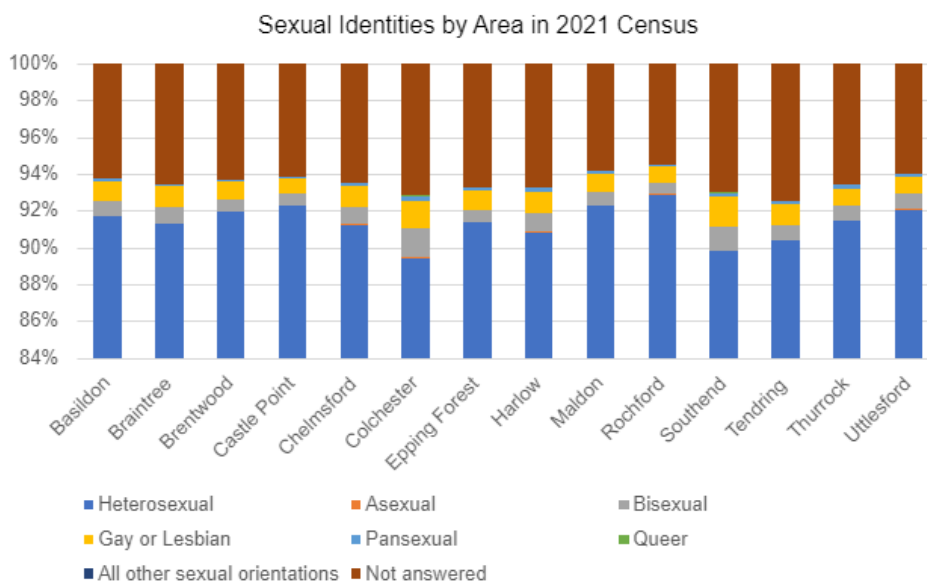


Figure 6

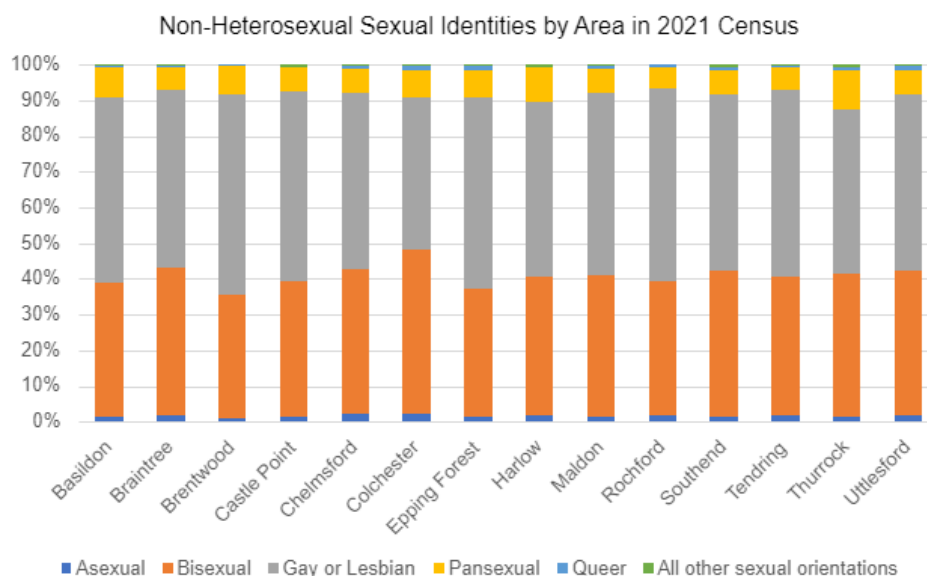


Figure 7

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In Figure 6 above we can see that similar to the data for gender identities, sexual identities have two main answers returned, one for heterosexual and one for not answered. In Figure 7, having taken away both these top two responses it is clear that the majority of people who have selected another choice for sexual identity are predominantly gay, lesbian or bisexual.

Whilst in Figure 8, below, we can see the predominant shift in lifestyle choices has been from marriage or civil partnership to cohabiting or single. The number of formal partnership arrangements which have been dissolved remain relatively consistent although with slight reductions indicative of the impact of those choosing not to enter into formal agreements.

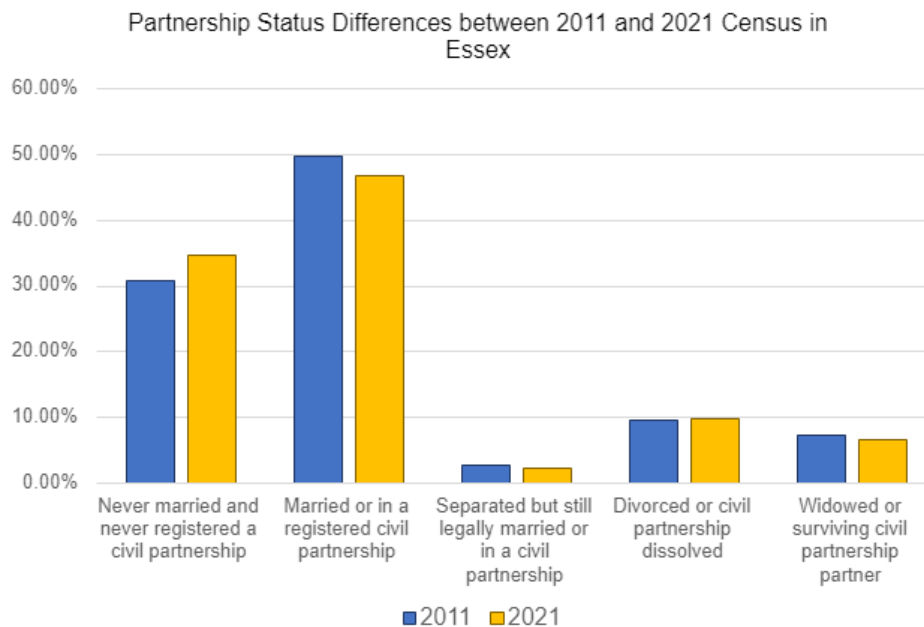


Figure 8

Further analysis could be carried out to understand the likely changing household compositions where all of the above demographic data is taken into consideration to determine what impact this may have on lifestyle behaviours and therefore requirements to resource the Service accordingly.

ETHNICITY AND LANGUAGES

Within the Figures 9 to 14 comparative graphs show the changes in population ethnicity across Essex between the 2011 census and the 2021 census. The graphs also show the changes in main languages spoken across Essex between both census dates.

In the first two graphs below (Figures 9 and 10) the main ethnicity groups are shown in comparison to one another and against both census counts. Figure 9 shows that between 2011 and 2022 the number of people of a non-white ethnicity within Essex has increased in comparison to those of a white ethnicity. Figure 10 breaks down the non-white category into the top 4 ethnic categorisations, showing a marked increase across all categories in the past 10 years whilst maintaining the distribution between each of these.

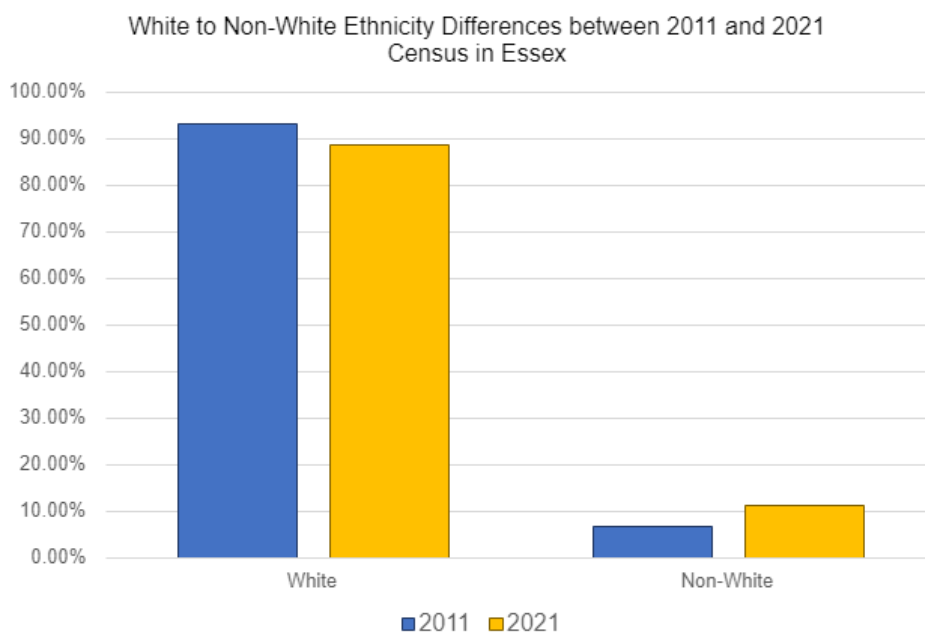


Figure 9

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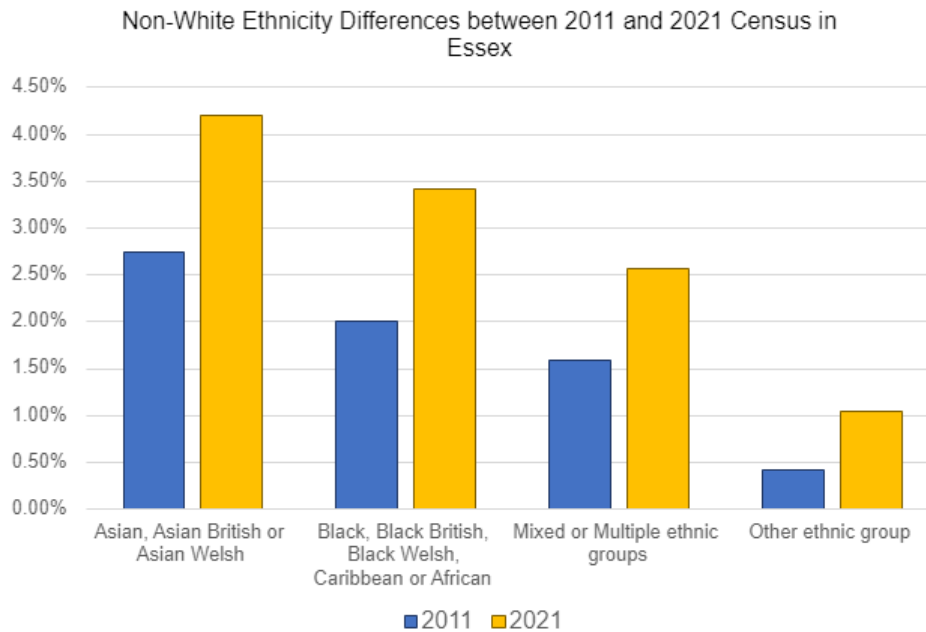


Figure 10

Figures 11 and 12 show the comparison between first languages spoken within Essex. Figure 11 shows that the majority of people in Essex speak a UK based language as their first language in comparison to non-UK languages. Whilst this has changed between the census counts it is a marginal difference. Figure 12 highlights that the majority of first languages spoken after a UK based language are those from within the EU, followed by those from South Asia. As can also be seen by this graph, both these language areas have increased significantly over the past 10 years with European (EU) languages almost doubling in use.

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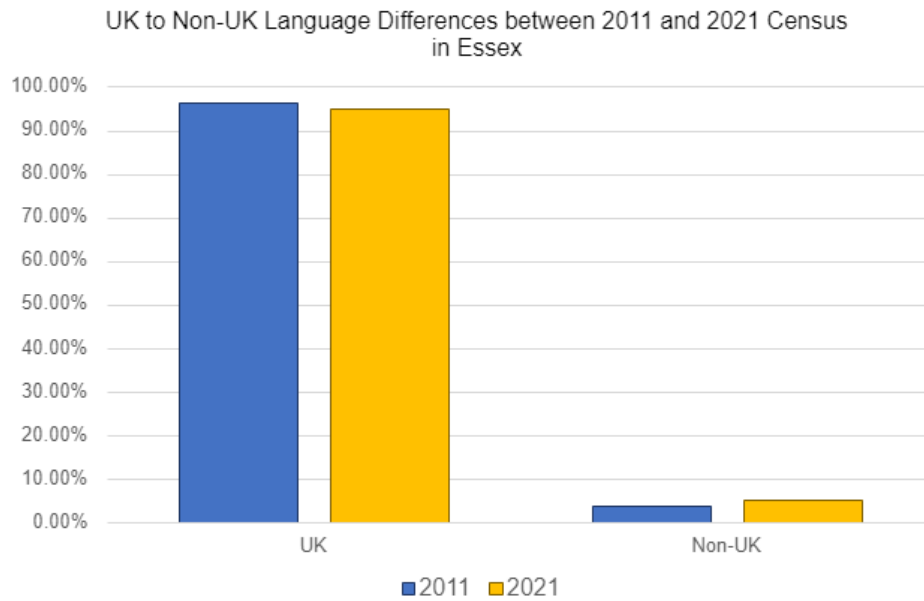


Figure 11

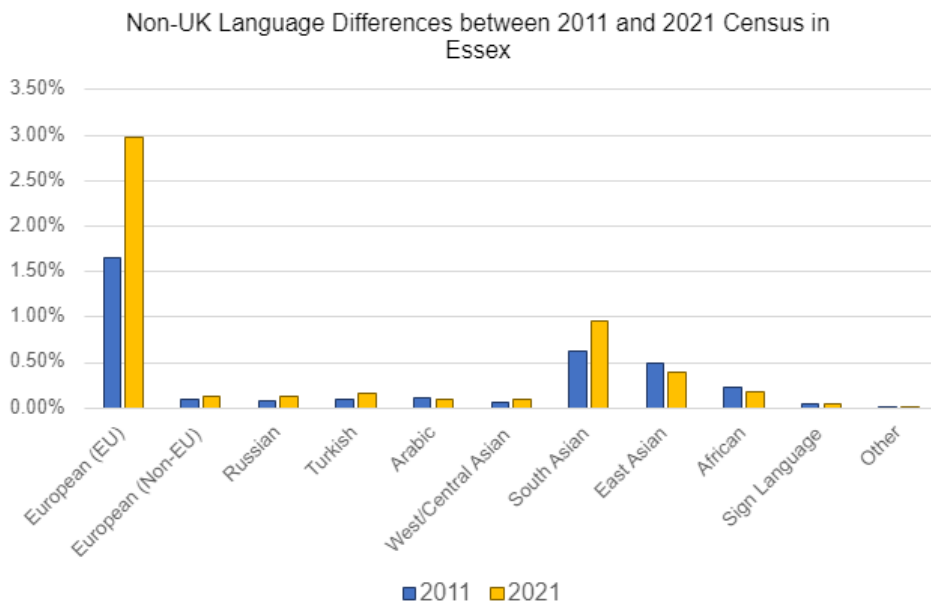


Figure 12

Another new addition to the 2021 Census is the more detailed break down of language categories. As can be seen in Figure 13 the top 15 languages spoken in Essex after English include 7 East European languages, 3 West European languages and 5 South Asian languages. The most dominant of these languages are Romanian and Polish. Consideration should be taken by the Service to ensure that it has the appropriate resources available to communicate and engage with people of non-UK ethnicities and where English is not their first language.

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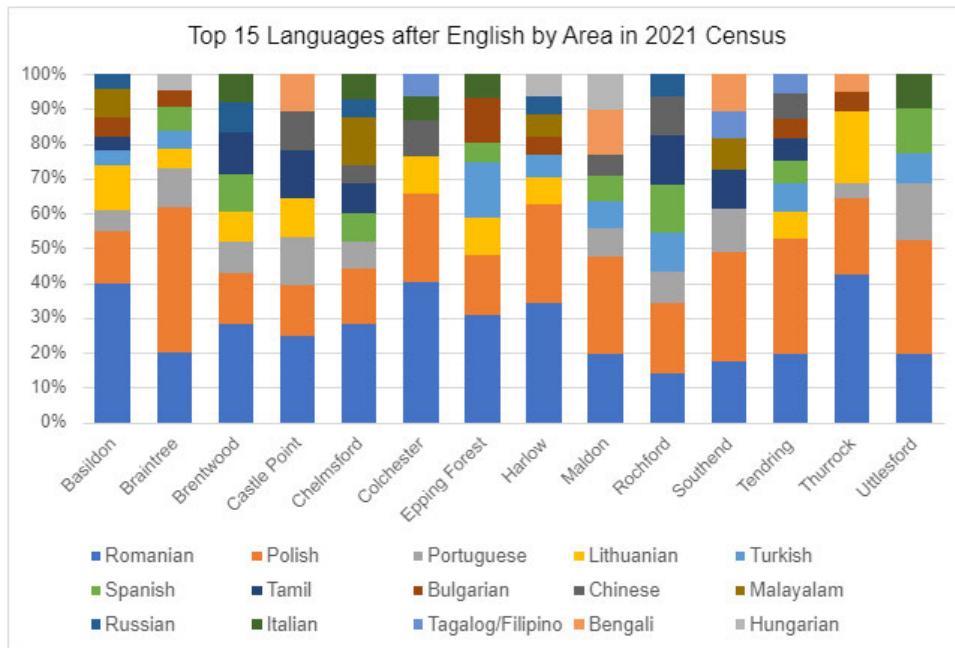


Figure 13

RELIGIOUS BELIEFS

Religious beliefs influence lifestyle behaviours which can create different risk patterns that the Service should consider when engaging with people. In the graphs below the dominant religious beliefs held within Essex are shown in comparison to the 2011 and 2021 census data. Figure 14 shows the reduction in followers of Christianity over the past 10 years, alongside the increase in people with no religious belief, and those with a religious belief other than Christianity.

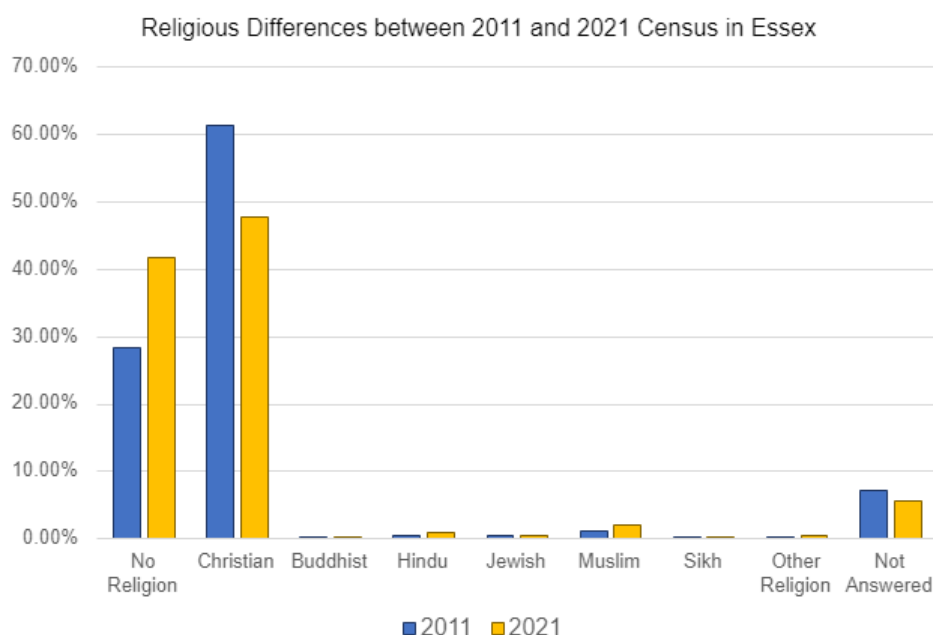


Figure 14

Figures 15 and 16 show the break down of religious belief by area within Essex in the 2021 census. As can be seen in Figure 15 the predominant religious belief remains Christianity across all areas, followed by no religious belief and not answered before all other religious beliefs. In Figure 16 we can see that the highest proportion of other religious beliefs are Muslim and Hindu, followed by Judaism significantly in Castle Point and Epping Forest.

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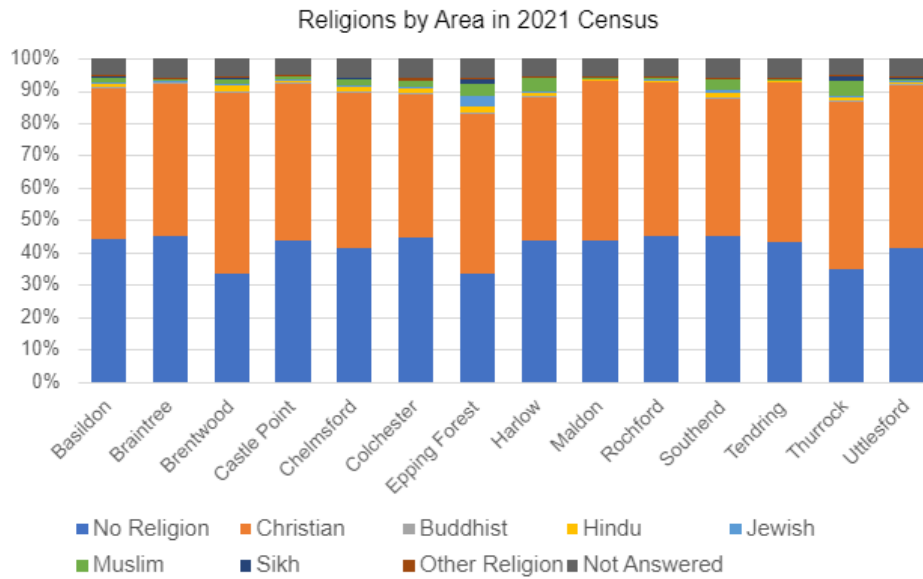


Figure 15

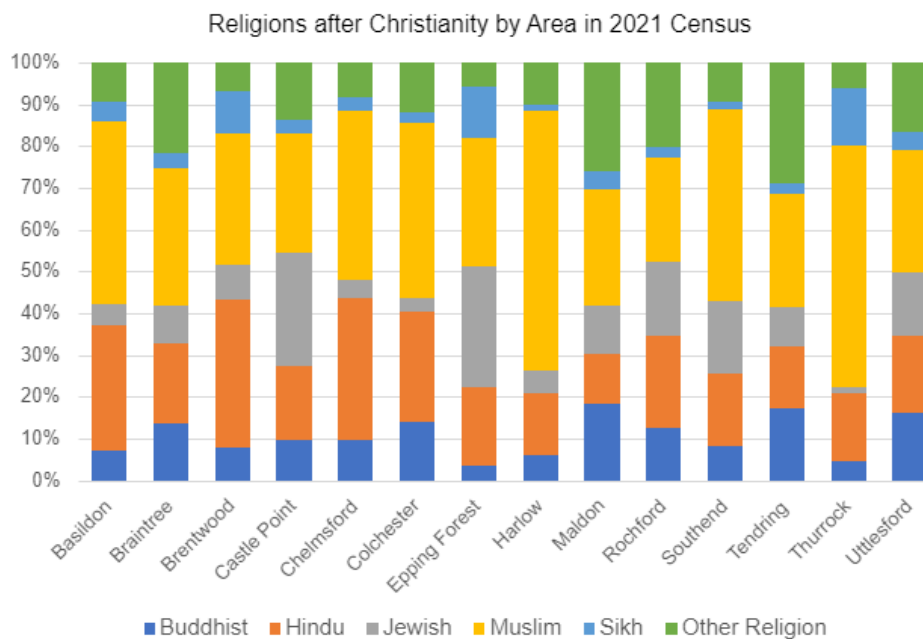


Figure 16

Further analysis could be carried out to understand which areas within the District and Unitary Authority locations have higher proportions of those with different religious beliefs, and considerations may need to be taken by the Service when engaging with those communities.

DEPRIVATION

The Ministry of Housing, Communities and Local Government calculate areas of deprivation utilising an established methodology which considers seven distinct domains of deprivation, which when combined and appropriately weighted form the Index of Multiple Deprivation. These encompass a wide range of an individual's living conditions and as such people can be regarded as deprived if they lack any kind of resources to meet their needs. The seven areas considered are:

- Income (weighted at 22.5%)
- Employment (weighted at 22.5%)
- Health Deprivation and Disability (weighted at 13.5%)
- Education, Skills Training (weighted at 13.5%)
- Crime (weighted at 9.3%)
- Barriers to Housing and Services (weighted at 9.3%)
- Living Environment (weighted at 9.3%)

The Service utilises these Indexes of Multiple Deprivation, and in conjunction with Essex County Council and the University of Essex have combined these factors alongside known contributors to accidental dwelling fires to divide Essex into four areas of ratings, known as:

- Cluster 1: Deprived urban centres with significant challenges (shown in red)
- Cluster 2: Deprived town centres and outskirts (shown in yellow)
- Cluster 3: Suburban communities (shown in dark green)
- Cluster 4: Small towns and rural settings (shown in light green)

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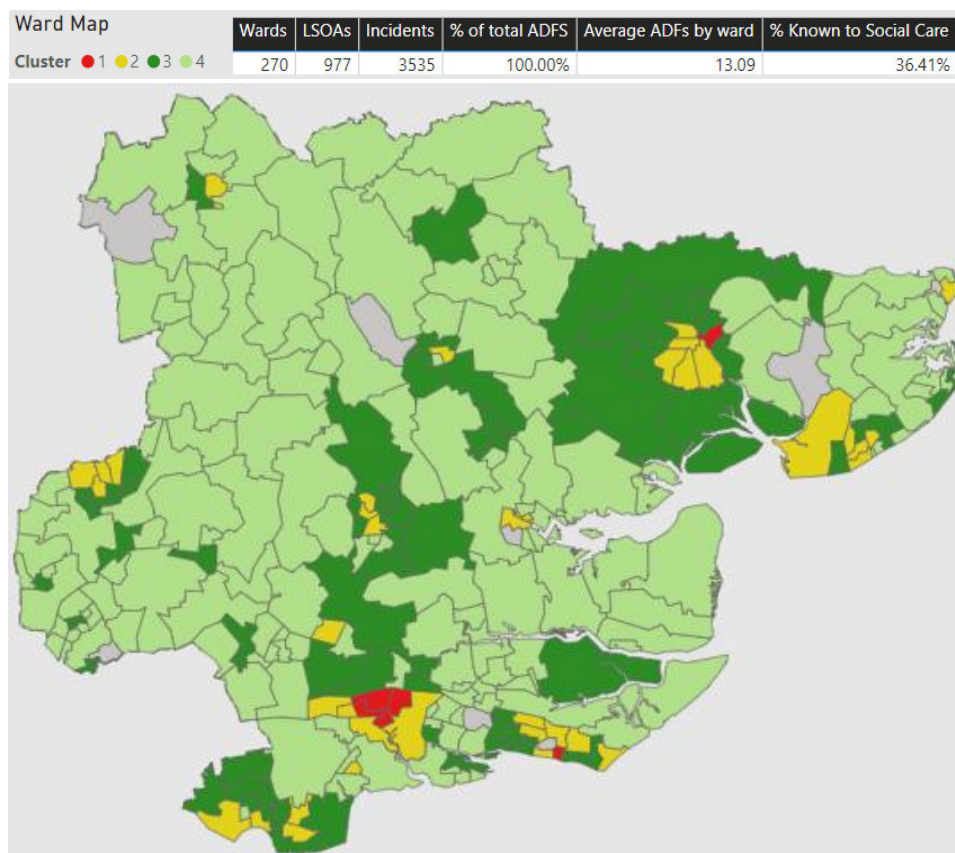


Figure 17

As can be seen in Figure 17, a large proportion of Essex is formed of Cluster 4. These areas have the lowest prevalence of accidental dwelling fires and the second highest proportion of accidental dwelling fires occurring in buildings where someone is known to adult or children social care. This area also has the lowest proportion of accidental dwelling fires where alarm systems are present.

Figure 18 provides further detail to support how each of the four clusters have been calculated using the average scores from the Index of Multiple Deprivation. Understanding how each of these factors contribute to behaviours which increase the risk to individuals of fire within the home enables the Service to provide targeted support and engagement through its Prevention activity delivery.

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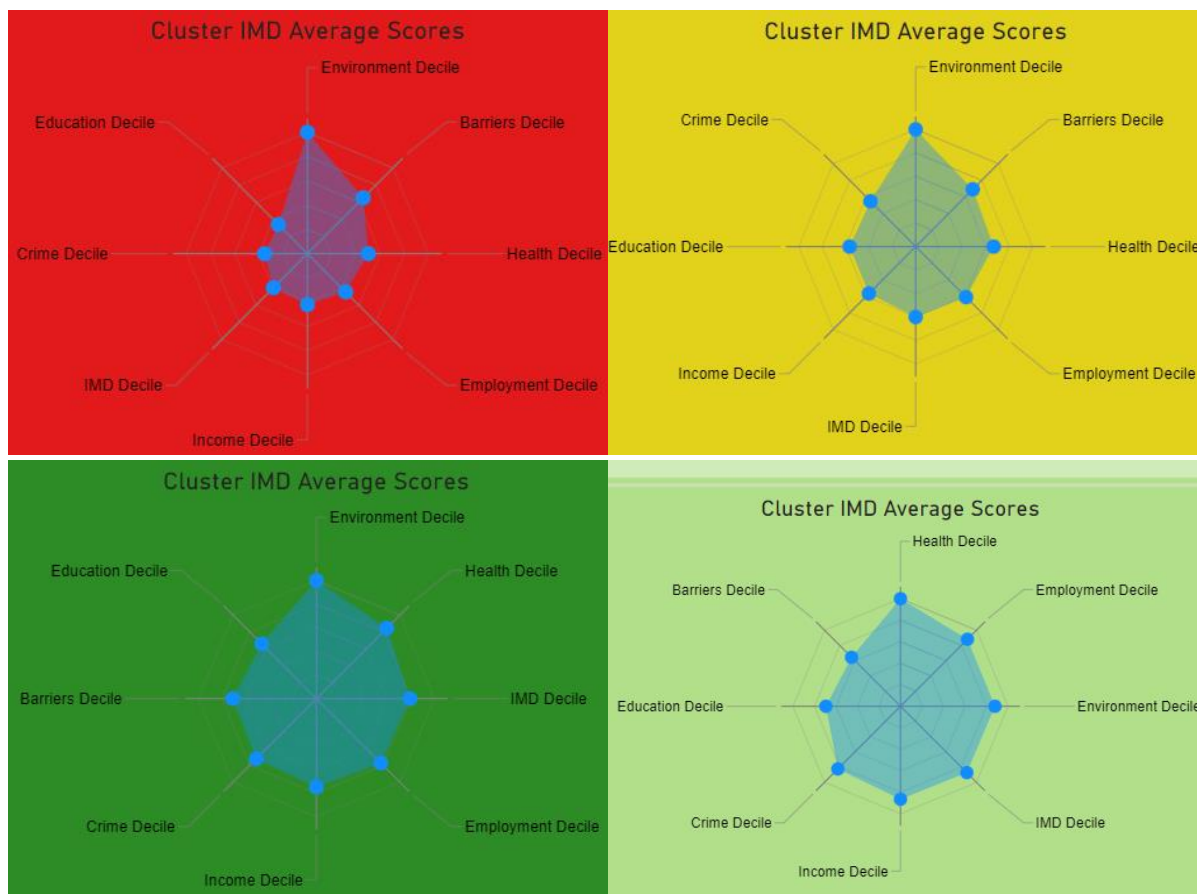


Figure 18

HOUSING

The Essex Strategic Joint Needs Assessment conducted by Essex County Council provides current statistical analysis of the health and wellbeing aspects of the residents of Essex. Part of this analysis includes the quality of housing in relation to overcrowding. Figure 19 depicts the overcrowding proportional percentages by area in 2022.

Using this data in conjunction with the insights provided through the areas of deprivation and accidental dwelling fires as previously depicted in Figures 17 and 18 provides the Service with evidential support for the delivery of targeted Prevention activities. As can be seen in Figure 20 households with children and more than 5 people living in the home have been shown to be at greater risk of accidental dwelling fires.

Quality of Housing - Overcrowding 2022

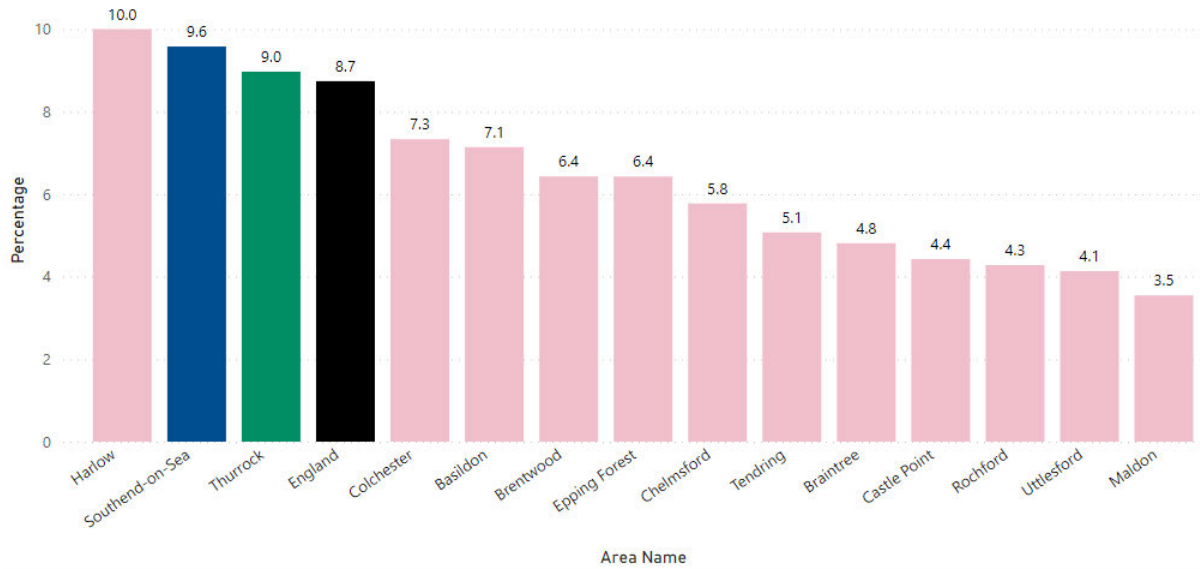


Figure 19: Households with overcrowding based on overall room occupancy levels – proportion %

Household composition	Children in household	35.19%
	Household with 5+ people	7.16%
Household composition	Children in household	31.50%
	Household with 5+ people	6.84%
Household composition	Children in household	31.43%
	Household with 5+ people	6.59%
Household composition	Children in household	29.18%
	Household with 5+ people	6.50%

Figure 20

FUEL POVERTY

Fuel poverty in England is measured using the Low Income Low Energy Efficiency (LILEE) indicator. Under this indicator, a household is considered to be fuel poor if:

- They are living in a property with a fuel poverty energy efficiency rating band D or below

and

- When they spend the required amount to heat their home, they are left with a residual income below the official poverty line.

With the current cost of living crisis, where the price of consumer goods and services rose at the fastest rate in four decades in the year to October 2022 (source office for national statistics), individuals are making cost saving decisions which may be a direct course of higher risk in other areas.

Looking at Figures 21 and 22 we can see that the household fuel poverty level is higher than the English mean in Tendring, Southend, Harlow, Thurrock and Colchester. We can also see that this has been increasing in Tendring, Harlow, Colchester and Basildon over the years 2019 to 2020.

Household Fuel Poverty 2020

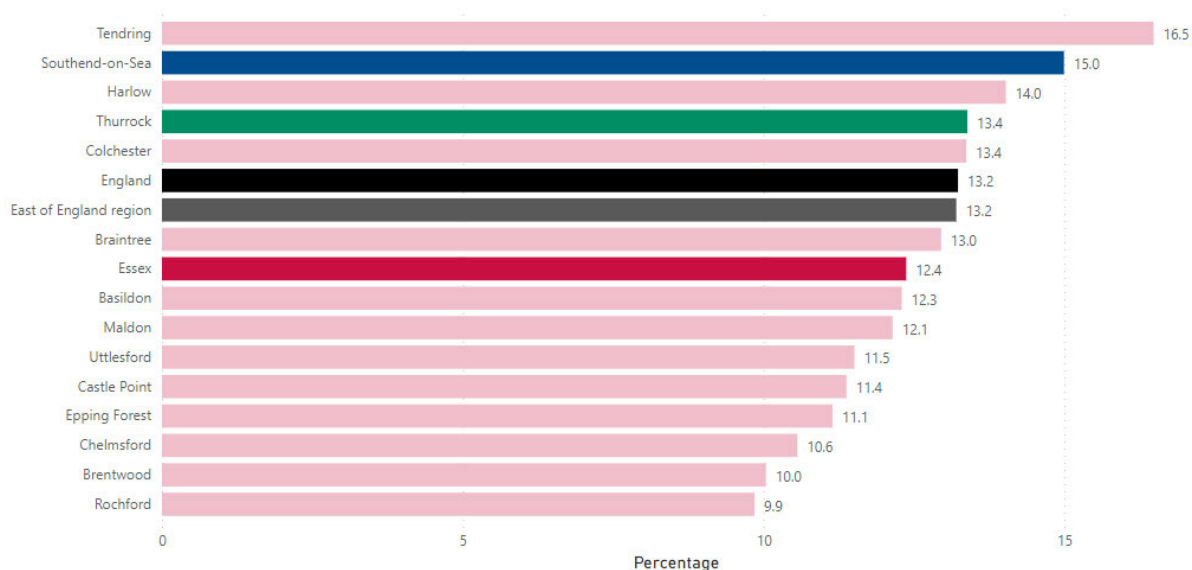


Figure 21: The percentage of households in an area that experience fuel poverty based on the low income, low energy efficiency (LILEE) methodology 2020

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Household Fuel Poverty 2019 to 2020

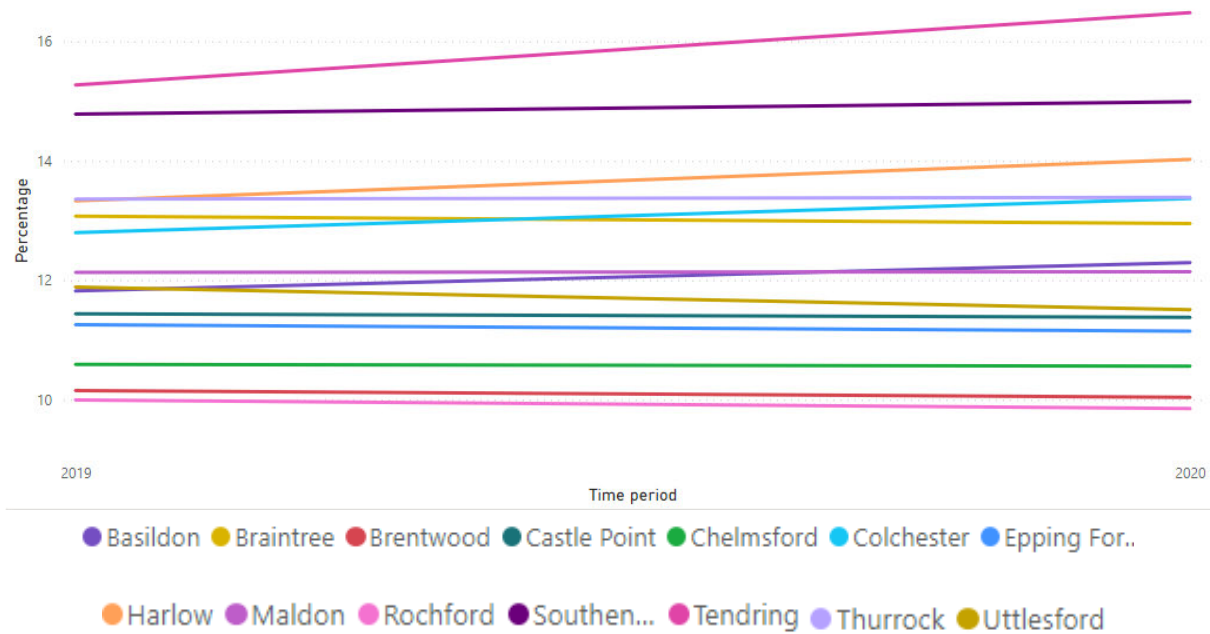


Figure 22: The percentage of households in an area that experience fuel poverty based on the low income, low energy efficiency (LILEE) methodology 2019-2020

Viewing this data in association with the insights provided through the areas of deprivation and accidental dwelling fires, we can see that those areas most at risk of accidental dwelling fires also have the highest level of fuel poverty. The Service should continue to monitor the trends in fuel poverty and how these correlates to other known risk factors to ensure that Prevention activities are appropriately resourced and delivered.

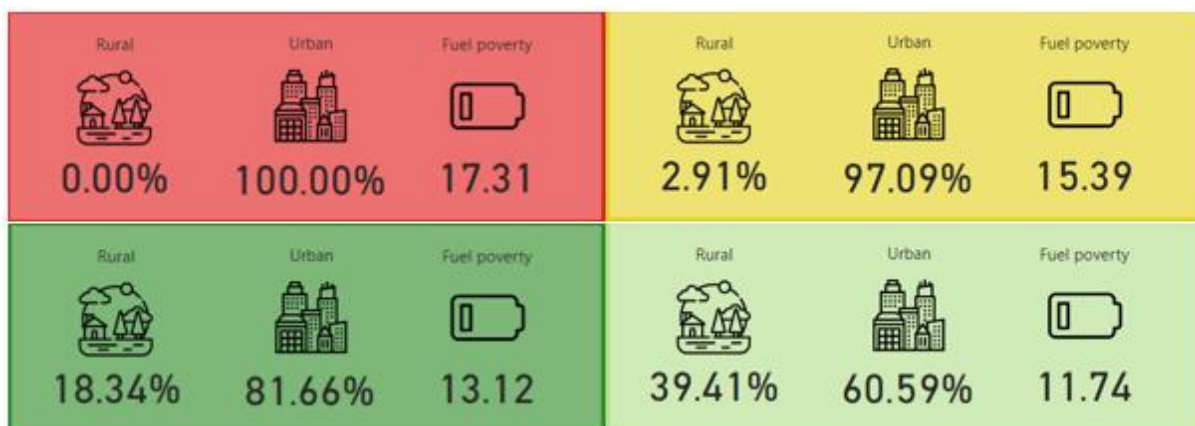


Figure 23

HEALTH AND WELLBEING

CARE & SUPPORT NEEDS

The graphs below (Figures 24 and 25) show the percentage of palliative or supportive care as provided in 2020 to 2021 and 2021 to 2022 respectively, as detailed in the Essex Strategic Joint Needs Assessment. These year on year comparisons show us that care provision increased in Tendring, Castle Point, Epping Forest, Rochford and Southend. In Figure 26 we can see that the majority of people who receive care do so through paid services, whilst those who do provide unpaid care for others predominantly spend up to 19 hours a week doing so. This remains relatively consistent across all areas with an equal increase in paid care provision across all areas as well. Further analysis of care needs in relation to other contributing factors which increase an individual's risk of fire incidents occurring should be undertaken to ensure the Service provision of Prevention activities are resourced appropriately.

Palliative/Supportive Care

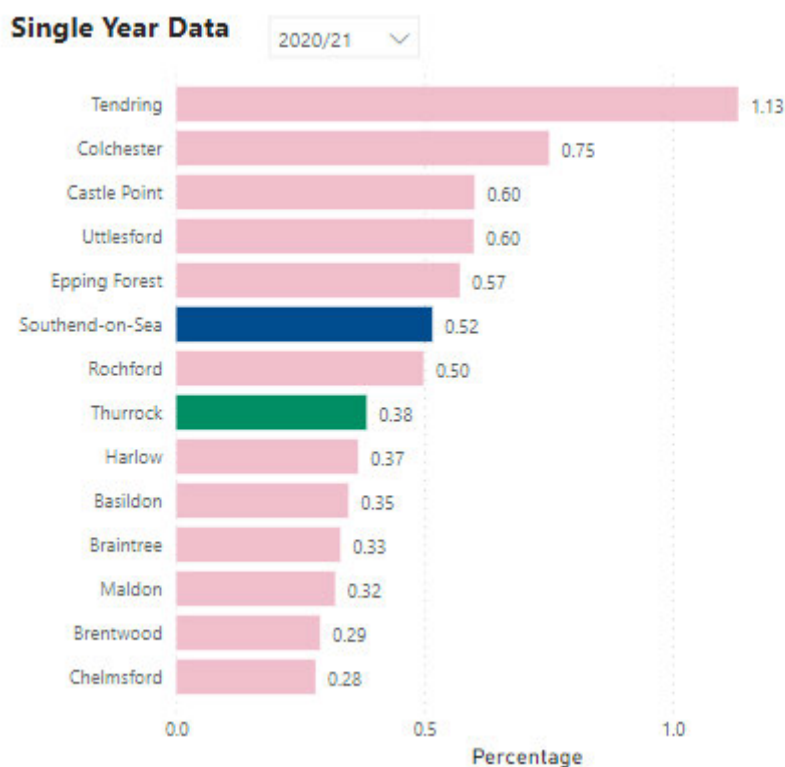


Figure 24: The percentage of patients in need of palliative care/support, as recorded on practice disease registers, irrespective of age, 2020-2021

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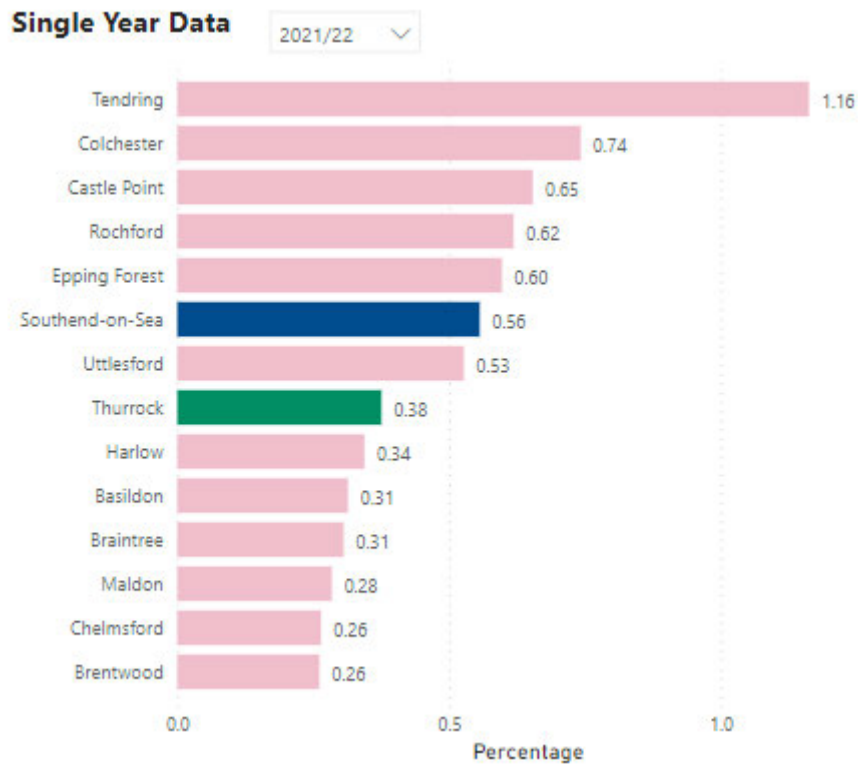


Figure 25: The percentage of patients in need of palliative care/support, as recorded on practice disease registers, irrespective of age, 2021-2022

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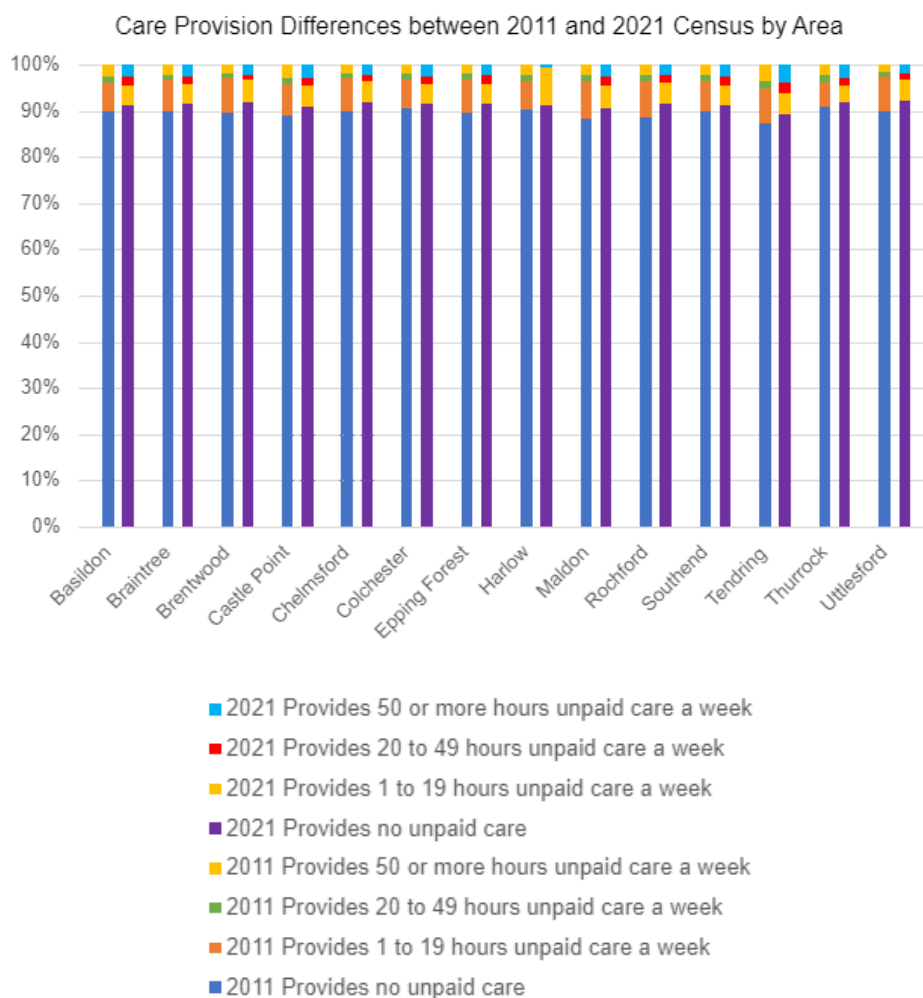


Figure 26

MENTAL HEALTH

Figures 27 and 28 provide the percentage of patients recorded as having a diagnosed mental health condition by area for 2020 to 2021 and 2021 to 2022 respectively. These show us that over the two year period the number of patients with mental health conditions increased in Southend, Tendring, Colchester, Braintree, Chelmsford, Maldon, Castle Point, Thurrock, Brentwood, Rochford and Uttlesford, whilst they decreased in Harlow and remained the same percentage for Basildon and Epping Forest. Whilst the changes in these percentages are relatively small, further trend analysis could be conducted to determine if these are long term trend patterns and how they relate to other societal factors contributing to an individual's overall risk of involvement in a fire or other incident.

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Mental Health Prevalence – All Ages

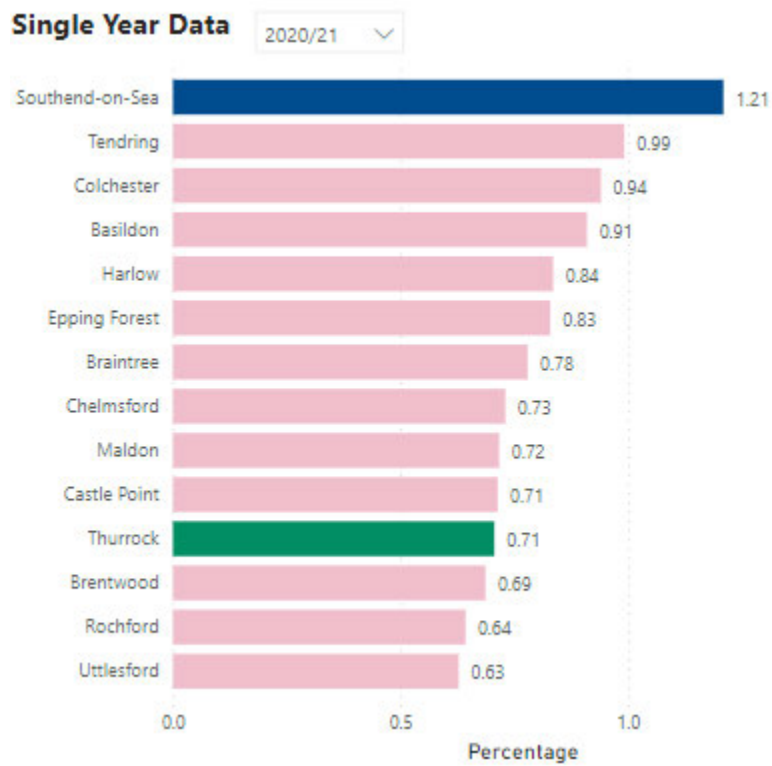


Figure 27: The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses as recorded on practice disease registers 2020-2021

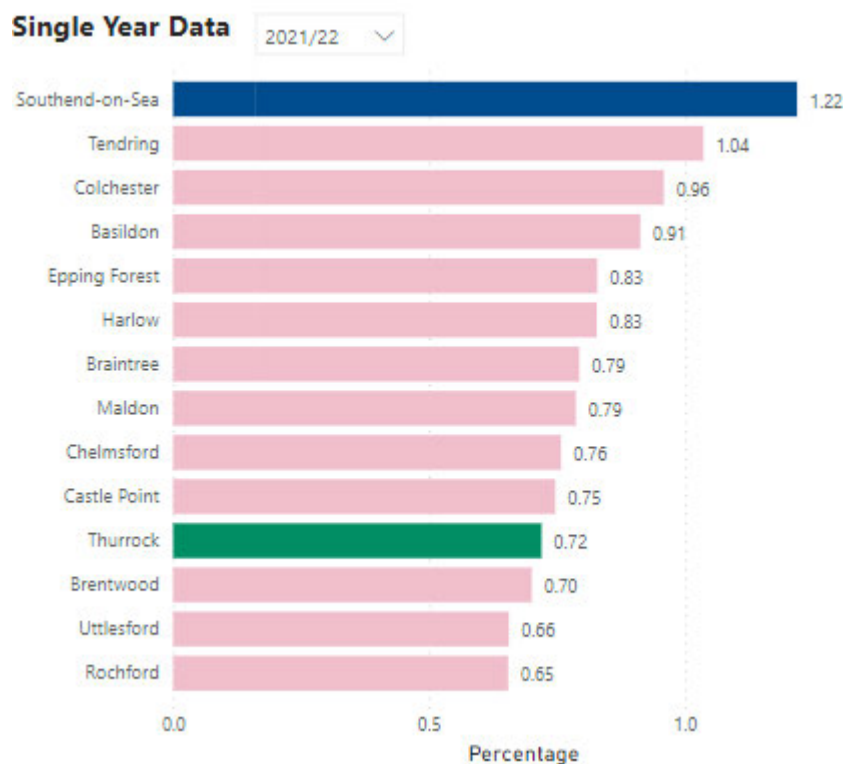


Figure 28: The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses as recorded on practice disease registers 2021-2022

DISABILITY

As can be seen by the graph in Figure 29, the percentage of the population within most areas of Essex who are registered as having a disability has decreased consistently between the 2011 and 2021 census. Braintree and Colchester are the exceptions where the number of registered disabled people has increased between the census dates, whilst Tendring has remained the area with the highest proportion of disabled people. Further understanding of the range of disabilities represented and the impacts they have on an individual’s mobility and home support needs will enable the Service to ensure its Response activities are appropriately considered and adjusted to ensure effective resolution of incidents.

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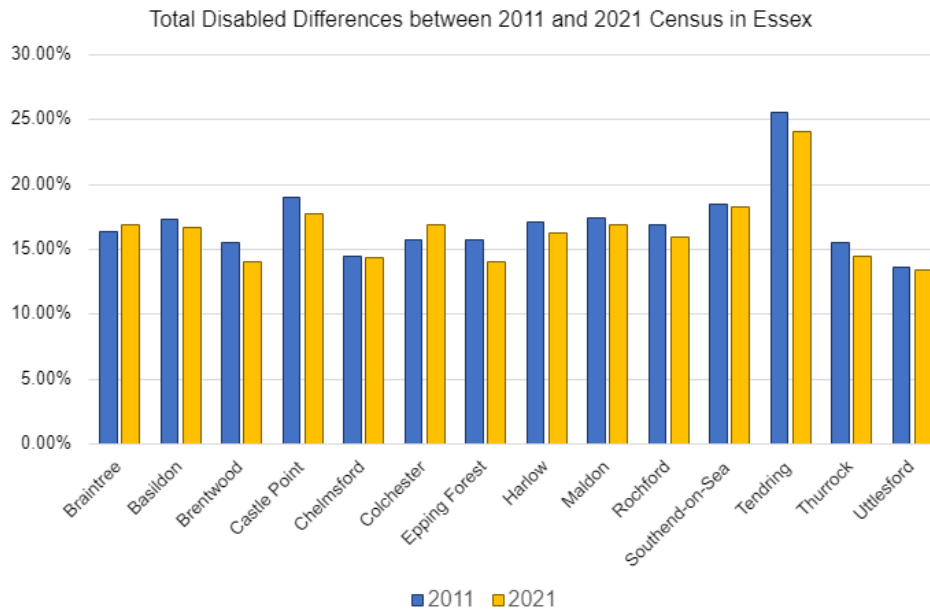


Figure 29

OBESITY

Following the behavioural changes incurred during the restrictions imposed through the UK response to COVID-19, the graphs below show how these have impacted upon the general health and weight of the population. There is a gradual increase shown in the percentage of adults who are classed as overweight or obese across all areas of Essex between 2015 and 2021 (as shown in Figure 30) which is matched by a similar trend pattern in the percentage of children aged 10-11 classified as living with obesity or severe obesity (Figure 31). As challenges to physical health are known to be a contributing factor to fire fatalities (source Fatal Fire Key Findings Presentation 2021), the Service should constantly review its Safe and Well delivery activities and how these can be improved to address all known risk factors.

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Adults

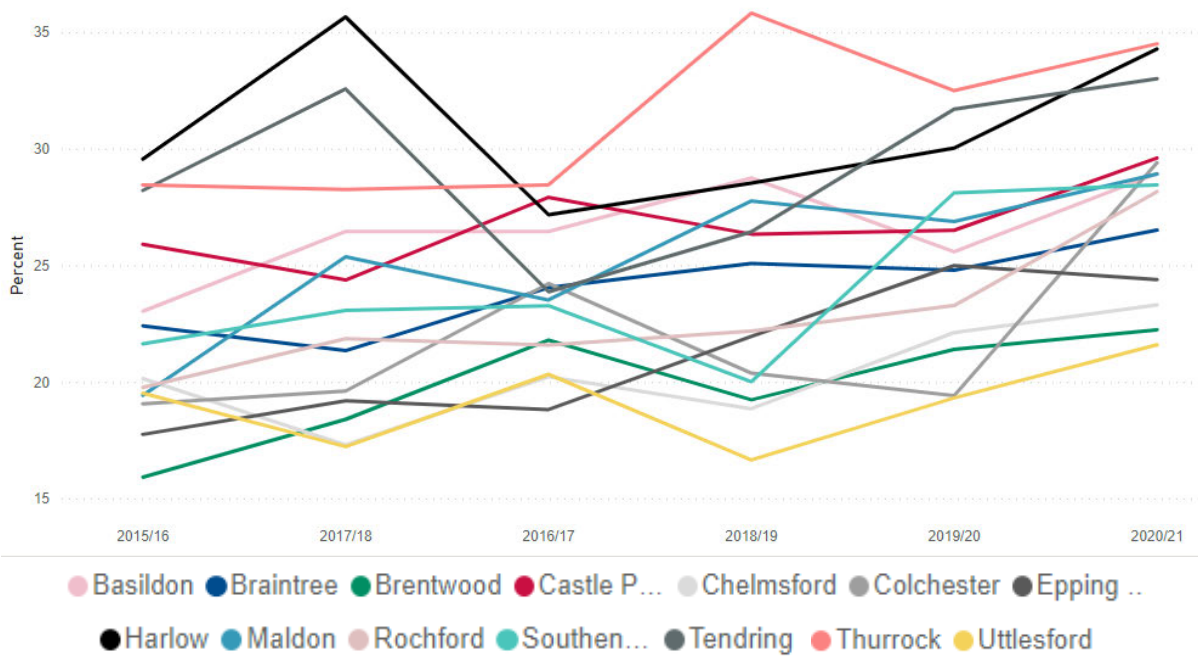


Figure 30: Percentage of adults aged 18 and over classified as overweight or obese 2015-2021

Children Aged 10-11

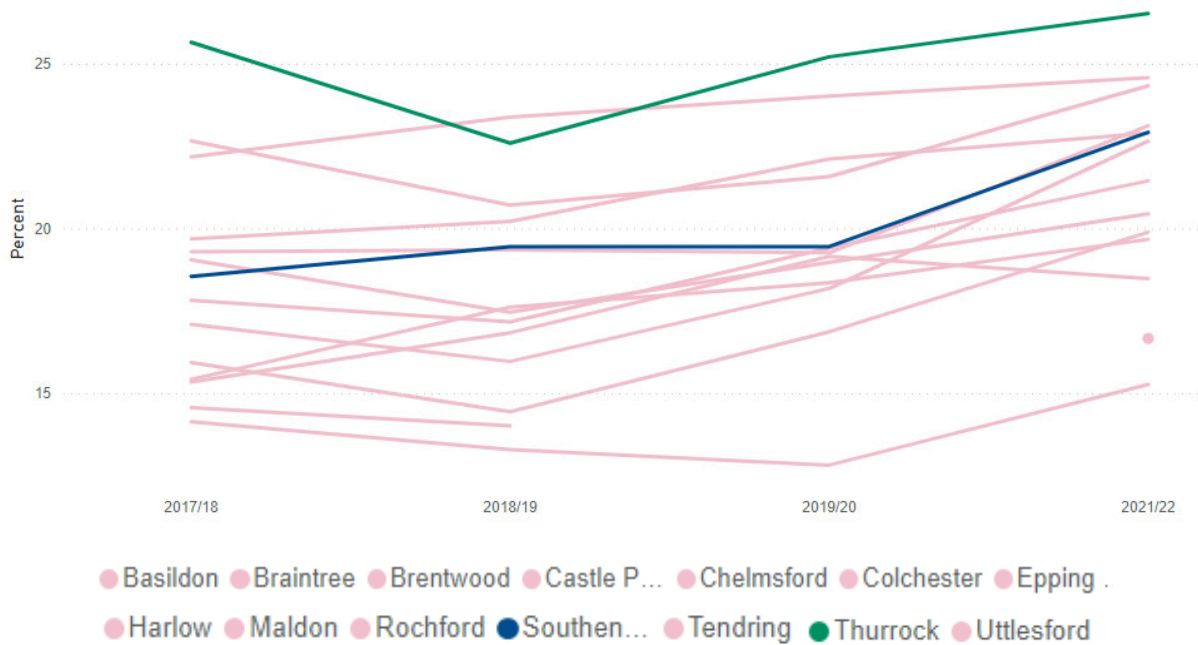


Figure 31: Proportion of children aged 10-11 years classified as living with obesity or severe obesity. 2017-2022

SMOKING

Figure 33 indicates the percentage of people who identified themselves as smokers to their doctor between 2016 and 2021 across Essex. This shows the number of declared smokers reduced significantly for most areas in 2018, returned to similar numbers in 2019 and has remained relatively consistent since. Some areas have more variation year on year in the percentage of smokers, however when taken in consideration with Figure 32 and the overall percentage of smokers as declared in 2020 to 2021, it suggests that this is not a high risk factor. Further analysis could be undertaken to correlate the relationship between the percentage of smokers and the percentage of smoking related incidents by area to understand the risk factor smoking currently has on incidents occurring.

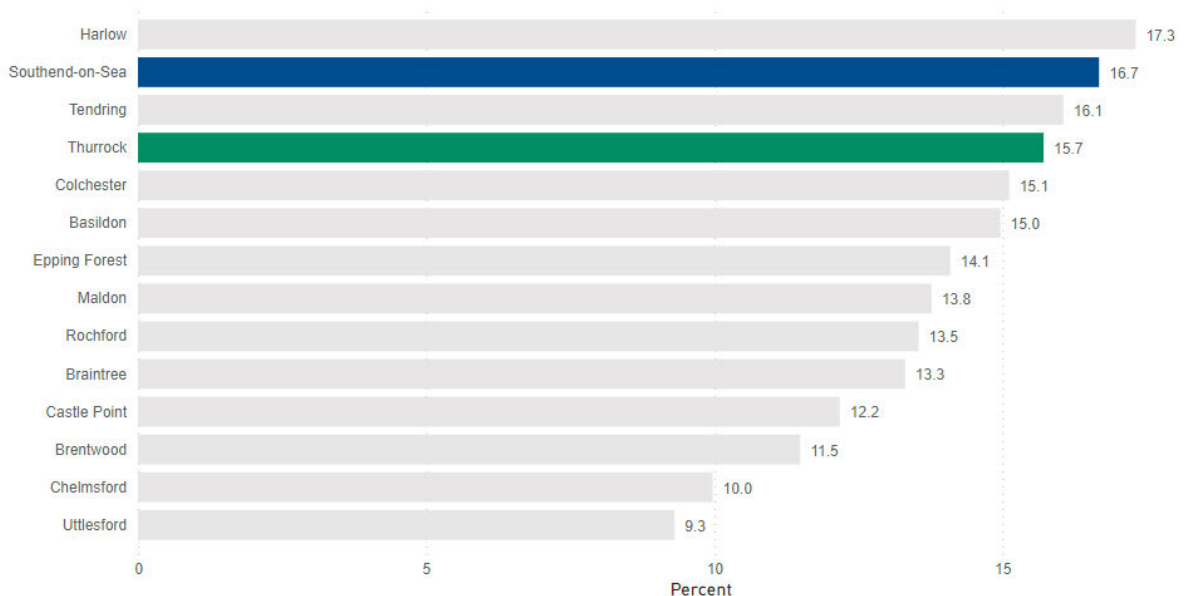


Figure 32: Percentage of the population who classify themselves as either occasional or regular smokers according to the GP Patient Survey, 2020-2021

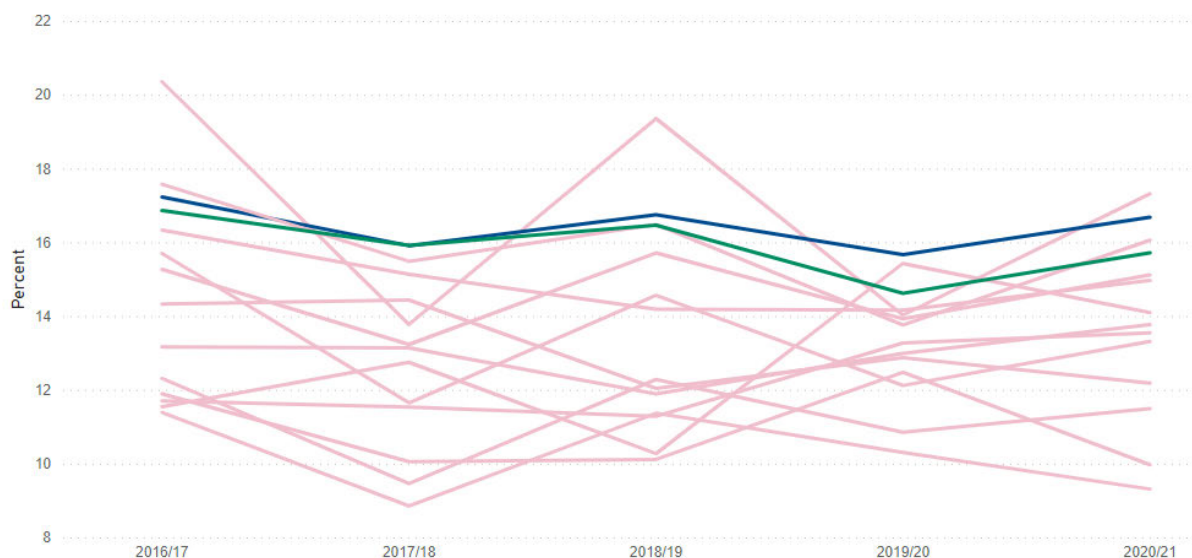


Figure 33: Percentage of the population who classify themselves as either occasional or regular smokers according to the GP Patient Survey. 2016-2021

INFECTIOUS DISEASES

Emerging infectious diseases occur frequently and planning assumptions rely on the health service to effectively respond and contain the outbreak. Failure to contain the outbreak would result in a large epidemic in the UK or a pandemic which could become global. The specific characteristics of a novel emerging infection may vary and the long term impacts will not be fully understood until several months, or even years, of follow up have taken place.

Each pandemic is different and the characteristics of the pathogen, its transmission route, where and the time of year it emerges, and its impact on society cannot be known in advance. Socioeconomic deprivation, ethnicity, pre-existing health conditions and age will factor in the impacts felt by newly emerging infectious diseases through both increased exposure and the more severe effect of exposure.

It is impossible to predict the timing of a future pandemic and the probability of one occurring in the next five years is highly uncertain. The interval between previous pandemics is variable and there are no known markers that suggest the start of a new one. Based on historical evidence within the UK of the 1918/1919 flu and the COVID-19 pandemic which started at the end of 2019 it is judged that the average annual probability of a pandemic similar to reasonable worst case scenario planning occurring is 2%, or approximately 10% over the next 5 years. It is possible that a pandemic worse than the reasonable worst case scenario planning could occur, it is also likely that milder pandemics will occur more frequently than the figures quoted above.

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Recovery from the COVID-19 pandemic will take several years as the disease reaches a stable endemic state and for the UK to fully recover from the health, social, and economic impacts. As a key responder to the COVID-19 pandemic and the combined work through tri-service agreements, the Service should be cognisant not only of the long term implications of COVID-19, but also the potential for future infectious diseases to emerge during the ongoing recovery and the impacts that may have on Service delivery and critical activities.

CRIME TRENDS AND ANALYSIS

CRIME & ANTISOCIAL BEHAVIOUR

The Service supports the delivery of the Serious Violence Duty in accordance with The Police, Crime, Sentencing and Courts Act 2022. Through its engagement with Community Safety Partnerships, Essex County Fire & Rescue Service collaborates in a multi-agency forum, providing data analysis to support the understanding of the causes and consequences of serious violence, and contributing to local plans for the prevention and risk reduction services to those identified as vulnerable and at risk from exploitation or abuse.

Incorporating the Office for National Statistics published crime statistics on reported crimes per 100,000 households, the Essex Strategic Joint Needs Assessment provides a Crime and Community Safety dashboard which shows us that 8 areas of Essex had a higher proportion of crime compared to England and the East of England region in 2021 (Figure 34). Breaking this total crime rate down to focus on criminal damage and arson we can see that 6 areas of Essex had a higher proportion of these particular crimes reported compared to England and the East of England region in 2021 (Figure 35). Specifically, Harlow, Basildon, Southend, Tendring, Thurrock and Colchester area in both high crime rate categories.

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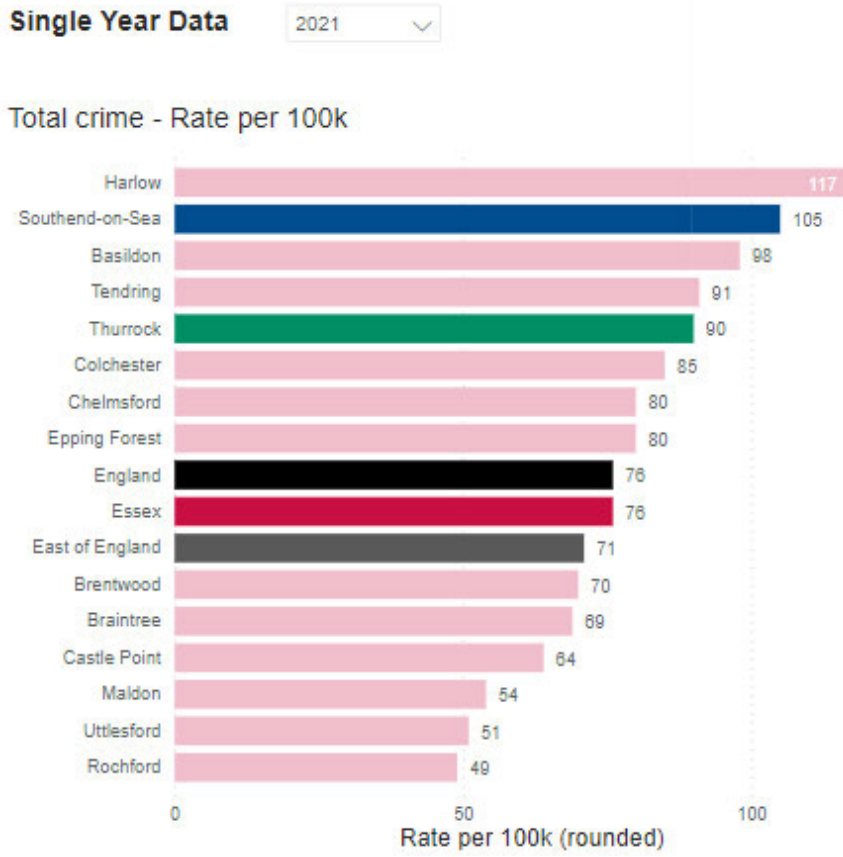


Figure 34

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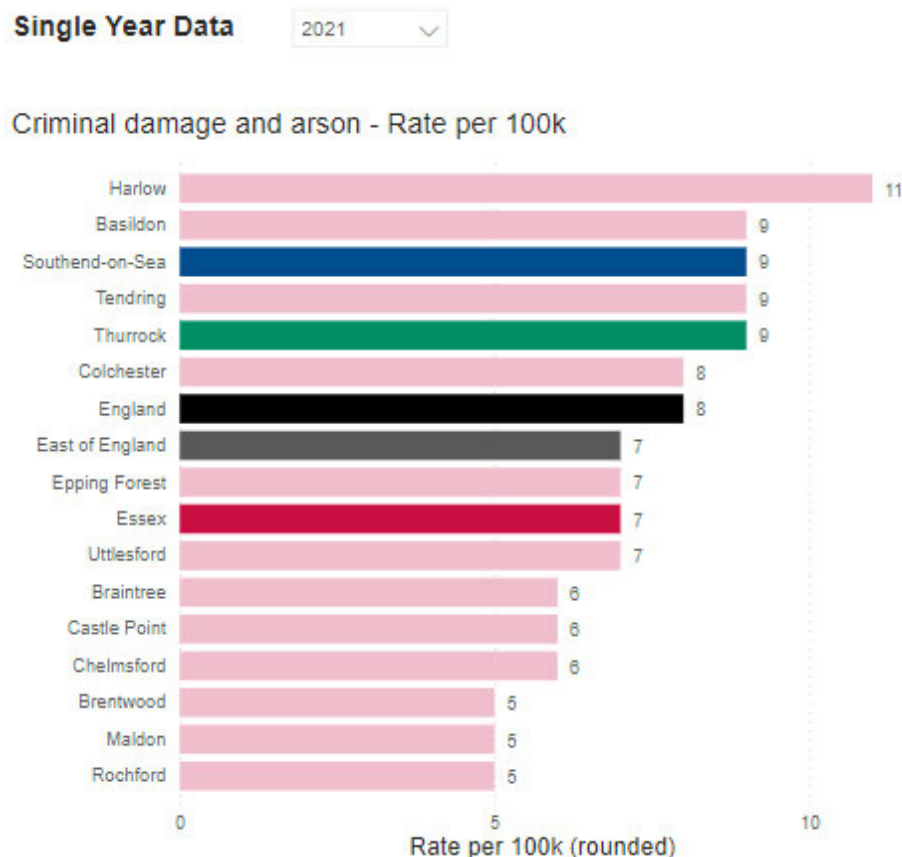


Figure 35

Looking at the crime statistics over a 6 year period from 2015 to 2021 we can see that the number of reported crimes increased significantly between 2018 and 2019 and has remained relatively consistent since (Figure 36). Whilst in comparison the rate of criminal damage and arson has not changed significantly within this time period. There is a corresponding spike for 2019, although for most areas this has reduced at a greater percentage than overall crime into 2021 (Figure 37). Further analysis could be undertaken by the Service to understand why arson maintains a relatively stable crime rate and what contributing factors lead an individual to commit arson so that Prevention activities can be resourced appropriately.

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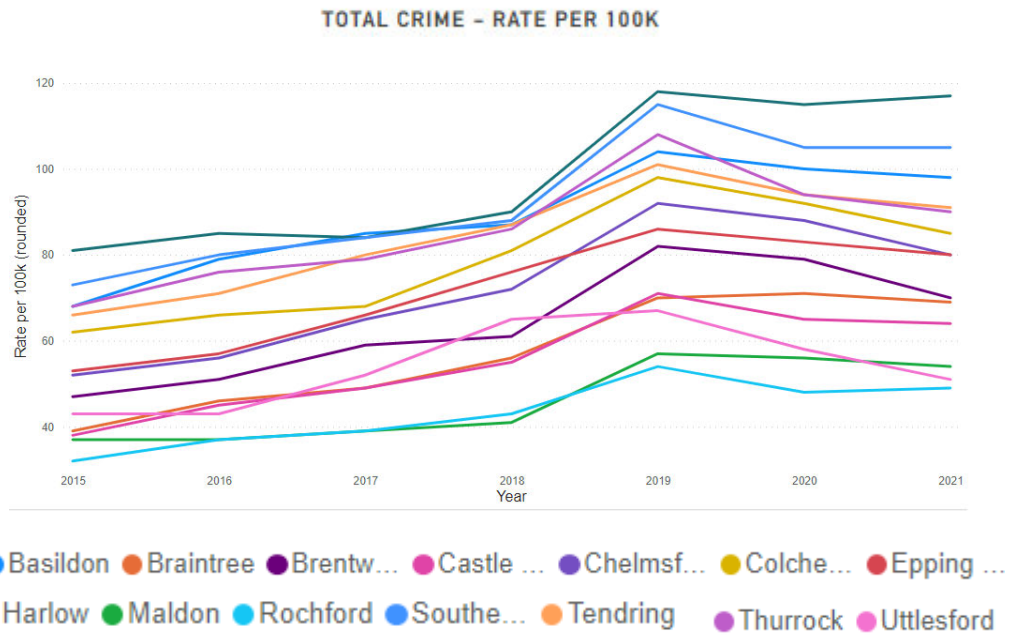


Figure 36

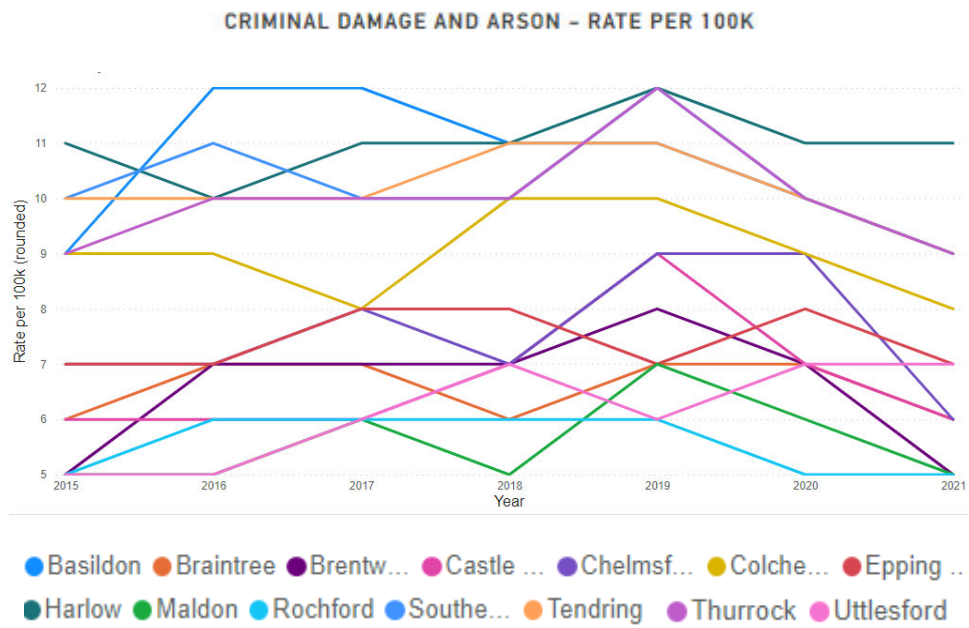


Figure 37

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HUMAN TRAFFICKING & MODERN SLAVERY

Organised Immigration Crime is the illegal movement of persons (known as people smuggling); usually Clandestinely and/or abuse of legitimate means and false or fraudulently obtained genuine travel documents. Modern Slavery is when an individual is exploited by others, for personal or commercial gain. Whether tricked, coerced, or forced, they lose their freedom. This includes but is not limited to servitude, human trafficking, forced labour and debt bondage which are all forms of modern slavery.

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Human Trafficking is when a person arranges or facilitates the travel of another person with the view of that person being exploited. It is irrelevant whether the person consents to the travel. This can be arriving or entering into any Country, leaving any Country or travelling within a Country. Traffickers may use violence, threats or false promises of well-paid jobs and a better life, to trick victims into working for them and then do not fulfil this promise in a view to exploit them such as in the above scenarios.

Within Essex the majority of human trafficking incidents occur along the main arterial transport routes such as the Thames Estuary, M25, M11 and significant A roads which connect these to other parts of the county or UK. Around 70% of human trafficking crime into Essex comes via Kent as the onward travel route from Calais to Dover to other UK destinations.

In previous years there has been an average of 11 human trafficking incidents per month, however in the past year this has decreased to an average of 7 incidents per month. This is reflected nationally as people are choosing to attempt these journeys by boat rather than lorry. Whilst the risks are greater to those who travel by boat, the cost is much lower.

Following the lorry incident in Grays in 2019 Essex Police have identified that organised crime gangs engage in human trafficking alongside other crimes as it provides greater profits than guns and drugs trafficking. They also identified that previous Police processes moved people who were being trafficked to immigration services and did not follow up with any criminal proceedings.

Essex Police have trialled working practices with the Service's Urban Search and Rescue team and their live person detection dogs. Further collaboration between the two emergency services with Essex County Fire & Rescue Service providing safety and risk management support to incidents could reduce the risks of fatalities occurring.

The graphs below show the number of modern slavery investigations carried out by Essex Police over the previous 5 years. What these indicate is that modern slavery occurs in similar areas to that of human trafficking, that is along the main road and transport corridors within Essex, predominantly along the Thames Estuary. As can be seen in Figure 39 the number of non-crime related investigations associated with modern slavery have decreased significantly in all areas except Southend since 2019. Whilst in Figure 38 we can see that crime related investigations have been increasing steadily in most areas since 2019.

Strategic Assessment of Risk – Societal Risk

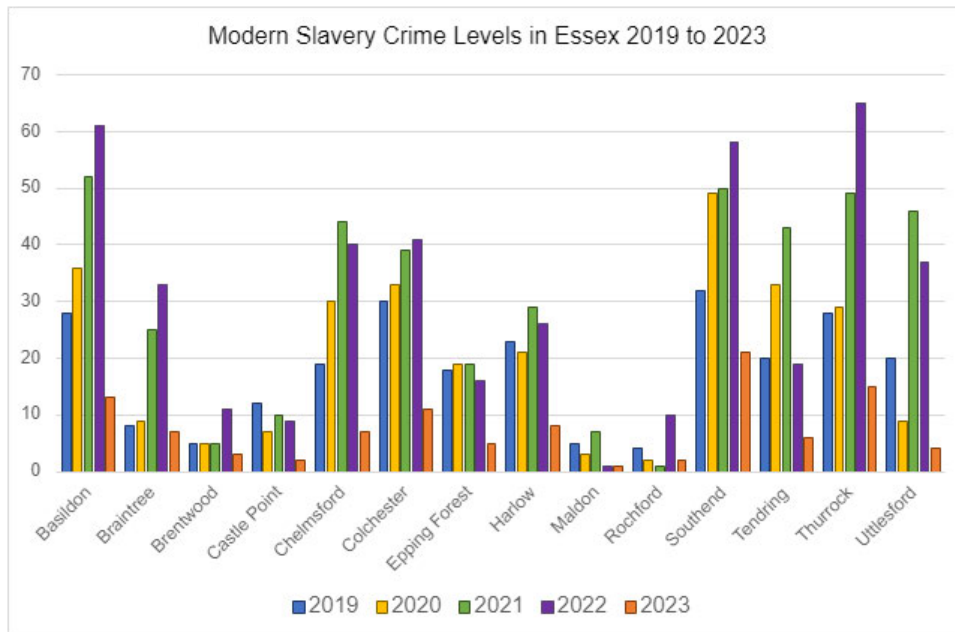


Figure 38

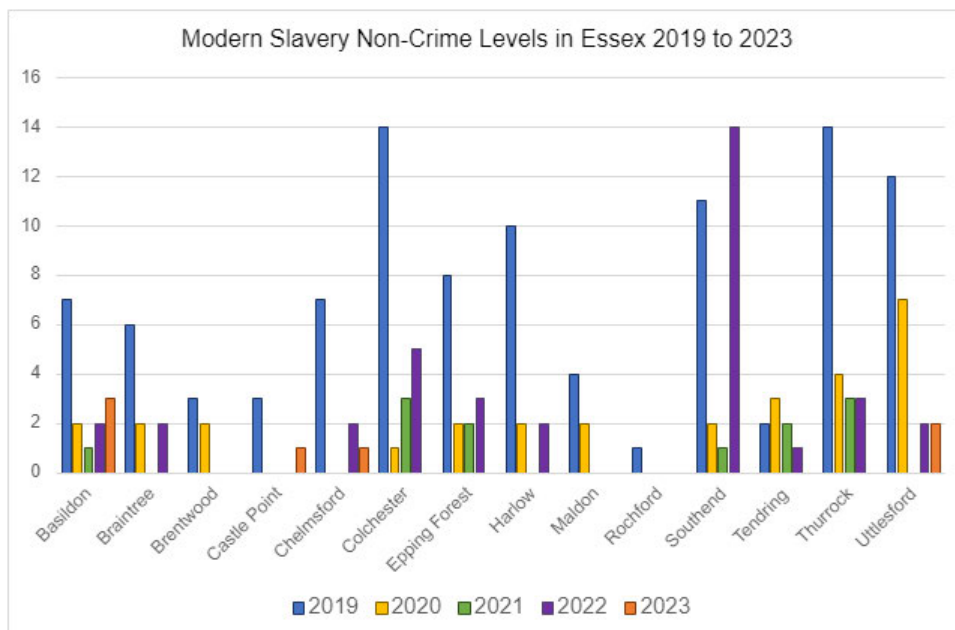


Figure 39

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