

# Using Acorn Wellbeing & the Kent Integrated Dataset (KID) to identify and analyse older people more likely to be experiencing social isolation and loneliness

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**Produced by**

Gerrard Abi-Aad: Head of Health Intelligence ([gerrard.abi-aad@kent.gov.uk](mailto:gerrard.abi-aad@kent.gov.uk))

Rachel Kennard: Senior Intelligence Analyst ([rachel.kennard@kent.gov.uk](mailto:rachel.kennard@kent.gov.uk))

Correspondence to: Rachel Kennard

## | Version Control

Version Number	Date	Reviewer	Change reference and summary
1	26/6/2018	RK	Initial draft
2	4/9/2018	RK	Updated with Kent maps

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## 1. Executive Summary

The issue of social isolation is receiving increasing attention from a range of organisations, including local authorities. Kent County Council have formed a select committee to look at the issue of social isolation and loneliness, with a particular focus on older residents. Work to summarise return on investment for social isolation interventions and some current KCC initiatives suggests that the most effective tend to be those aimed at older people.

This report describes analysis conducted locally to both identify and profile older people likely to be at increased risk of social isolation and loneliness.

It has been possible to use Wellbeing Acorn in combination with the Kent Integrated Dataset to identify c.29,500 Kent residents aged 65+ who live alone and whose Wellbeing Acorn type suggests an increased risk of social isolation and/or loneliness.

The individuals identified have many of the characteristics expected based on other studies of social isolation. In comparison with all Kent residents aged 65+, the group identified as being at higher risk of social isolation or loneliness are:

- older,
- more likely to be female,
- much more likely to be living in a deprived neighbourhood,
- more likely to have a range of long term conditions, including
  - cardiovascular disease (AF, CHD, heart failure, hypertension, PAD and stroke combined),
  - respiratory disease (COPD and asthma combined),
  - chronic kidney disease,
  - diabetes,
  - and depression,
- more likely to be multimorbid (i.e. have two or more long term conditions).
- more likely to have attended A&E, have been admitted to hospital, have had contact with community health services and received social care services
- more likely to be assessed as being in a high risk score group,
- and more likely to have characteristics recorded by their GP that place them in the 'severe' or 'moderate' frailty groups of the Electronic Frailty Index (EFI).

The Kent residents identified as being at risk of social isolation/loneliness can be further segmented according to their Wellbeing Acorn type. Analysis by these segments suggests that older people living alone in Acorn Wellbeing types 1 (limited living), 2 (poorly pensioners) and 3 (hardship heartlands) are at the highest risk of social isolation and loneliness *and* have the highest levels of multimorbidity, depression, the highest usage of acute and social care services, and the highest levels of frailty.

## 2. Introduction & Objectives

The issue of social isolation is receiving increasing attention from a range of organisations, including local authorities. Research has shown that, in terms of negative health outcomes, lacking social connections is comparable to smoking 15 cigarettes a day, and has worse health outcomes than risk factors such as obesity and physical inactivity. It has been calculated that loneliness increases the likelihood of mortality by 26% in older people<sup>1</sup>. Research also suggests that social frailty has a stronger impact on the onset of depressive symptoms than physical frailty or cognitive impairment<sup>2</sup>.

Kent County Council have formed a select committee to look at the issue of social isolation and loneliness, with a particular focus on older residents. Work to summarise return on investment for social isolation interventions and some current KCC initiatives suggests that the most effective tend to be those aimed at older people<sup>3</sup>. This report describes analysis conducted locally to both identify and profile older people likely to be at increased risk of social isolation and loneliness.

The work draws on previous work in this area conducted by Gloucestershire County Council<sup>4</sup>, Essex County Council<sup>5</sup> and by the Business Intelligence team within Kent County Council<sup>6</sup>. In all of these examples, geodemographic segmentation tools were used to identify groups of households likely to exhibit characteristics associated with social isolation and loneliness. This analysis draws on CACI's Wellbeing Acorn segmentation tool to identify an initial pool of residents likely to have characteristics associated with social isolation and loneliness, which has then been overlaid onto person-level data within KID to further refine the cohort identified so that only those with particular demographic characteristics are included. The identified cohort have then been profiled in terms of their health characteristics, risk and service usage as well as geographical location.

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<sup>1</sup> Holt-Lunstad, Julianne. Social Relationships and Mortality Risk: A Meta-analytic Review. 2010.

<sup>2</sup> Kota Tsutsumimoto et al. Social frailty has a stronger impact on the onset of depressive symptoms than physical frailty or cognitive impairment: A 4-year follow-up longitudinal cohort study. JAMDA. 19 (2018) 504-510.

<sup>3</sup> Return on Investment for public health interventions: Social isolation, sexual health, health visiting, mental health and NHS Health Checks.

<sup>4</sup> <https://inform.gloucestershire.gov.uk/resource.aspx?resourceid=129&cookieCheck=true&JScript=1>

<sup>5</sup> <https://campaigntoendloneliness.org/guidance/case-study/essex-county-council-isolation-index/>

<sup>6</sup> See Appendix A. This analysis also drew on the work conducted by Gloucestershire and Essex County Councils.

### 3. Identifying older people more likely to be experiencing social isolation and loneliness

A two-stage process is proposed to the identification of older people in Kent likely to be experiencing social isolation and loneliness. The aim is to identify a group of residents with a higher propensity to be experiencing social isolation and loneliness than a randomly generated list, for further analysis.

#### 3.1 Stage 1 – Initial list of postcodes generated using Acorn Wellbeing<sup>7</sup>

It is proposed that an initial list of postcodes with an increased propensity for residents to be experiencing social isolation and loneliness is generated using the Wellbeing Acorn segmentation. This has been done by considering a number of variables (which CACI have profiled by Wellbeing Acorn Type) that may be indicative of ‘social isolation’ and possible ‘loneliness’<sup>8</sup>.

##### ***Impact of physical/mental health problems***

- Last 4 weeks: physical or mental health interfered with social life

##### ***Social capital: community***

- Belong to neighbourhood: Disagree
- Can borrow things from neighbours: Disagree
- Talk regularly to neighbours: Disagree
- I could go to someone in my neighbourhood for advice: Disagree

##### ***Social capital: networks***

- Family understands the way I feel\*
- Can rely on family\*
- Can talk about worries with family\*
- Friends understands the way I feel\*
- Can rely on friends\*
- Can talk about worries with friends\*

##### ***Social capital: participation***

- Member of tenants or residents group\*
- Member of environmental group\*
- Member of other community group\*
- Member of social group\*
- Member of voluntary service group\*

\*denotes a variable where a lower propensity score has been taken to indicate social isolation/loneliness.

<sup>7</sup> [https://www.caci.co.uk/sites/default/files/resources/Wellbeing\\_Acorn\\_User\\_Guide.pdf](https://www.caci.co.uk/sites/default/files/resources/Wellbeing_Acorn_User_Guide.pdf)

<sup>8</sup> Please note that variables solely indicating ill-health have not been used to drive the selection of the Wellbeing Acorn types.

A weighted average propensity score has been calculated for each Wellbeing Acorn type using the index values<sup>9</sup> provided by CACI to create an 'isolation index' for each Wellbeing Acorn type. Types with an isolation index above 102 have then been identified as having an increased propensity for residents to be experiencing social isolation and loneliness.

### 3.1.1 Weighting

Consideration has been given to different approaches to weighting the 16 variables listed above in the creation of the isolation index, and indeed to restricting the analysis to smaller subsets of variables. This sensitivity analysis suggests that a very similar list of Wellbeing Acorn types would be generated regardless of the weighting regime. The approach to weighting used in the analysis presented in this report is to give equal weight to each of the four domains of indicators (impact of physical/mental health problems, social capital: community, social capital: networks and social capital: participation) as follows:

#### *Impact of physical/mental health problems*

- Last 4 weeks: physical or mental health interfered with social life (6)

#### *Social capital: community*

- Belong to neighbourhood: Disagree (1.5)
- Can borrow things from neighbours: Disagree (1.5)
- Talk regularly to neighbours: Disagree (1.5)
- I could go to someone in my neighbourhood for advice: Disagree (1.5)

#### *Social capital: networks*

- Family understands the way I feel\* (1)
- Can rely on family\* (1)
- Can talk about worries with family\* (1)
- Friends understands the way I feel\* (1)
- Can rely on friends\* (1)
- Can talk about worries with friends\* (1)

#### *Social capital: participation*

- Member of tenants or residents group\* (1.2)
- Member of environmental group\* (1.2)
- Member of other community group\* (1.2)
- Member of social group\* (1.2)
- Member of voluntary service group\* (1.2)

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<sup>9</sup> An index value of 100 for 'belong to neighbourhood: disagree' for a particular Wellbeing Acorn type would mean the proportion of households disagreeing is the same as the average for the UK. A value of 200 would illustrate that households belonging to this type are twice as likely to disagree.

### 3.1.2 Wellbeing Acorn types identified

The above approach identified 11 Wellbeing Acorn types<sup>10</sup> as having a higher than average isolation index.

#### ***Wellbeing Acorn types with a high isolation index***

- Type 1: Limited living
- Type 2: Poorly pensioners
- Type 3: Hardship heartlands
- Type 5: Countryside complacency
- Type 6: Dangerous dependencies
- Type 7: Struggling smokers
- Type 9: Everyday excesses
- Type 10: Respiratory risks
- Type 11: Anxious adversity
- Type 12: Perilous futures
- Type 14: Rooted routines

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<sup>10</sup> Type 8: Despondent diversity was also identified, but only one Kent postcode falls into this Wellbeing Acorn type and so it has not been included in the analysis.



### 3.2 Stage 2 – Enhancing the approach using data from KID

Kent residents falling within the above list of 11 Wellbeing Acorn types have been further refined by cross-referencing with demographic information contained within the Kent Integrated Dataset (KID). In this way, residents aged 65+ who live alone who also fall into a Wellbeing Acorn type identified as being more likely than average to be socially isolated/lonely have been identified.

Wellbeing Acorn type	Total population (KID)	Aged 65+ (KID)	Aged 65+ and live alone (KID)
1 Limited living	12,628	7,577	5,094
2 Poorly pensioners	31,545	8,377	3,753
3 Hardship heartlands	55,640	7,941	3,443
5 Countryside complacency	54,542	9,214	2,677
6 Dangerous dependencies	11,060	1,218	412
7 Struggling smokers	36,133	2,382	558
9 Everyday excesses	157,184	17,403	5,766
10 Respiratory risks	21,106	3,408	985
11 Anxious adversity	58,587	6,037	1,551
12 Perilous futures	34,242	4,207	1,428
14 Rooted routines	85,948	12,802	3,810
Total	558,615	80,566	29,477

This identifies c.29,500 Kent residents aged 65+ who live alone and are more likely than average to exhibit characteristics that might suggest social isolation; 9.6% of the 65+ population of Kent<sup>11</sup>. It is estimated that around 10% of over 65's are lonely all or most of the time<sup>12</sup>.

<sup>11</sup> Source: ONS mid-year population estimates, 2016

<sup>12</sup> Source: Campaign to End Loneliness

## 4. Analysing older people more likely to be experiencing social isolation and loneliness

This section provides an analysis of Kent residents aged 65+ who have been identified as living alone and falling into one of the 11 Wellbeing Acorn types identified as having a higher than average isolation index.

### 4.1 Geographic location: Numbers

The maps below show Wards with high *numbers* of individuals identified. Wards falling into the highest quintile are highlighted, i.e. the 20% of Wards with the highest numbers of older residents identified. Many of the wards identified cover the most deprived areas in Kent: 35 of the 57 wards with 165 or more older residents identified include at least one of the most deprived decile LSOAs in Kent<sup>13</sup>.

#### 4.1.1 Ashford CCG

##### Older people more likely to be experiencing social isolation/loneliness: by electoral ward

Number identified belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



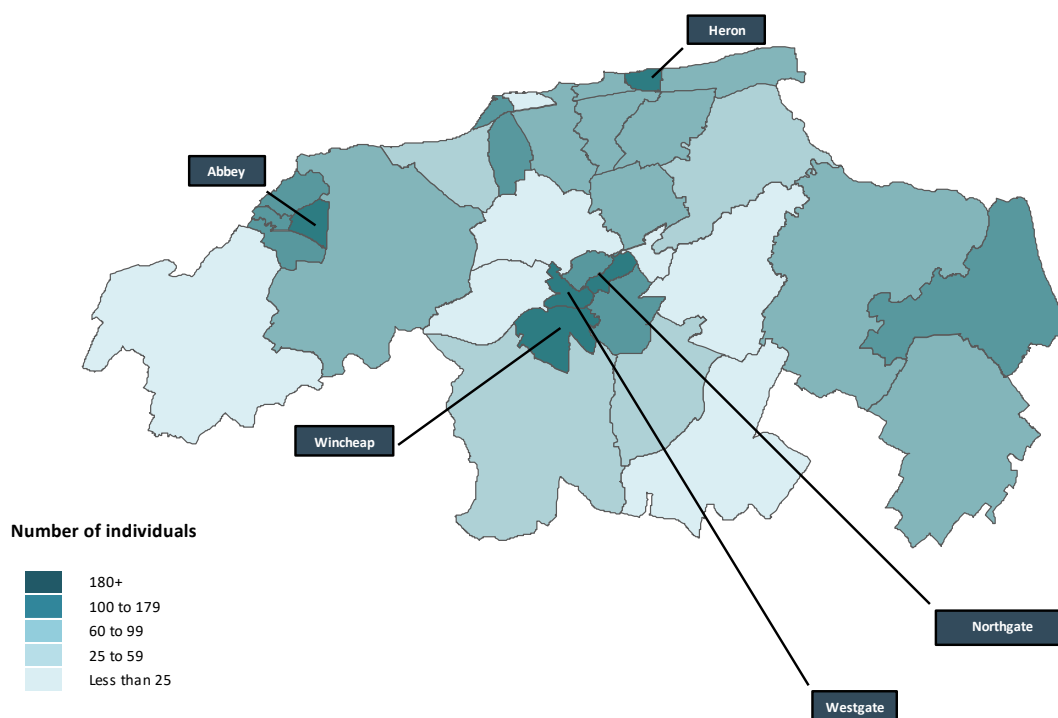
Source: CACI, Kent Integrated Dataset (KID), prepared by KPHO (RK), Jul-18

<sup>13</sup> <https://www.kpho.org.uk/health-intelligence/inequalities/deprivation/mind-the-gap-analytical-report>

#### 4.1.2 Canterbury and Coastal CCG

##### Older people more likely to be experiencing social isolation/loneliness: by electoral ward

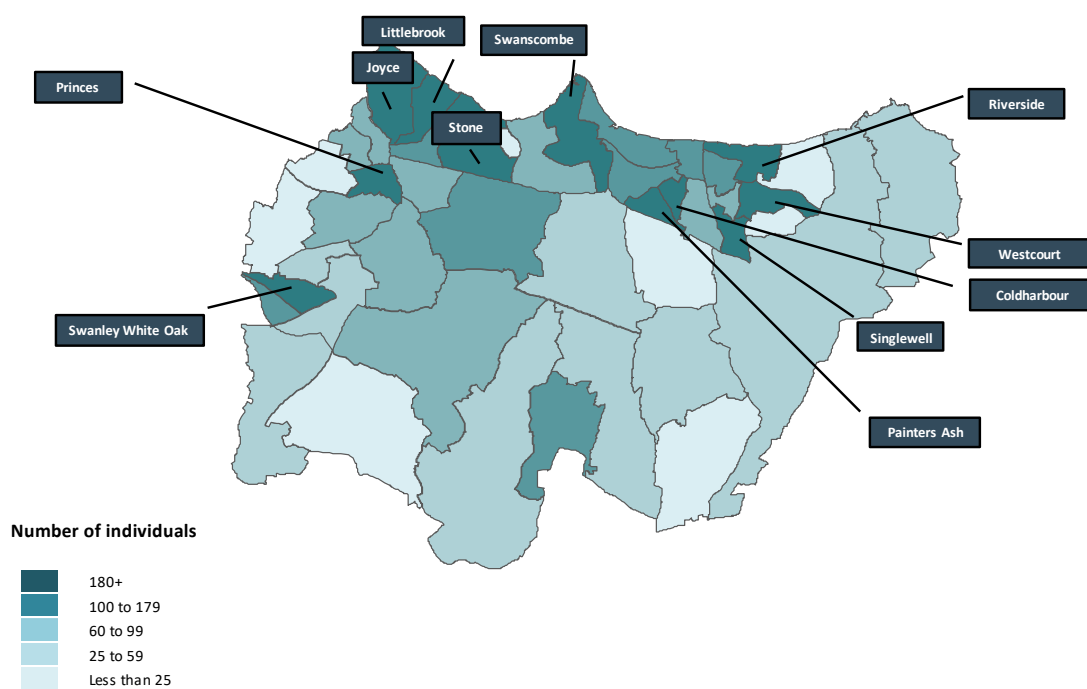
Number identified belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



#### 4.1.3 Dartford, Gravesham and Swanley CCG

##### Older people more likely to be experiencing social isolation/loneliness: by electoral ward

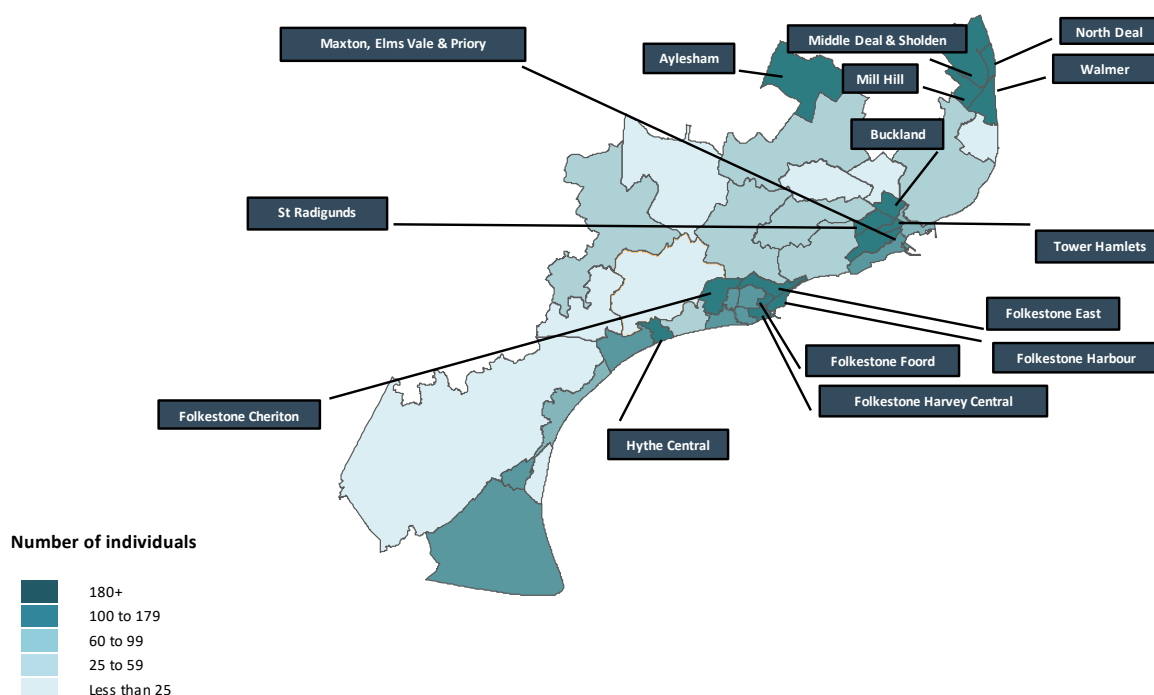
Number identified belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



#### 4.1.4 South Kent Coast CCG

##### Older people more likely to be experiencing social isolation/loneliness: by electoral ward

Number identified belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

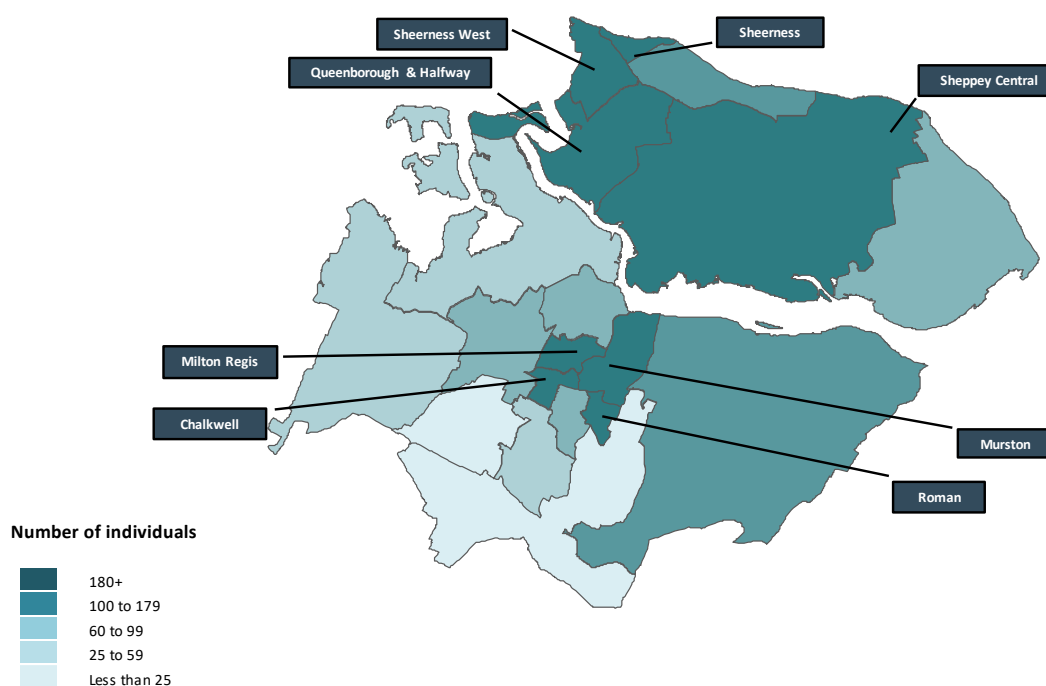


Source: CACI, Kent Integrated Dataset (KID), prepared by KPHO (RK), Jul-18

#### 4.1.5 Swale CCG

##### Older people more likely to be experiencing social isolation/loneliness: by electoral ward

Number identified belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

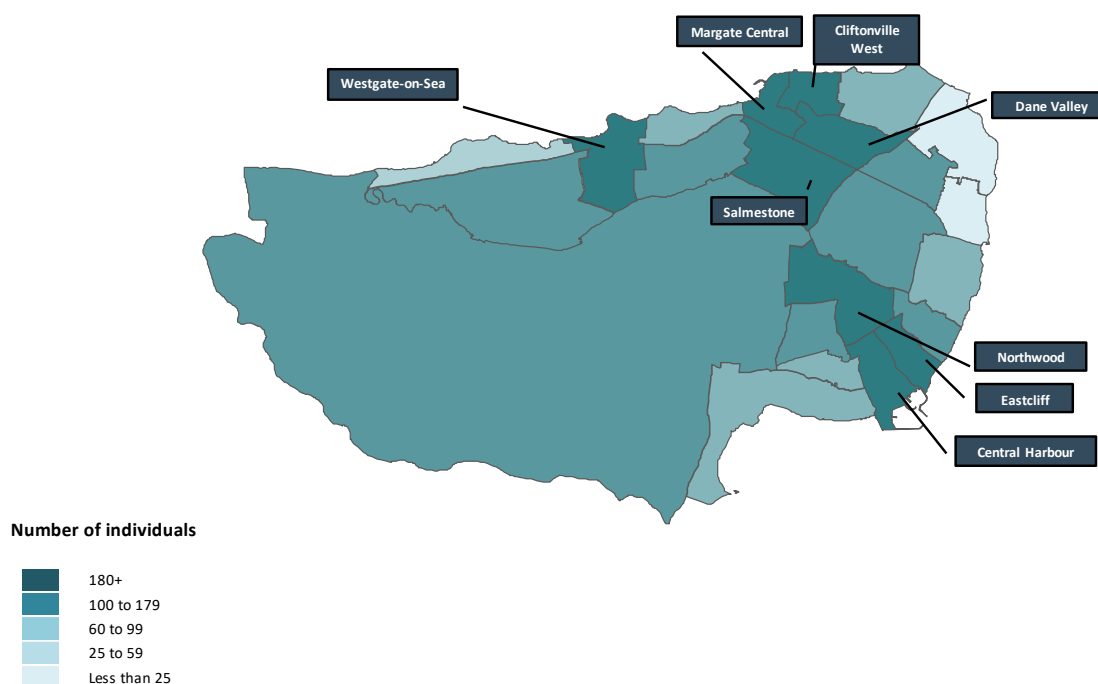


Source: CACI, Kent Integrated Dataset (KID), prepared by KPHO (RK), Jul-18

#### 4.1.6 Thanet CCG

##### Older people more likely to be experiencing social isolation/loneliness: by electoral ward

Number identified belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

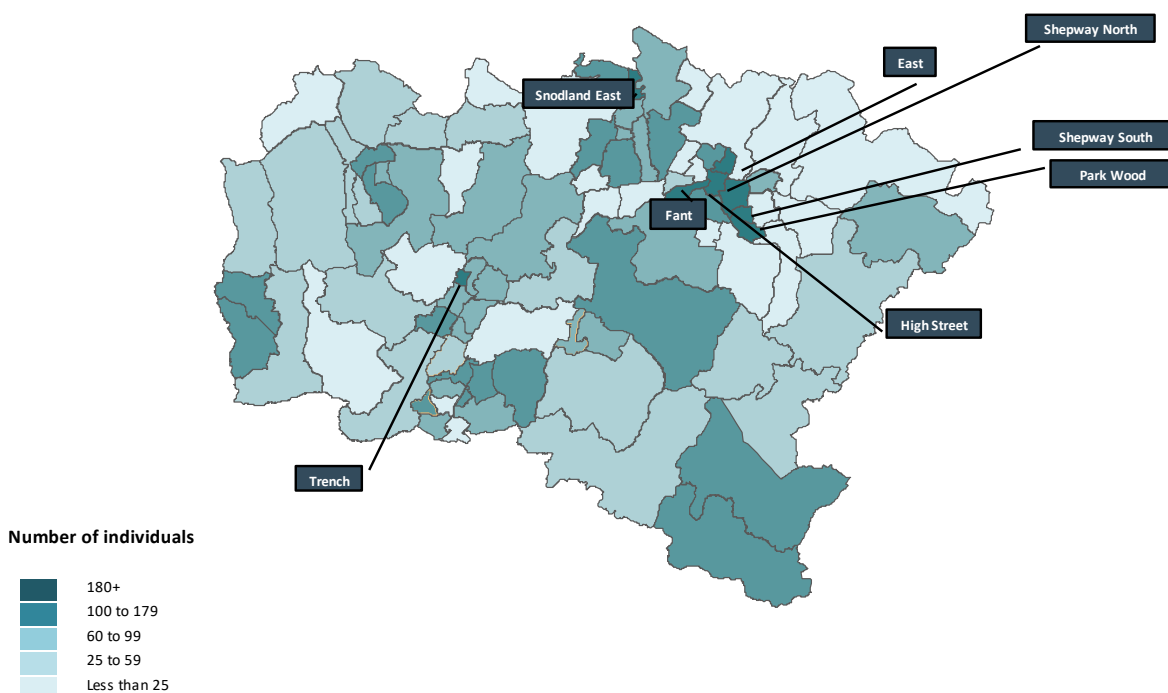


Source: CACI, Kent Integrated Dataset (KID), prepared by KPHO (RK), Jul-18

#### 4.1.7 West Kent CCG

##### Older people more likely to be experiencing social isolation/loneliness: by electoral ward

Number identified belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

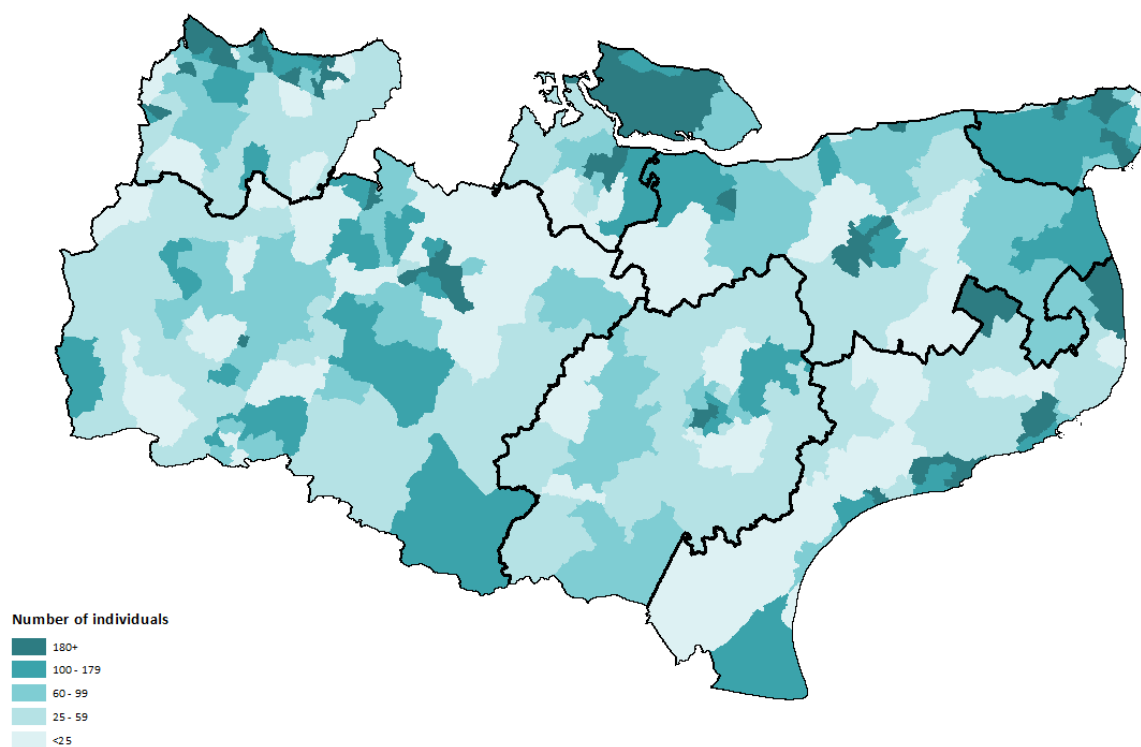


Source: CACI, Kent Integrated Dataset (KID), prepared by KPHO (RK), Jul-18

#### 4.1.8 Kent

##### Older people more likely to be experiencing social isolation/loneliness: by electoral ward

Number identified belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



Source: CACI, Kent Integrated Dataset (KID), prepared by KPHO (LLY), Aug-18

## 4.2 Geographic location: Percentages

The maps below show Wards with high *percentages* of their populations identified as being older people more likely to be experiencing social isolation or loneliness. Results are shown based both on the percentage of the total population identified as being at risk, and on the percentage of the population aged 65+. In each case wards falling into the highest quintile are highlighted, i.e. the 20% of Wards with the highest percentages of residents identified.

### 4.2.1 Ashford CCG

% of the population who are older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

% of older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

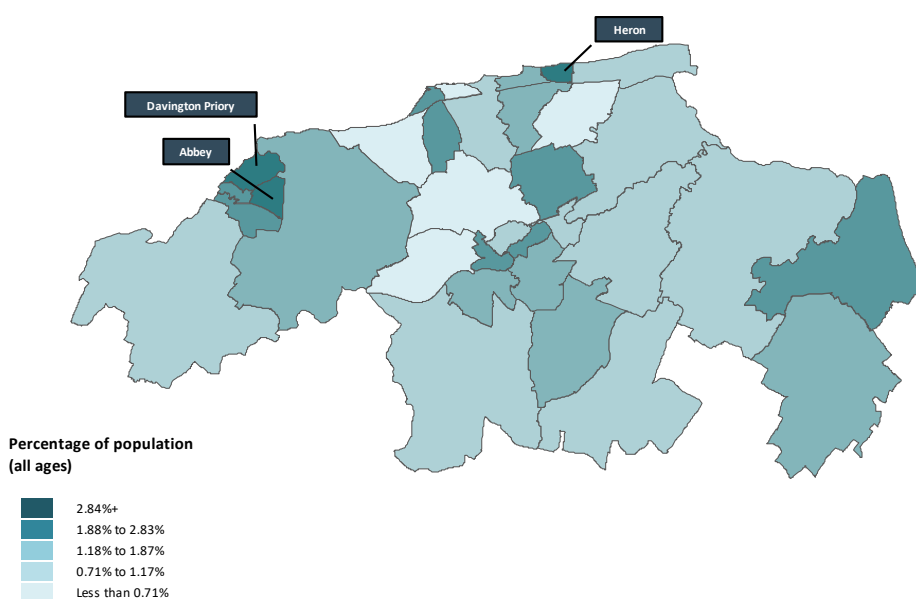


Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

## 4.2.2 Canterbury and Coastal CCG

### % of the population who are older people more likely to be experiencing social isolation/loneliness: by electoral ward

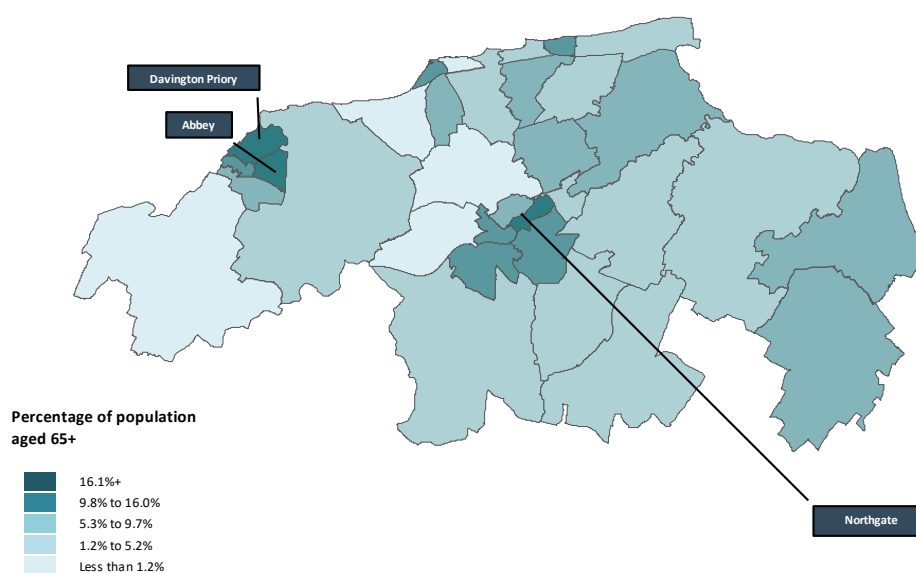
Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

### % of older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



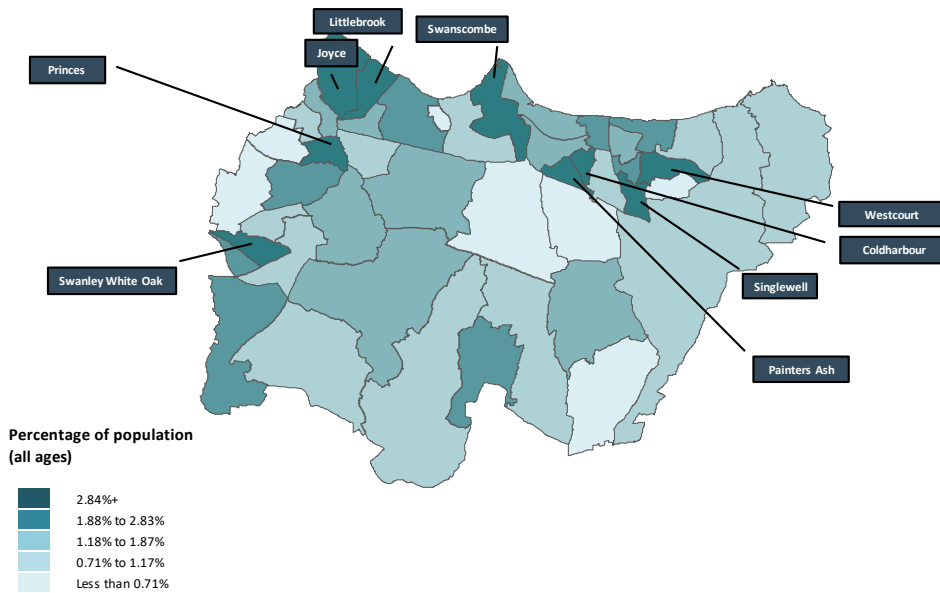
Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18



### 4.2.3 Dartford, Gravesham and Swanley CCG

#### % of the population who are older people more likely to be experiencing social isolation/loneliness: by electoral ward

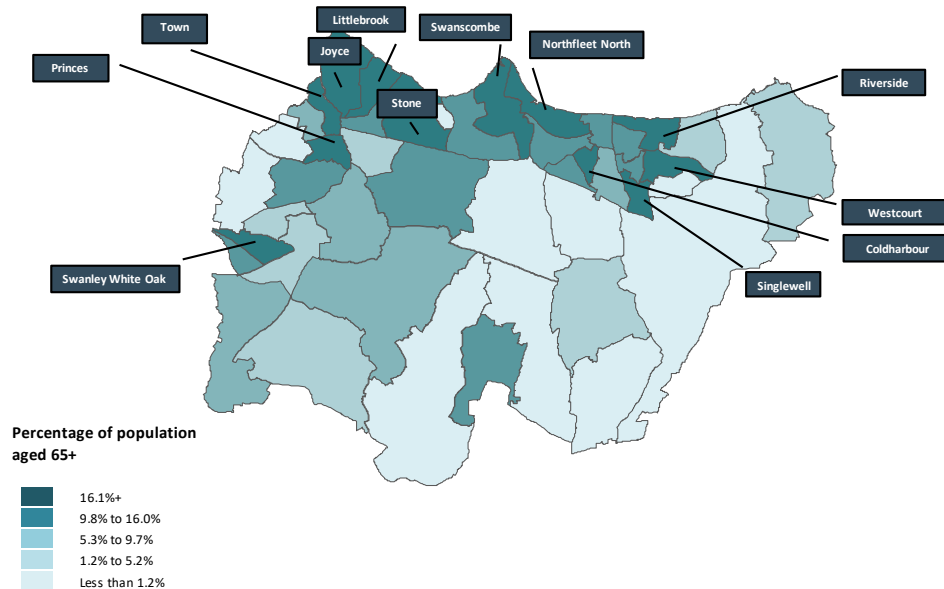
Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

#### % of older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

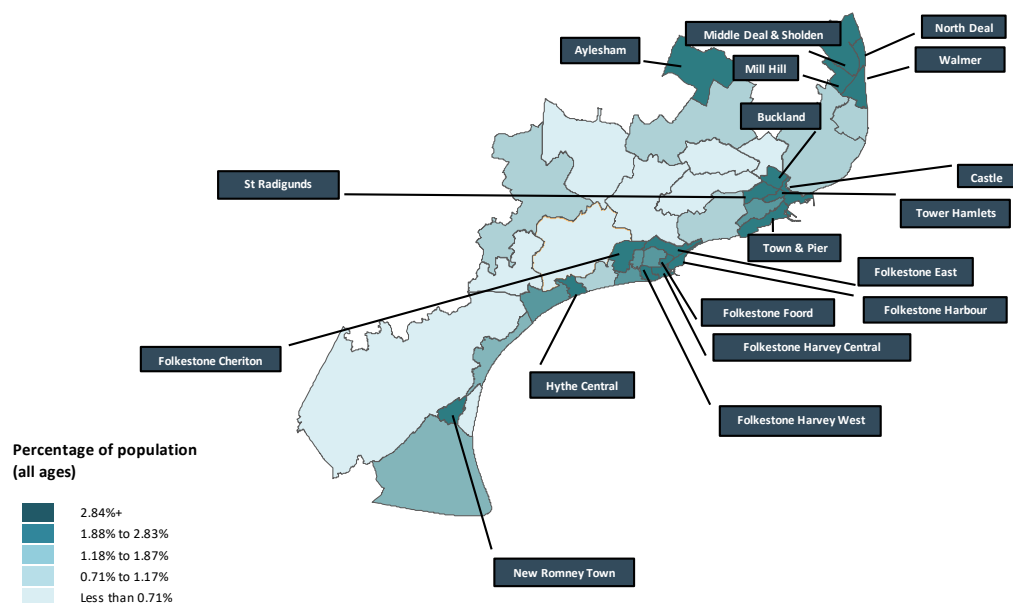


Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

## 4.2.4 South Kent Coast CCG

### % of the population who are older people more likely to be experiencing social isolation/loneliness: by electoral ward

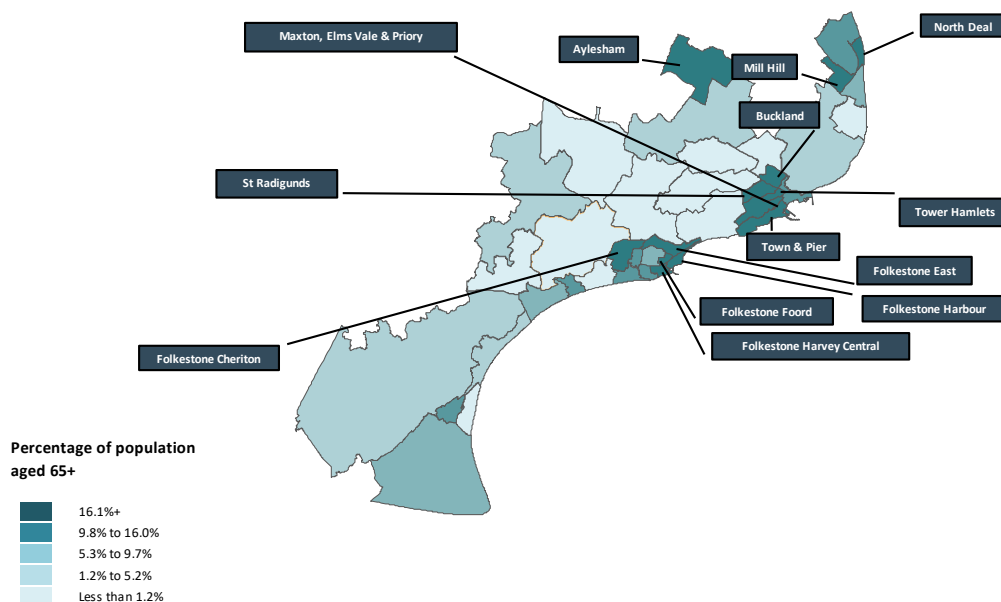
Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

### % of older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

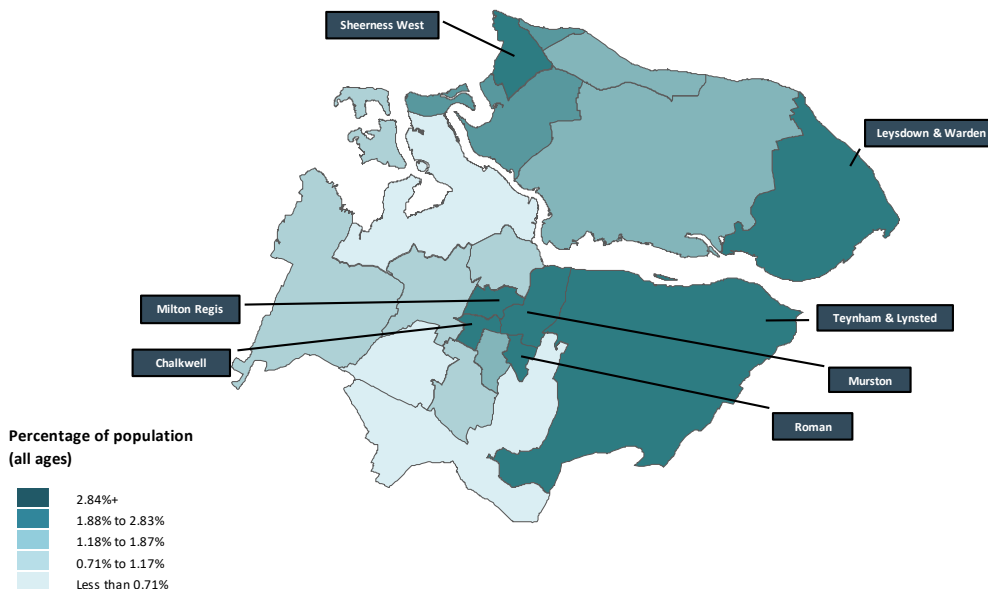


Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

## 4.2.5 Swale CCG

### % of the population who are older people more likely to be experiencing social isolation/loneliness: by electoral ward

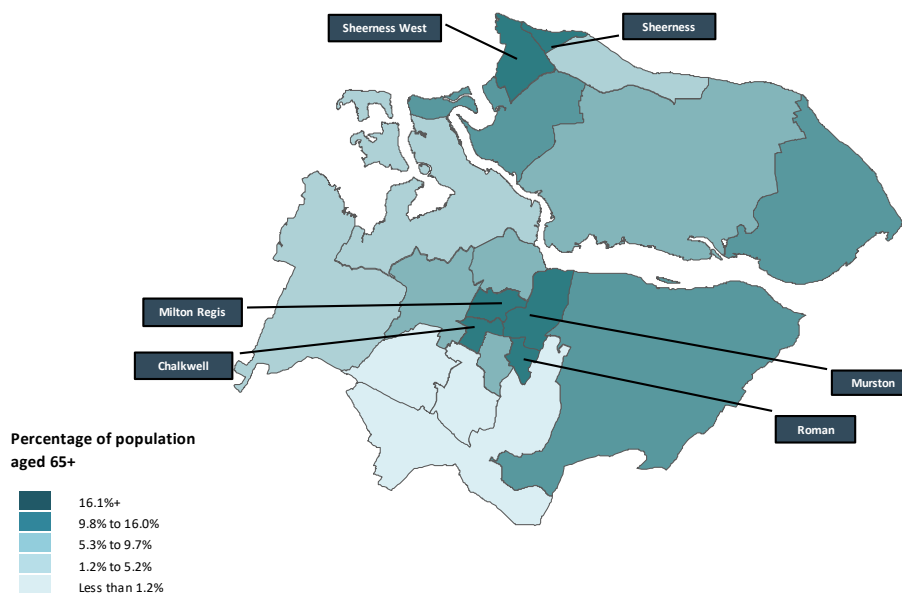
Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

### % of older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

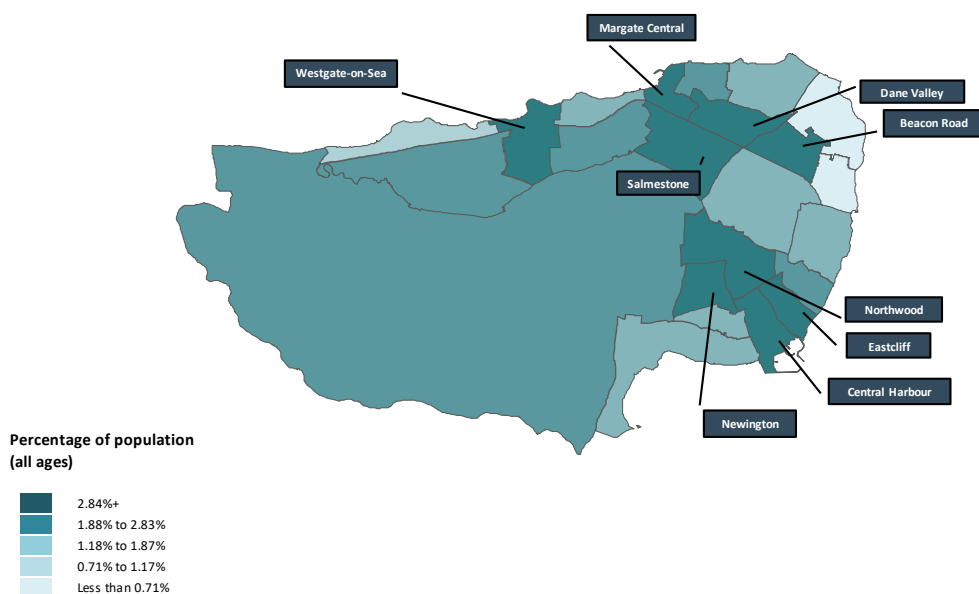


Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

## 4.2.6 Thanet CCG

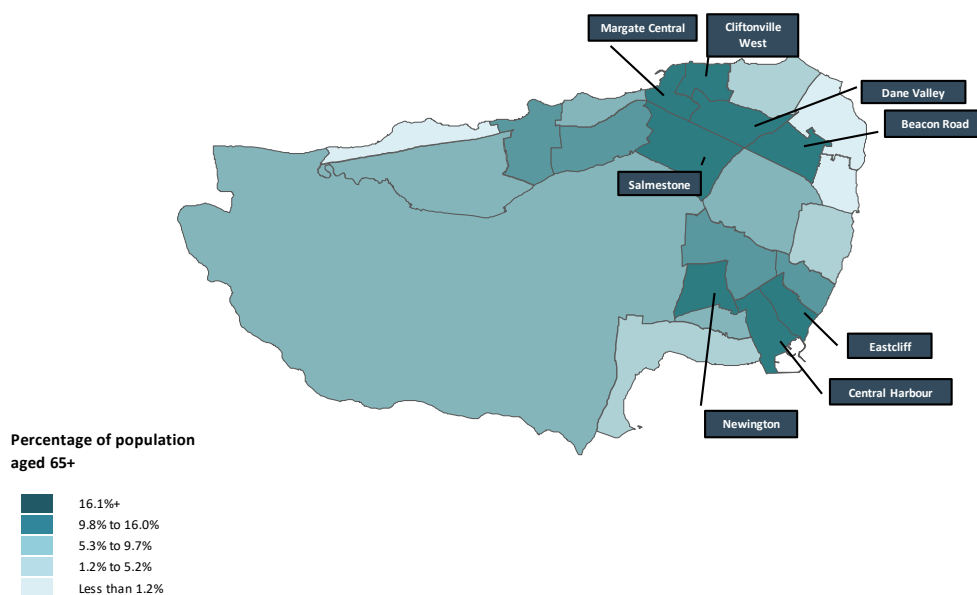
### % of the population who are older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



### % of older people more likely to be experiencing social isolation/loneliness: by electoral ward

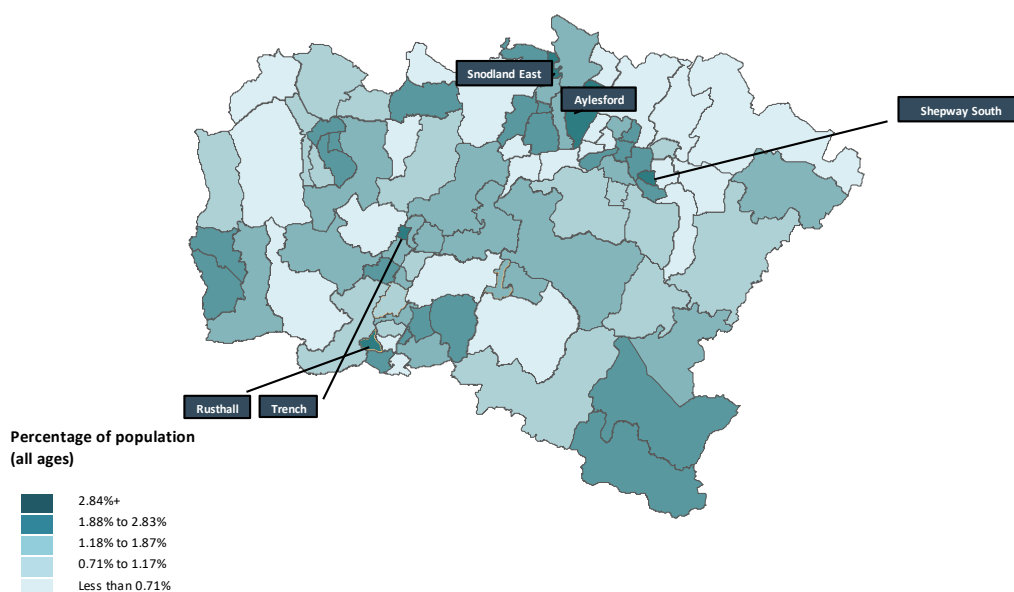
Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



## 4.2.7 West Kent CCG

### % of the population who are older people more likely to be experiencing social isolation/loneliness: by electoral ward

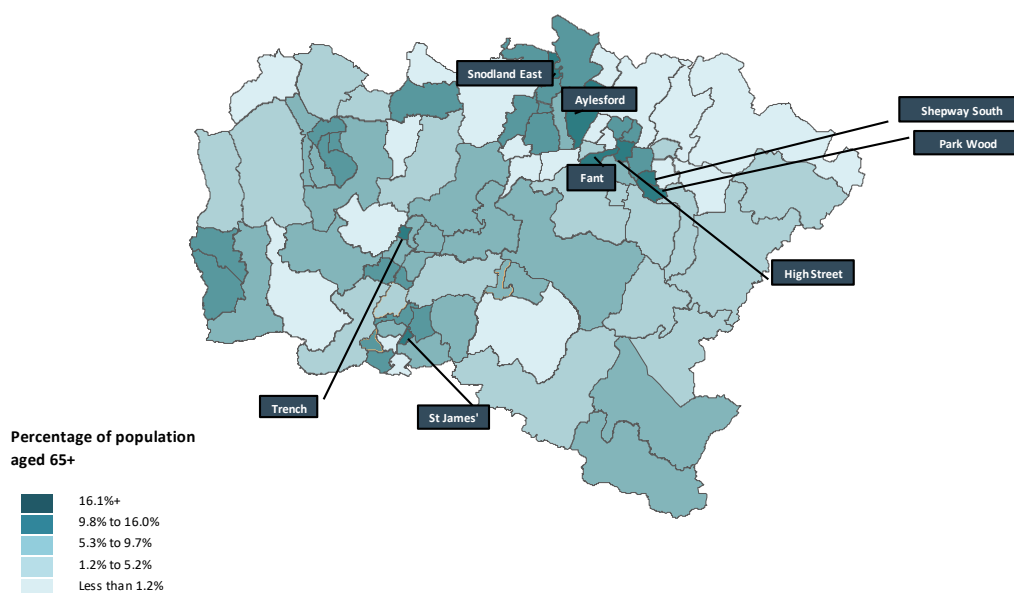
Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

### % of older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

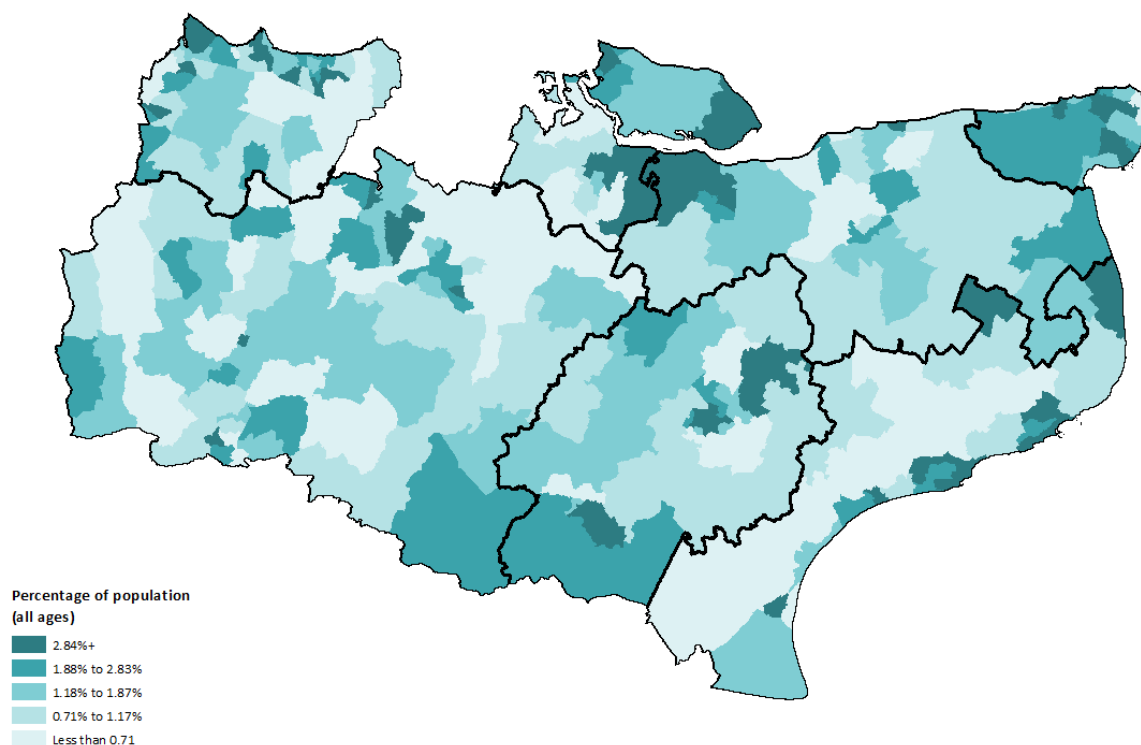


Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

## 4.2.8 Kent

### % of the population who are older people more likely to be experiencing social isolation/loneliness: by electoral ward

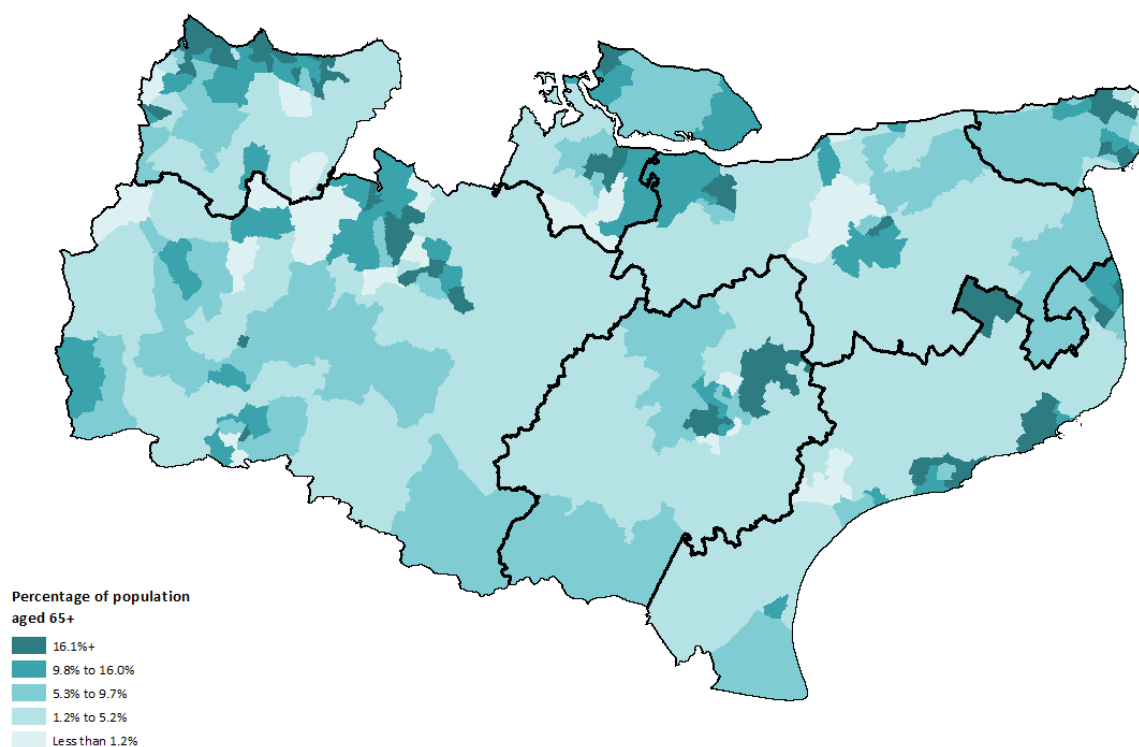
Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



Source: CACI, Kent Integrated Dataset (KID), prepared by KPHO (LLY), Aug-18

### % of older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018



Source: CACI, Kent Integrated Dataset (KID), ONS, prepared by KPHO (LLY), Aug-18

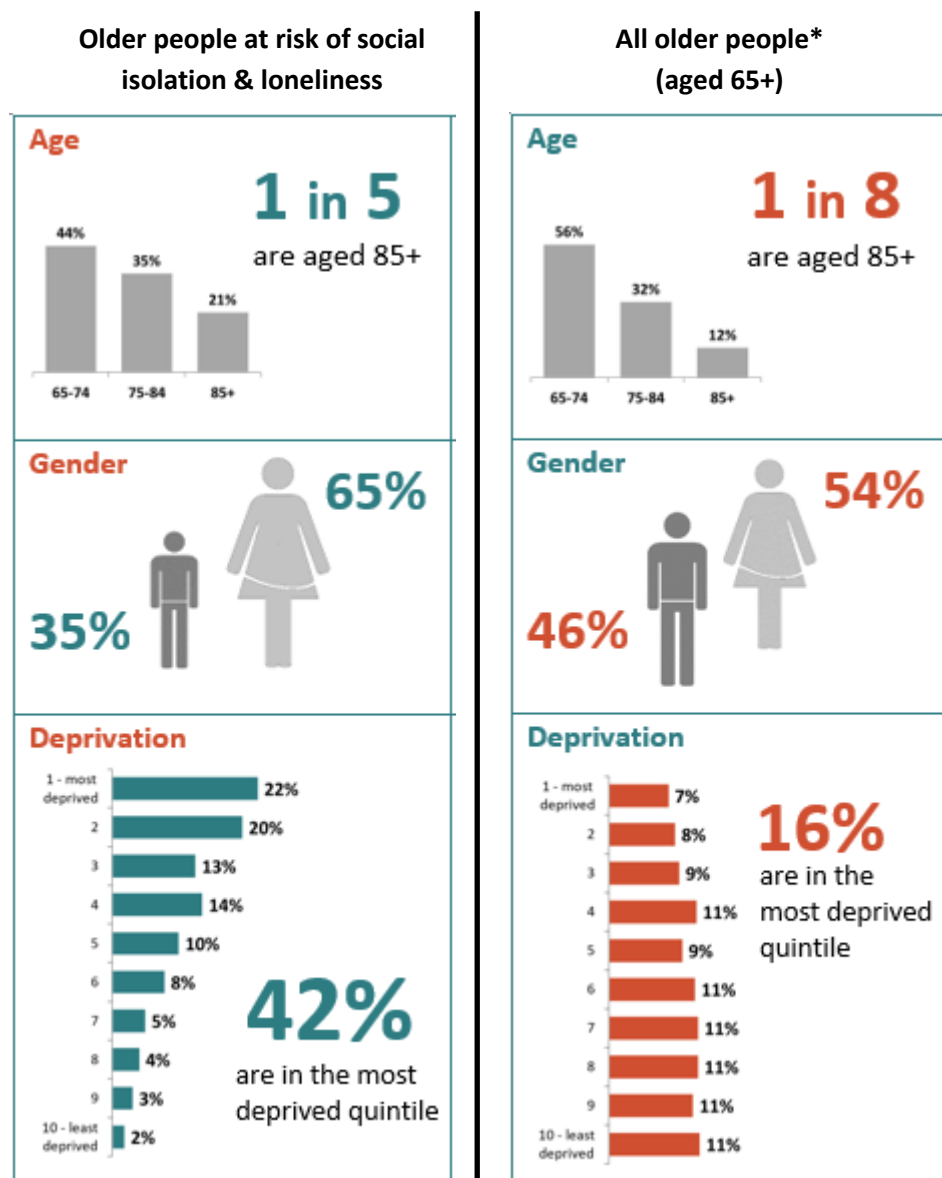
### 4.3 Profiling older people at risk of social isolation and loneliness

The analysis below compares the Kent residents at risk of social isolation and loneliness identified using the approach above with all Kent residents aged 65+<sup>14</sup>.

#### 4.3.1 Demographic profile

Older people in Kent identified as being at risk of social isolation and loneliness are:

- older than the overall 65+ population of Kent,
- more likely to be female,
- and much more likely to be living in a deprived neighbourhood.



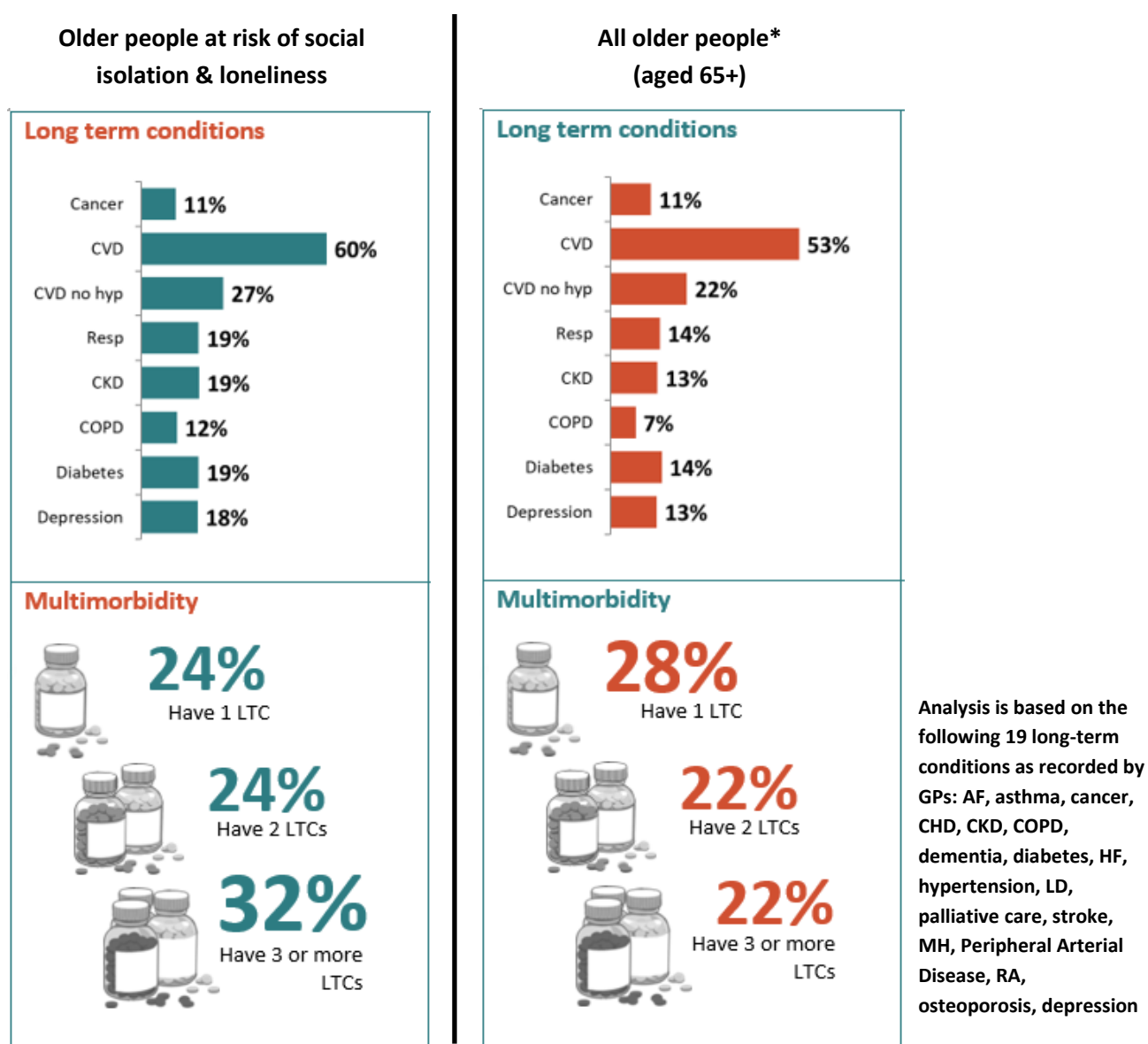
\*excluding care home residents

<sup>14</sup> Excluding care home residents

### 4.3.2 Health profile: long term conditions

Older people in Kent identified as being at risk of social isolation and loneliness are:

- more likely than the overall 65+ population of Kent to have a range of long term conditions<sup>15</sup>, including
  - cardiovascular disease (AF, CHD, heart failure, hypertension, PAD and stroke combined),
  - respiratory disease (COPD and asthma combined),
  - chronic kidney disease,
  - diabetes,
  - and depression,
- more likely to be multimorbid (i.e. have two or more long term conditions).



\*excluding care home residents

<sup>15</sup> Based on GP records.

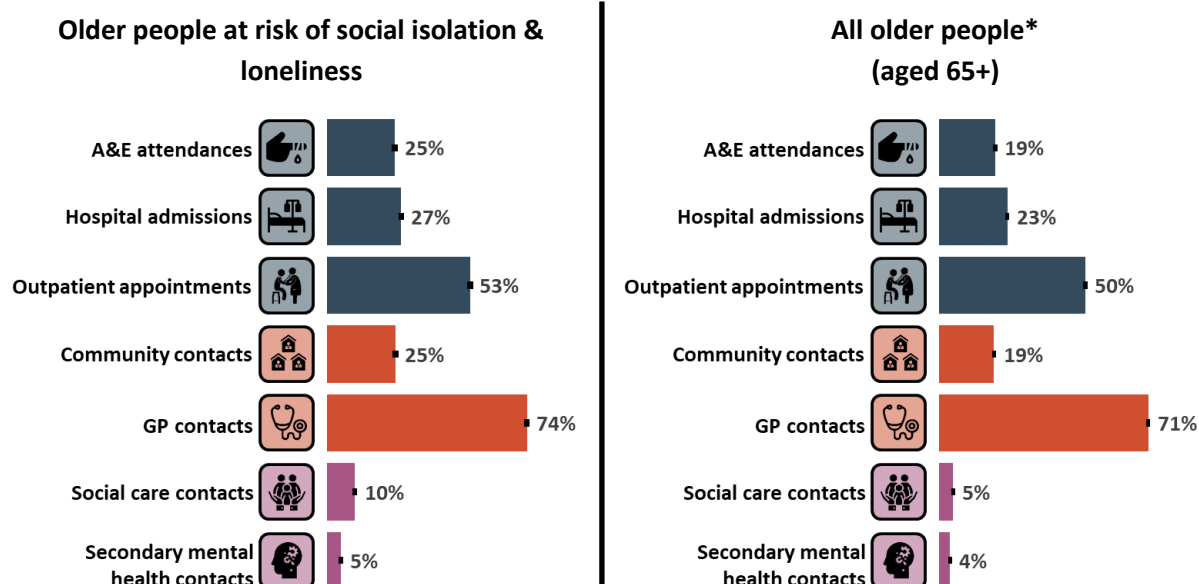


### 4.3.3 Health profile: Service Usage

The analysis below compares older people in Kent identified as being at risk of social isolation and loneliness and the overall 65+ population in terms of the proportions who have had any contact during 2017 with a range of key health and social care services.

Older people in Kent identified as being at risk of social isolation and loneliness are more likely than the overall 65+ population of Kent to:

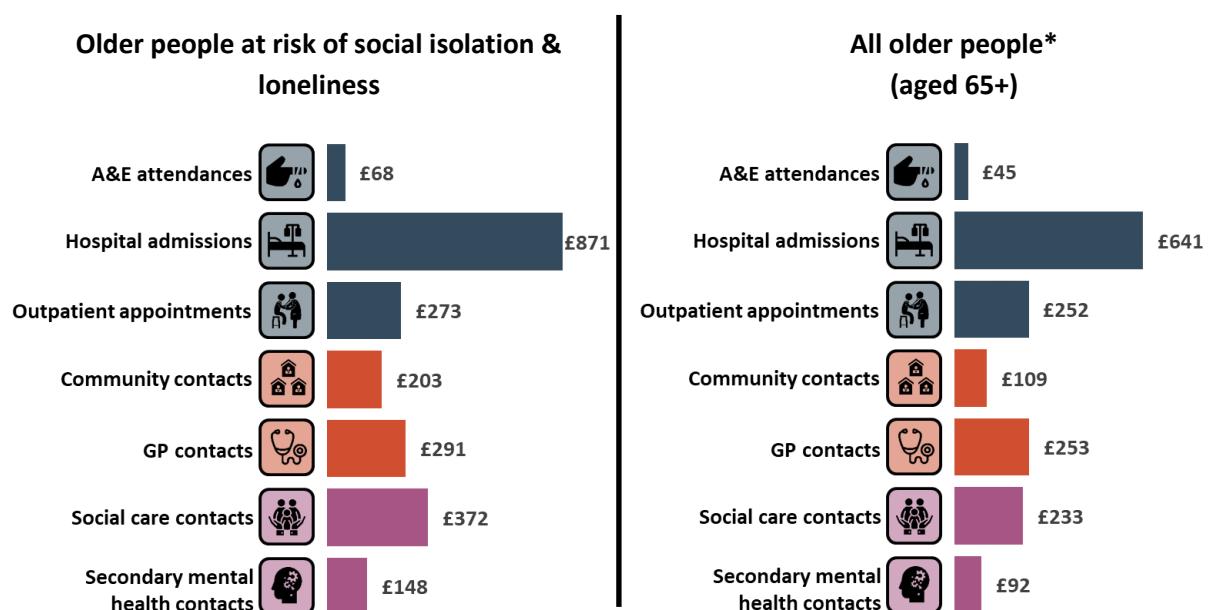
- have attended A&E,
- have been admitted to hospital,
- have had contact with community health services,
- and social care



Source: Kent Integrated Dataset (KID), prepared by KPHO (RK)  
Analysis restricted to individuals registered with a GP flowing data to the KID  
Images from Noun Project

\*excluding care home residents

The figure below provides a similar analysis, but with the total average per capita cost<sup>16</sup> of usage of key health & social care services shown. Again, the analysis covers service usage during 2017.



Source: Kent Integrated Dataset (KID), prepared by KPHO (RK)  
Analysis restricted to individuals registered with a GP flowing data to the KID  
Images from Noun Project

<sup>16</sup> Across all individuals in each group, not just those using each of the services.

#### 4.3.4 Risk

Older people in Kent identified as being at risk of social isolation and loneliness are:

- more likely to be assessed as being in a high risk score group<sup>17</sup>,
- and more likely to have characteristics recorded by their GP that place them in the 'severe' or 'moderate' frailty groups of the Electronic Frailty Index (EFI)<sup>18</sup>.



<sup>17</sup> See [https://www.kingsfund.org.uk/sites/files/kf/field/field\\_document/PARR-combined-predictive-model-final-report-dec06.pdf](https://www.kingsfund.org.uk/sites/files/kf/field/field_document/PARR-combined-predictive-model-final-report-dec06.pdf) for further details on the risk scores used. Band 1 corresponds to 'very high relative risk', Band 2 to 'high relative risk', Band 3 to 'moderate relative risk' and Band 4 to 'low relative risk'.

<sup>18</sup> Development and validation of an electronic frailty index using routine primary care electronic health record data, Clegg *et al*, *Age and Ageing*, Volume 45, Issue 3, 1 May 2016, Pages 353–360, <https://doi.org/10.1093/ageing/afw039>

## 4.4 Segmenting older people at risk of social isolation and loneliness

The Kent residents identified as being at risk of social isolation/loneliness can be segmented according to their Wellbeing Acorn type. Analysis by these segments suggests that older people living alone in Acorn Wellbeing types 1 (limited living), 2 (poorly pensioners) and 3 (hardship heartlands) are at the highest risk of social isolation and loneliness *and* have the highest levels of multimorbidity, depression, the highest usage of acute and social care services, and the highest levels of frailty.

### 4.4.1 Multimorbidity

The figure below compares multimorbidity levels (% recorded as having 2 or more long term conditions) with the calculated 'isolation index' for 65+ year olds living alone in each of the 11 Wellbeing Acorn types identified.

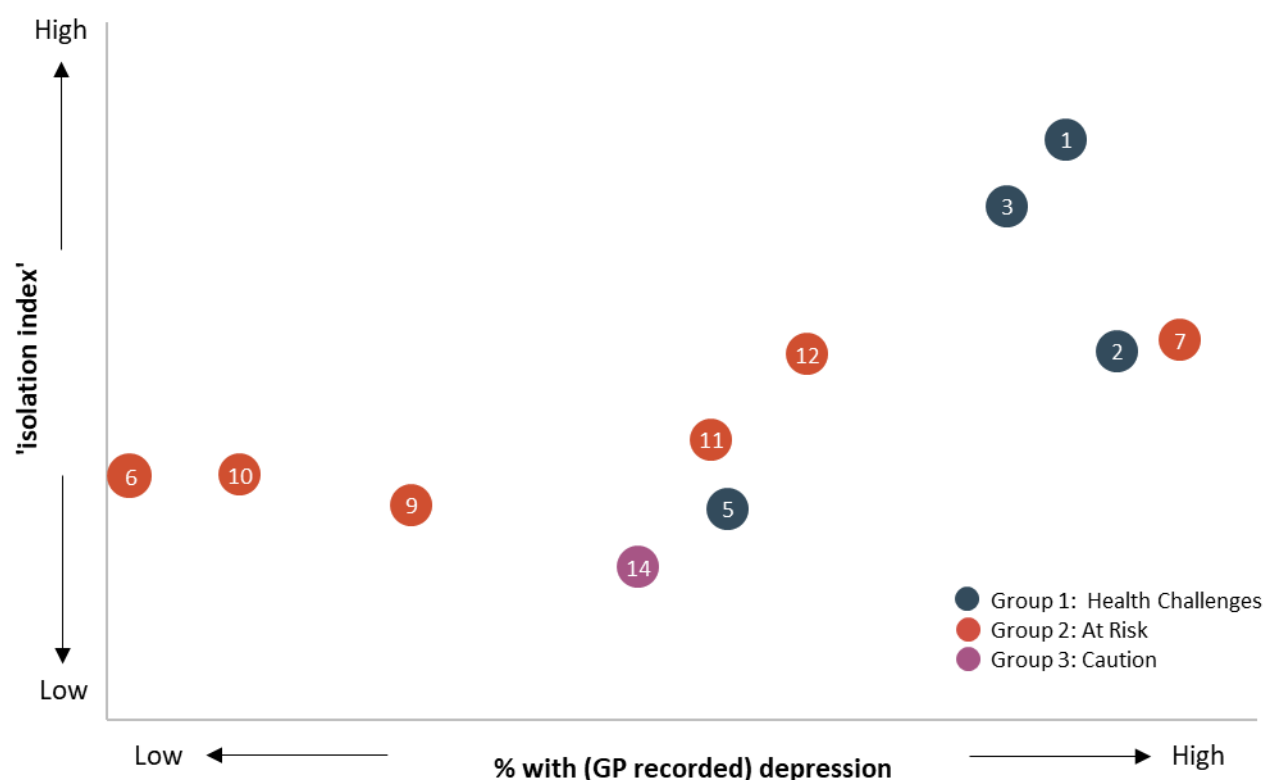
This analysis suggests that the Wellbeing Acorn types with the highest isolation indices (i.e. assessed as being at the highest risk of social isolation) also have the highest levels of multimorbidity. In particular, those aged 65+ living alone and in Wellbeing Acorn groups 1 (limited living), 2 (poorly pensioners) and 3 (hardship heartlands) are highlighted.



#### 4.4.2 Depression

The figure below compares GP recorded depression with the calculated 'isolation index' for 65+ year olds living alone in each of the 11 Wellbeing Acorn types identified.

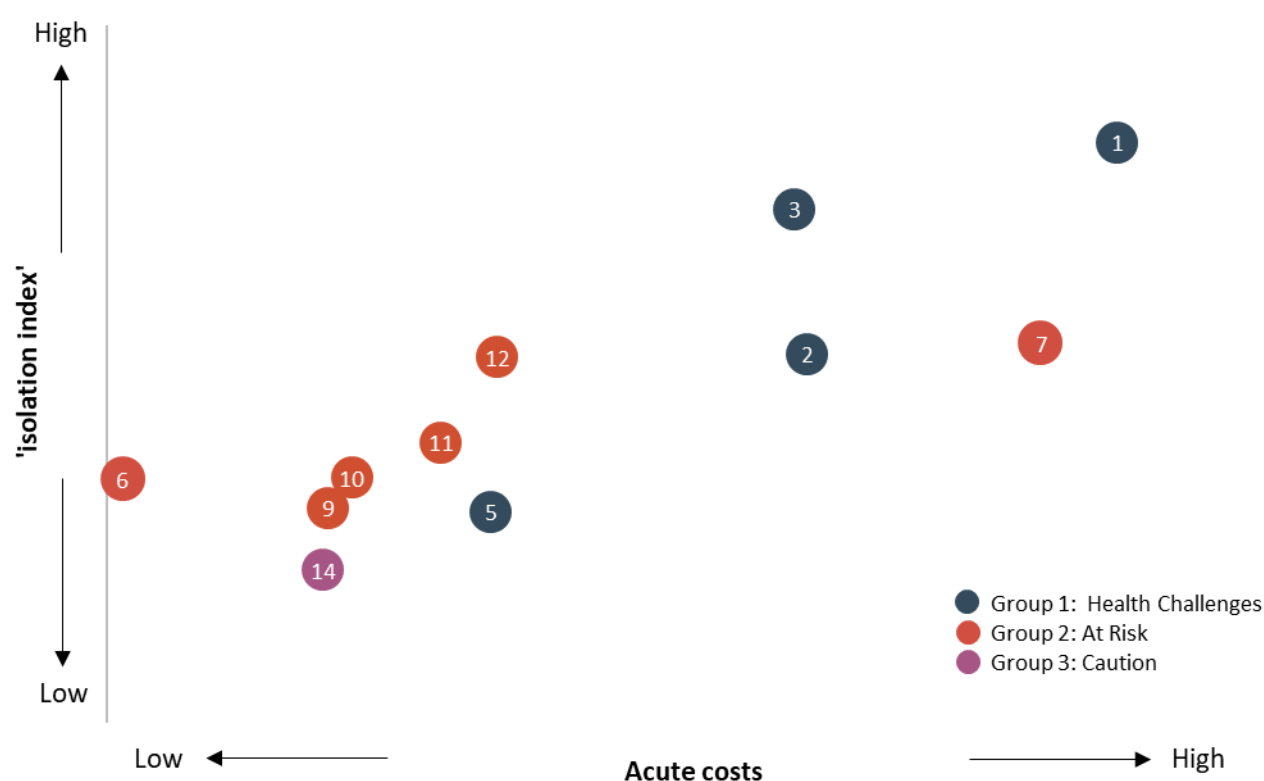
This analysis suggests that the Wellbeing Acorn types with the highest isolation indices (i.e. assessed as being at the highest risk of social isolation) also have the highest levels of recorded depression. In particular, those aged 65+ living alone and in Wellbeing Acorn groups 1 (limited living), 2 (poorly pensioners), 3 (hardship heartlands) and 7 (struggling smokers) are highlighted.



#### 4.4.3 Service usage: Acute care

The figure below compares usage of acute services (A&E, hospital admissions and/or outpatient appointments) with the calculated 'isolation index' for 65+ year olds living alone in each of the 11 Wellbeing Acorn types identified.

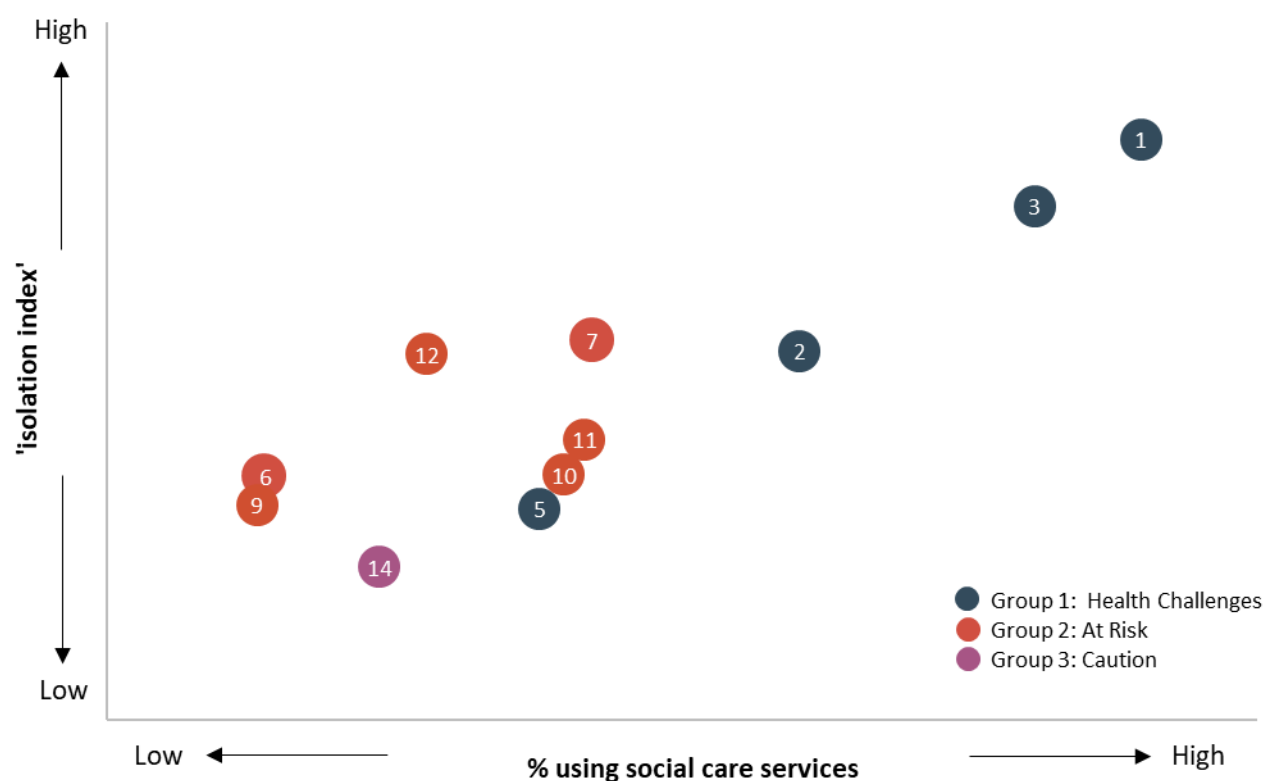
This analysis suggests that the Wellbeing Acorn types with the highest isolation indices (i.e. assessed as being at the highest risk of social isolation) also tend to have the highest levels of usage of acute services. In particular, those aged 65+ living alone and in Wellbeing Acorn groups 1 (limited living), 2 (poorly pensioners), 3 (hardship heartlands) and 7 (struggling smokers) are highlighted.



#### 4.4.4 Service usage: Social care

The figure below compares usage of social care services with the calculated 'isolation index' for 65+ year olds living alone in each of the 11 Wellbeing Acorn types identified.

This analysis suggests that the Wellbeing Acorn types with the highest isolation indices (i.e. assessed as being at the highest risk of social isolation) also tend to have the highest levels of usage of social care services. In particular, those aged 65+ living alone and in Wellbeing Acorn groups 1 (limited living), 2 (poorly pensioners) and 3 (hardship heartlands) are highlighted.



#### 4.4.5 Frailty

The figure below compares frailty levels (% categorised as severely or moderately frail under the Electronic Frailty Index<sup>19</sup>) with the calculated 'isolation index' for 65+ year olds living alone in each of the 11 Wellbeing Acorn types identified.

This analysis suggests that the Wellbeing Acorn types with the highest isolation indices (i.e. assessed as being at the highest risk of social isolation) also tend to have the highest levels of frailty. In particular, those aged 65+ living alone and in Wellbeing Acorn groups 1 (limited living), 2 (poorly pensioners) and 3 (hardship heartlands) are highlighted.



<sup>19</sup> Development and validation of an electronic frailty index using routine primary care electronic health record data, Clegg *et al*, *Age and Ageing*, Volume 45, Issue 3, 1 May 2016, Pages 353–360, <https://doi.org/10.1093/ageing/afw039>



## | 5. Conclusions

It has been possible to use Wellbeing Acorn in combination with the Kent Integrated Dataset to identify c.29,500 Kent residents aged 65+ who live alone and whose Wellbeing Acorn type suggests an increased risk of social isolation and/or loneliness. The individuals identified have many of the characteristics expected based on other studies of social isolation.

The Kent residents identified as being at risk of social isolation/loneliness can be further segmented according to their Wellbeing Acorn type. Analysis by these segments suggests that older people living alone in Acorn Wellbeing types 1 (limited living), 2 (poorly pensioners) and 3 (hardship heartlands) are at the highest risk of social isolation and loneliness *and* have the highest levels of multimorbidity, depression, the highest usage of acute and social care services, and the highest levels of frailty.

## Appendix A

### Business Intelligence Report

# Mapping Loneliness in Kent A Mosaic Profile

May 2015



Note: This document contains  
commercially sensitive data and  
should not be shared outside  
Kent County Council

Business Intelligence, Research & Evaluation, Kent County Council  
[www.kent.gov.uk/research](http://www.kent.gov.uk/research)



## Loneliness and Social Isolation

Loneliness and social isolation affects an estimated 10% of all older people. There are many negative health outcomes associated with loneliness and social isolation. Indeed, the influence of isolation and loneliness on the risk of death is comparable with smoking / alcohol consumption and it exceeds the influence of other important risk factors such as physical inactivity and obesity. As loneliness can predicate negative health outcomes, which increases demand on services, it is appropriate to identify the areas where individuals are particularly at risk of loneliness. This in turn could inform the commissioning or development of services that would aim to reduce the volume of loneliness related health issues for KCC residents by intervening with at risk groups.

Essex County Council and Gloucestershire County Council have gained national attention by mapping the locations of those residents particularly at risk from loneliness and isolation. The model pioneered by Essex combined Mosaic customer segmentation data to create an index which determined the level of risk of loneliness for each Mosaic type. The households classified to one of the 'at risk' types were then plotted in order to ascertain the spatial distribution of the 'at risk' population and identify particular hot spots of loneliness. The Essex model used the following socio-demographic data in Mosaic in their loneliness index:

- Single pensioners
- Widowed
- Retired
- Unlikely to meet friends family regularly
- Unlikely to interact with neighbours
- Poor health
- Permanently sick
- Suffering from depression
- Suffering from poor mobility
- Visually impaired
- Hard of hearing
- Struggling financially
- Not employed (Part-time, Full-time, self-employed)
- Less educated (No further education, no degree)

Within Mosaic, each Mosaic group and type is assigned a score for each variable. A score of 100 indicates that this group is as likely as the national average to exhibit that particular characteristic. A score of under 100 indicates a less than average likelihood of exhibiting that characteristic whereas a score of over 100 designates a greater likelihood than the national average. Essex County Council combined the variables listed above to create an overall index score for each Mosaic type that indicated the likelihood of that type to be at

risk of loneliness and isolation. Different weightings were applied to each individual value during different scenarios, however this had little impact on which types were seen as at risk from loneliness.

### Kent Loneliness and Isolation Map

The data used in the Essex County Council loneliness index was generated from a previous Mosaic segmentation. Not all of the data categories used to create the index are available in the latest segmentation. Accordingly, categories in the current Mosaic segmentation were selected to create a comparable loneliness and isolation index for Kent. These are as follows:

- Elderly and Single
- Retired
- Personal Income <10k
- Pension Credit
- Worry a lot about oneself
- There is little that can be done to change life
- Bad Health
- Very bad health
- Depression
- Hearing Aids

These variables were combined to generate a loneliness and isolation index score for each of the 66 Mosaic types. The variables were not weighted as this map is indicative only and is intended to demonstrate methodologies that can be used to identify areas of social isolation and loneliness. Similarly, other data and variables can be added to the index, as the model is refined over time. Six Mosaic types scored over 200 in the combined index, thus indicating a significantly greater than average likelihood of exhibiting the characteristics listed above. These were:



F23 – Solo Retirees

Solo Retirees are elderly singles still able to live independently, whose incomes, though reduced in recent years, give them a satisfactory standard of living. Well into their retirement, they live in their affordable but pleasant owned homes.

Solo Retirees are almost exclusively pensioners who are in their 70s or older. They have been married, raised a family and are now on their own. Two thirds are female and many have lived in their homes for a very long time, 27 years on average, perhaps even bringing up their children here.

These properties are reasonably priced three bedroom detached bungalows, terraces and semis of fairly standard design located in pleasant suburbs and now almost all owned outright.

Most Solo Retirees attained some qualifications, and working lives were mostly spent in lower managerial or intermediate roles that offered or allowed them to afford a small private

pension. This is now used to supplement their state pension and, although their income has fallen since they have been on their own, with modest outgoings they are able to live quite comfortably. One way they tend to keep their bills down is by switching things off when they are not in use and they will only rarely upgrade furniture or items such as fridges or washing machines.

Solo Retirees are not generally fans of new technology. Ownership of items such as smartphones and tablets is low as is any internet usage.

Solo Retirees are similar to their Senior Security counterparts in having a lower than average dependency on the state than people in general, despite their advancing years.

These older people do not tend to smoke, and their alcohol consumption is typical of the population overall, though a slightly higher proportion than average do drink every day. While they are more likely than average to follow a healthy eating regime, exercise and sport no longer feature in their day to day activities.

The crime rate in the pleasant suburbs where Solo Retirees live is low, but Solo Retirees are more likely than others in this group to think that both crime and anti-social behaviour in general has increased a lot in their neighbourhoods. However, they are personally only slightly more likely to worry about becoming a victim of crime.

Levels of environmental knowledge are lower than the norm in this type, but although they are less willing to make major lifestyle changes to benefit the environment, they are better than average at recycling and reducing energy.



#### N57 – Seasoned Survivors

Seasoned Survivors are deep-rooted elderly owners of low value terraces in communities in which they may have lived for much of their adult life. Now in their later retirement, the modest equity they have in their homes provides some security for their future needs.

Seasoned Survivors consists of elderly people, mainly in their 70s and 80s with an average age of 77, who are long-term residents of their local communities. Most are now living alone, and women outnumber men.

They have the longest length of residency of any type, having lived in their home, on average, for 29 years. Their neighbourhoods contain a mix of ages, and neighbours may well be younger families.

Their homes are traditional two or three bedroom terraced properties with some semi-detached homes which Seasoned Survivors own outright. Although properties are of low value, the modest equity Seasoned Survivors have built up over the years does give them some security and more options for care as time goes on.

Incomes are modest, most having long retired from routine and semi-skilled jobs, but Seasoned Survivors are careful with their money and manage to keep on top of their finances, getting by on their state pensions. They often shop at local markets and prefer paying for purchases with cash.

Seasoned Survivors rely on the state for a high level of support from a range of benefits. Like other less affluent elderly types, these old people suffer from an increasing number of health problems. However, health levels here are better than amongst some other older people and 75 per cent still consider themselves in very good or good health. Smoking and alcohol consumption are both well below average and a good proportion of Seasoned Survivors make sure they get their 'Five a day'.

The crime rate in Seasoned Survivors neighbourhoods is above average for most types of crime. Of all those in Vintage Values, this type is the most likely to think that crime is a major problem in their area. As a result they do worry about becoming a victim of crime, and are significantly more likely to feel unsafe when walking alone at night.

While not especially knowledgeable about environmental issues, Seasoned Survivors are greener than many others in this group, tending to recycle and re-use slightly more than the average.





#### N58 – Aided Elderly

Aided Elderly are people who live in specialised accommodation designed for elderly people, including retirement homes and small complexes of purpose built flats. Some require care while others live comparatively independently but value the reassurance of on-site

assistance in case of need.

Aided Elderly are mostly aged in their late 70s or older with quite a few people in their 90s. Most are living alone, many are widowed, and there is a high proportion of single females. Homes are mostly purpose-built fairly modern flats with one or two bedrooms, within private communities. They can be of a reasonable value due to their location in good suburbs and the specific nature of their design which caters to the needs of a particular market. Two-thirds of residents are owner occupiers, having downsized from their own larger homes due to their advancing years.

Disposable incomes vary, with a number likely to enjoy income from an occupational pension in addition to their state pension. For these individuals the move to a smaller property was necessitated by declining health rather than financial factors.

Aided Elderly do not feel confident with technology and are the least likely to own a mobile phone. While some may go online it is usually when someone can show them what to do. They prefer to keep up-to-date with the world by watching TV news channels and reading newspapers.

Apart from their State Pension, Aided Elderly are far less dependent on the state than their old aged counterparts, being considerably less likely to access benefits, including those around incapacity and disability.

Levels of crime tend to be around or below average in the areas in which Aided Elderly live, and their fear of crime is significantly below average. Living as they often do in specialist accommodation in small private complexes, they do not experience much in the way of anti-social and nuisance behaviour and they are less likely than average and considerably less likely than other elderly people to worry about being a victim of crime.

Few in this type smoke, but they are more likely to drink more frequently than others – particularly when compared to other elderly types. Again, compared to their peers and indeed to people in general they are better at ensuring they eat five portions of fruit and vegetables a day.

Aided Elderly will make the effort to reduce their energy and water use, although this is probably driven by thriftiness as much as a concern for the environment, since they are average in terms of green behaviours such as recycling and minimising packaging.



#### N59 – Pocket Pensions

Pocket Pensions are penny-wise elderly singles living in small developments of compact social homes designed to meet the needs of elderly people. They are still able to live independently and are not yet in need of sheltered accommodation.

Pocket Pensions consists of single pensioners who rent their small homes from the council. Over 60 per cent of these pensioners are women. They live in small estates of low value housing with one or sometimes two bedrooms, designed with elderly needs in mind. Half of these homes are bungalows, and most of the remainder are low-rise flats.

There are fewer long term residents in these locations and most Pocket Pensions have moved in to this housing within the last ten years.

Incomes are low, often limited to the state pension and other benefits, after careers that were spent working in routine and semi-routine occupations. However, Pocket Pensions are inherently thrifty and most are able to manage on their tight budgets.

These people are most likely to say that they don't like new technology. Use of the internet and watching digital or cable TV is very limited but they are particularly keen viewers of ITV1. They prefer traditional contact methods from the banks and other organisations they deal with such as landline telephone calls or visiting branches.

Pocket Pensions mainly get by on their small State Pensions. Some access other benefits often associated with increasing age and decreasing health such as Disability Allowance and Incapacity Benefit. Overall, however their level of dependency on the state is only slightly above average.

Pocket Pensions are less likely than people on the whole to smoke and drink, but with their increasing age, they do little to keep in shape and levels of good health are below the norm. Unlike some other people in old age, they are fortunate in living in neighbourhoods where the crime rate is well below average. Anti-social behaviour, speeding traffic, loitering teenagers and littering are all less common in these areas. Also, while they feel crime hasn't increased a lot in their area, they are more likely to feel it has increased across the country as a whole. That said, their fear of becoming a victim of crime is above average and they are especially likely to feel unsafe being out and about alone after dark.

This type does not generally understand issues such as climate change or carbon offsetting, and they are no better than the average when it comes to adopting practices or doing things that would benefit the environment.



#### N60 – Dependent Greys

Dependent Greys are ageing social renters with high levels of need, living in tiny homes within small centrally-located developments of flats and terraces. Most are single and are pensioners or people close to retirement whose working lives have been spent in low wage jobs.

Dependent Greys are older people, mostly in their 60s and older, who now live alone in compact accommodation in urban areas, with high levels of need. Many Dependent Greys are widowed, have never married or are divorced.

Homes are very small, yet practical, one-bedroom flats which are rented from the council or a housing association, often purpose built in the mid 1950s to the 1970s in these city locations. Education levels for Dependent Greys are particularly low, which has resulted in working lives spent in lower wage, high turnover jobs perhaps in construction, retail or manufacturing sectors. As a result, household incomes are low amongst those still of working age as well as those in retirement who rely on state pensions, and there is a need to depend on a range of benefits.

They are unlikely to spend time online though some have mobile phones to keep in touch. Car ownership is low but their urban location means buses are a useful method of transport. Although Dependent Greys are not the oldest type – their average age is 68 – they are nearly three times more likely to be in bad or very bad health. Many have disabled parking permits. They are significantly more likely to be smokers and indeed heavy smokers than people in general, although their alcohol consumption is far lower than average. They tend not to exercise or get their 'Five a day'.

Dependent Greys are the most likely of all elderly people to need the support of the state, not merely for the State Pension. They are 74 per cent more likely to receive Disability Living Allowance and 86 per cent more likely to receive Incapacity Benefit. A number close to retirement also rely on various allowances to help people unable to find employment. They do tend to live in areas with higher than average crime rates, particularly for shoplifting and public disorder. They are the type most likely to feel that their quality of life is affected by fear of crime and they are more likely than average to feel that crime in their areas has gone up a lot; they perceive drug dealing as one of the biggest problems. As a result they are amongst the most likely to feel unsafe walking alone at night.

Dependent Greys are neither green in their behaviour nor do they claim to particularly understand green issues.



#### N61 – Estate Veterans

Estate Veterans are elderly, long-standing social renters of council homes who are likely to have lived in council accommodation almost all their lives. Living in typical social housing rather than accommodation designed for the elderly, they have seen their neighbourhoods change over the many

years they have been there.

Estate Veterans contains older people, whose average age is 75, many of whom have been council tenants all their lives and still live in the homes where they brought up their children. They have the second longest length of residency of any type and on average Estate Veterans have been at their present address for almost 25 years. These homes are two or three bedroom semi-detached or terraced properties with gardens.

They are often living alone on larger estates with some challenges. Their local communities contain people with a mix of ages and while many of their neighbours have purchased their council homes, Estate Veterans have not been able or inclined to become homeowners themselves, and instead remain long-term social renters.

These days they get by on a state pension supplemented by other statutory entitlements.

They are careful with money, buying supermarket own brands and saving up for items when necessary.

Estate Veterans have largely been left behind by technology and can feel confused by computers. Apart from mobiles, ownership of technology items is low. They prefer to arrange insurance over the phone and like to be able to do one thing at a time.

Health levels amongst this type are moderate, and although naturally declining they are better than some others in Vintage Value. Although far fewer than average drink regularly, they are more likely to smoke. Their eating habits are fairly typical, particularly in terms of eating enough fruit and vegetables.

Crime is generally just a little above average on the estates where these old people live. They are the most likely type in this group, and more than twice as likely as the national average, to think that anti-social behaviour has increased a lot and is a major problem. In particular, they are concerned about drug use and drug dealing. Their fear of crime is greater than the crime rate might suggest, and they are more likely than average, and the most likely within Vintage Value, to worry about being a victim of crime.

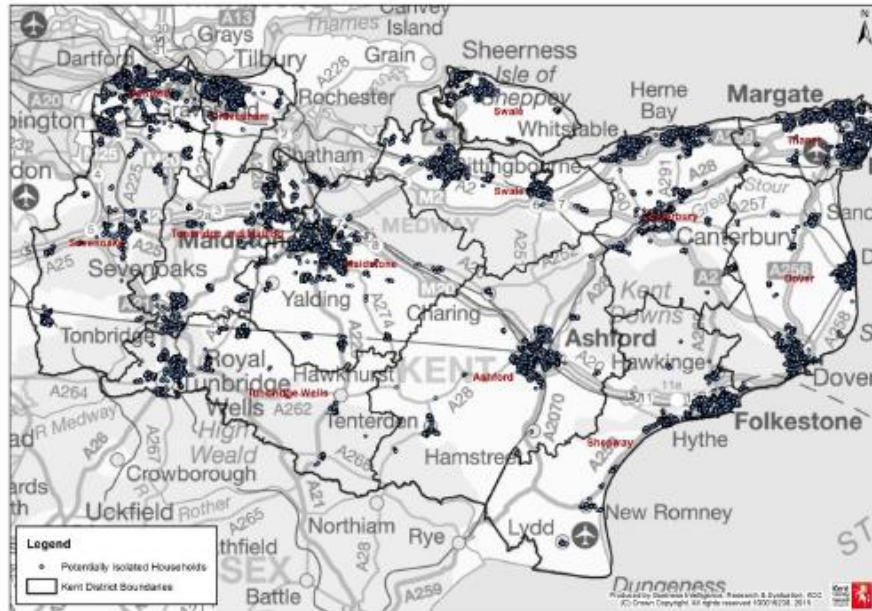
Estate Veterans require higher levels of state assistance than average across a range of benefits.

Their adoption of green practices and their level of understanding of green issues are both lower than amongst people in general.

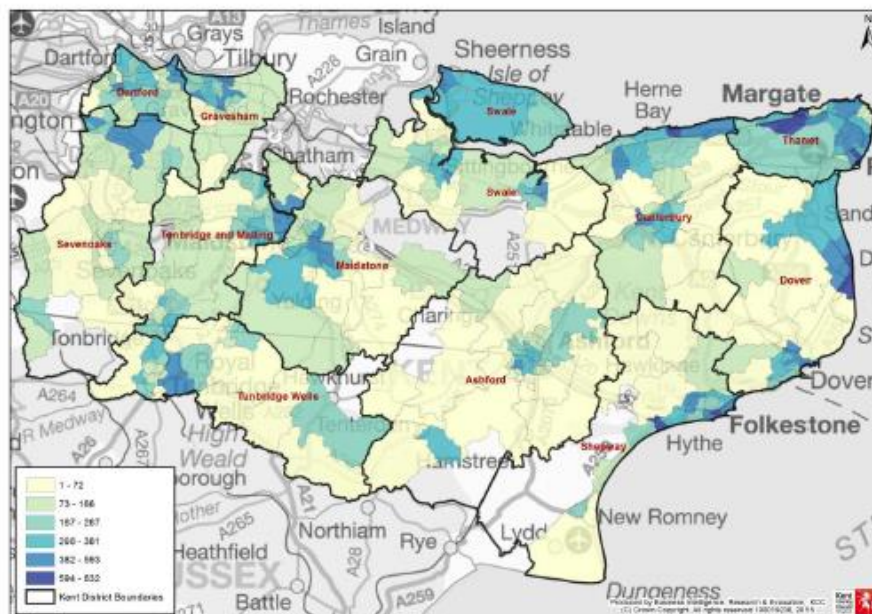
There are 60,417 households in KCC classified to one of these Mosaic types and 98,086 residents according to 2013 estimates, this 6.6% of the KCC population. The 60,417 households are shown in Map 1. Map 2 shows the number of 'at risk' households by electoral ward. This indicates that whilst there are concentrations of potential loneliness and isolation across the county, there are particular hotspots in coastal areas of East Kent, such as Margate, Dover, Deal, Folkestone, Hythe and Herne Bay. However, there is a particular concentration in the Thanet district. The ward with the greatest number of 'at risk' households is Heron ward in Dover. Map 3 illustrates this data as a proportion of all households within each ward. Whilst this shows a similar pattern, it does highlight some areas of concentration that are not highlighted when examined as a total number of households, such as Tenterden South ward, in which 31.9% of households are at risk from loneliness and isolation.



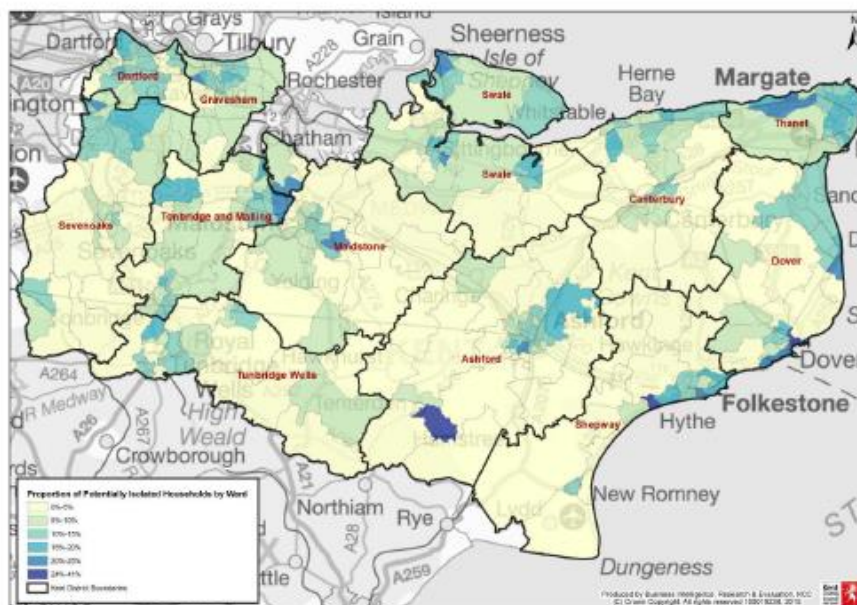
Map 1: Households at risk of loneliness and social isolation in KCC



Map 2: Households at risk of loneliness and social isolation by ward in KCC



**Map 3: Proportion of households at risk of loneliness and social isolation by ward in KCC**



## Conclusions

This brief report has provided a background into the work undertaken by Essex County Council and Gloucestershire County Council in estimating the number of residents at risk from loneliness and isolation and to map their location. Their methodology has been updated to provide an indicative map and calculation of the number of residents and households in KCC that are at risk of loneliness. This methodology is an example of a tool that could be used and adapted in the future in order to more accurately identify 'at risk' households. Given the negative and resource intensive outcomes of residents suffering from loneliness and isolation, it may become an increasing priority in the future to provide services and support to such residents.