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# Woman's Hour Report: The best places in Britain for women

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# 1. Summary

Our analysis considered a broad variety of indicators related to women's quality of life, from income to access to quality schools to air quality. The indicators selected for our core index cover eight broad domains:

- Income
- Housing affordability
- Personal wellbeing
- Safety
- Education
- Life expectancy
- Environment
- Culture

Recognising that the factors that affect women's quality of life likely differ by age and stage of life, we also created three sub-indices: one for young women (age 18-30), one for women in the middle age group (30-65) and one for older women (65 and older). These sub-indices include additional domains affecting particular age groups such as:

- Local area age profile
- Employment
- School quality
- Mortality
- Social networks/isolation

The key findings from this analysis are summarised in Table 1 The best and worst local authorities for women in Great Britain below.

**Table 1 The best and worst local authorities for women in Great Britain**

Rank	Core	Younger	Middle	Older
<b>Best</b>				
<b>1st</b>	East Dunbartonshire, Scotland	West Oxfordshire, South East	East Dunbartonshire, Scotland	South Oxfordshire, South East
<b>2nd</b>	East Renfrewshire, Scotland	East Dunbartonshire, Scotland	East Renfrewshire, Scotland	West Oxfordshire, South East
<b>3rd</b>	West Oxfordshire, South East	Wycombe, South East	West Berkshire, South East	Winchester, South East
<b>Worst</b>				
<b>1st</b>	Islington, London	Kingston upon Hull, Yorkshire	Nottingham, East Midlands	Islington, London
<b>2nd</b>	Blackpool, North West	Islington, London	Blackpool, North West	Manchester, North West
<b>3rd</b>	Corby, East Midlands	Blaenau Gwent, Wales	Kingston upon Hull, Yorkshire	Hackney, London





## 2. Introduction

Indices are commonly used by researchers as a tool for identifying disparities across local areas, countries or regions. One the most commonly index used is the English Index of Multiple deprivation (IMD), which allows for the identification of the most disadvantaged areas in England. There are similar (but differently constructed) indices in Scotland, Wales and Northern Ireland. In each country, this index is central to the evidence base for regeneration policy and help target limited resources appropriately.

Our index was constructed in the spirit of the IMD, meaning that we have constructed a composite measure of women's quality of life at local authority level, taking a holistic approach. Our index covers a range of domains: income, housing affordability, personal wellbeing, safety, education, life expectancy and environment. The core Index allows us to rank all 380 British Local Authorities from 'best' to 'worse', based on existing data. We also use a series of age-specific measures to identify the best place to be a young woman, a woman in the middle age category, and an older women.

### 3. Key data and indicators

Our analysis considered a broad variety of indicators that could have an impact on women's quality of life, from income and housing affordability to air quality and personal well-being. A key challenge in selecting indicators for the index was finding robust, up-to-date data that was available at the Local Authority level and comparable across England, Scotland and Wales. To a certain extent, our selection of indicators was limited by the availability of data meeting these requirements.

Despite the substantial data requirements, the indicators ultimately selected for our core index cover eight broad domains: income, housing affordability, personal wellbeing, safety, education, life expectancy environment, and culture. Recognising that the factors that affect women's quality of life likely differ by age and stage of life, we also created three sub-indices: one for young women (age 18-30), one for women in the middle age group (30-65)<sup>1</sup> and one for older women (65+). These sub-indices include additional indicators affecting particular age groups.

We drew data from a variety of publically available data sources included the Office for National Statistics (ONS), the Scottish Government, the Welsh Government, the Annual Population Survey (APS), the Annual Survey of Hours and Earnings (ASHE), Understanding Society (USoc), the Department for Energy, Good & Rural Affairs (Defra), OpenStreetMap and the 2011 Census. Table 2 Domains and indicators included in indices outlines the data and indicators included in the indices, which are described, in turn, below.

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<sup>1</sup> This includes measures of school quality - of relevance to women with school-age children, or thinking about starting a family.

**Table 2 Domains and indicators included in indices**

Domain	Indicator	Index			
		Core	Under 30	30-65	65 and over
Income	Median hourly wage for women	X	X	X	X
	Ratio of men's to women's median income	X	X	X	X
Housing affordability	Ratio of mean housing prices to median income	X	X	X	X
Personal wellbeing	Happiness	X	X	X	X
	Life satisfaction	X	X	X	X
	Worthwhile	X	X	X	X
	Anxiety	X	X	X	X
Safety	Offences per 1000 people	X	X	X	X
Education	NVQ4 or higher	X	X	X	X
	NVQ3 or higher	X	X	X	X
	Number of higher education institutions in the region		X		
Life expectancy	Female life expectancy at birth	X	X	X	X
	Female healthy life expectancy at 65				X
Environment	NO2 concentration	X	X	X	X
	PM10 concentration	X	X	X	X
	SO2 concentration	X	X	X	X
	Mean green spaces (w/in 900 metres)	X	X	X	X
Culture	Proportion went to the cinema in past year	X	X	X	X
	Proportion went to an art exhibition in past year	X	X	X	X
	Proportion went to a public library in past year	X	X	X	X
	Proportion went to a museum in past year	X	X	X	X
Area age profile	Proportion of the population single people under 35		X		
	Proportion of the population under 35		X		
	Proportion of the population aged 35-49			X	
	Proportion of the population 65 and over				X
Employment	Female employment rate		X	X	
	Female unemployment rate		X	X	
School quality	Proportion of young people going on to HE			X	
	Exclusions per 1,000 pupils			X	
	Average class size			X	
Social networks/isolation	Proportion of women 65 and over living alone				X
Mortality	Female mortality rate				X



## 3.1 Core domains and indicators

### Income

As Kahneman and Deaton (2010) suggest, high income may not buy happiness per se, but it appears to be strongly related with higher life satisfaction. Income may also serve as a proxy measure for economic opportunity and higher quality of housing, schools and services (Darrah and DeLuca, 2014). As a result, individuals, generally, find it important to live in an area where they are able to access the standard of living they want. To capture income, we include two indicators:

- **Median (full-time) hourly gross income** among women, which captures the level of economic resource held by women in a local area; and
- The **median gender pay gap** between men and women (expressed as a ratio of men's full-time gross income over women's), which captures the degree of inequality of economic resources held by women relative to the men in their local area.

These indicators were obtained from the 2015 ASHE. Local authorities where women's median income was higher and where the gender wage gap was smaller (or where women earned more than men) ranked better in this domain.

### Housing Affordability

The affordability of local housing is an important factor contributing to individuals' quality of life (Albouy, 2008). To capture local housing affordability we calculated the **ratio of median local house purchase prices to the median full-time income** of local residents. Data for England and Wales were drawn from the ONS (2016), and the data from Scotland were obtained from the Registers of Scotland (2016) and ASHE 2015.

### Personal wellbeing

The average personal wellbeing of residents in a local area may shed light on the quality of life and accesses to services in the area. To capture personal wellbeing, we used the ONS's four measures of personal wellbeing:

- **Mean anxiety score** in answering the question: "Overall, how anxious did you feel yesterday?" Where 0 is 'not at all anxious' and 10 is 'completely anxious';
- **Mean life satisfaction** in answering the question "Overall, how satisfied are you with your life nowadays?" Where 0 is 'not at all satisfied' and 10 is 'completely satisfied';
- **Mean happiness** in answering the question "Overall, how happy did you feel yesterday?" Where 0 is 'not at all happy' and 10 is 'completely happy';

- **Mean worthwhile** in answering the question “Overall, to what extent do you feel the things you do in your life are worthwhile?” Where 0 is ‘not at all worthwhile’ and 10 is ‘completely worthwhile’.

These measures were drawn from the 2016 ONS Annual Population Survey.

It is worth noting that evidence suggests that women tend to report higher subjective happiness compared to men (Frey and Stutzer, 2002; Gerdtham and Johannesson, 2001). However, we used mean wellbeing scores for both male and female residents as LA-level data broken by sex was not available.

## Safety

Survey evidence suggests that safety and low crime rates are important factors in when considering places to live – particularly among women (McCann 2004). Individuals tend to leave cities when crime rates are high and tend not to return, even if the crime rates have decreased (Rosenthal and Ross 2010).

To capture local area safety, we used a measure of total **number of offences per capita**. This includes theft, arson, burglary, drug offences, fraud offences, homicide, and miscellaneous crimes against society, possession of weapons, public order offences, robbery, sexual offences, vehicle offences and violence with and without injury.

For England and Wales, the data were obtained from the ONS (2016), and for Scotland, from the Scottish Government (2015).

## Education

As education is highly linked with earnings and health, it may be also be a proxy for quality of life (Albouy, 2009; Darah and DeLuca, 2014; McCann, 2004).

To measure local educational attainment, we used APS 2016 to calculate two measures:

- The proportion of the local population (16-65 years old) with at least A-Levels/ Scottish Highers (or equivalent) (**NVQ3**).
- The proportion of the local population (16-65 years old) with at least some higher education below degree level (**NVQ4**).

## Life Expectancy

Life expectancy at birth is usually higher in places where mortality rates are low and where socio-economic characteristics are higher. It can therefore serve as an effective proxy measure for quality of life in a local area. To capture this we used a measure of local **female life expectancy at birth** from the ONS (2013-2015).

## Environment

The quality of the local environment is an increasingly relevant factor affecting residents' health and quality of life. Findlay et al. (1988) find that over half (55%) of those surveyed reported that low pollution levels were particularly important in considering where to live. Individuals' preferences for better air quality are revealed in housing markets - willingness to pay for housing decreases in areas where air quality is poor (Chay and Greenstone 2005).

To capture environmental quality we used data from the Department of Environment, Food and Rural Affairs (2016) and OpenStreetMap (2016)<sup>2</sup> covering four measures:

- **PM10 particle concentration**, measuring the concentration of particles that are less than 10 µm in diameter. Fine particles can cause inflammation and a worsening of the condition of people with heart and lung diseases;
- **Nitrogen dioxide concentration**, which can irritate the lungs and lower resistance to respiratory infections such as influenza. Extended exposure higher concentrations may cause increased incidence of acute respiratory illness in children;
- **Sulphur dioxide concentration**, which can decrease lung functioning in asthmatics, even in moderate concentrations. SO<sub>2</sub> pollution is particularly harmful when other pollution concentrations are high;
- **Access to green spaces**, indicating the average amount of space within 900 metres.

## Culture

Research indicates that access to entertainment, arts and culture may also be an important factor contributing to quality of life (Albouy 2009). We used data from Understanding Society (2013/14) to measure the proportion of those (both men and women) who did the following in the past 12 months:

- **Went to the cinema;**
- **Attended an art exhibition;**
- **Went to a museum;**
- **Went to a public library.**

The sampling methodology used in Understanding Society did not allow us to estimate access to culture and entertainment at the local authority level. Therefore government office region averages were imputed for each local authority. The result of this process is that our measure likely masks high levels of variation within regions in access to culture. To account for this shortcoming we attributed a half weight to this domain than others in the derivation of our indices.

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2 Obtained from the Consumer Data Research Centre: <https://data.cdrc.ac.uk/dataset/access-to-healthy-assets-and-hazards-ahah>

## 3.2 Younger women

### Education

As discussed above, higher education is linked with higher earnings, better health and greater quality of life (Albouy, 2009; Darah and DeLuca, 2014; McCann, 2004). Therefore access to higher education institutions may play a role in determining how desirable an area is for a young woman. Using data from the Higher Education Statistics Agency, 2015-2016, we calculated the number of higher education institutions per government office region in all three countries.

### Area age profile

The extent to which the local population reflects a woman's age and stage of life may also be an important feature influencing their quality of life. Women under the age of 30 may prefer to live in areas with higher proportions of individuals in their age group. They may also prefer to live in an area where romantic prospects are high – as over three quarters of women in England and Wales between the ages of 16 and 30 are unmarried (ONS, 2017). We use data from the 2011 Census from England, Wales, and Scotland to calculate:

- The **Proportion of single people under 35** among those 16 and older in the local area;
- The **Proportion of local population 16-35**.

### Employment

Greater access to job opportunities is one of the most important factors motivating individuals to move to different areas (Moch, 2003). Employment and unemployment levels may also serve as a proxy measure for the economic health of a local area. To capture these factors, we used two measures:

- **Female employment rate**, measured as the ratio of employed persons to the working age population;
- **Female unemployment rate**, measured as the ratio of unemployed persons to the active labour force population.

Employment rate data was taken from APS 2016 while unemployment rates were taken from 2011 Census data for England and Wales and Scotland.

## 3.3 Women in the middle age group

### School quality

School quality plays a significant role in parents' valuation of their local area and is often a key consideration when moving home (Darah and DeLuca, 2014). While direct measures of school quality, such as those published by Ofsted, are not comparable across the three countries, we

used three indicators to create a composite measure indicative of school quality:

- The **proportion of young people moving into higher education**;
- **Average class size** at Key Stage 2 (or equivalent);
- **Proportion of pupils excluded** (from primary and secondary schools).

Data was drawn from:

- Higher Education Funding Council for England (2012) (continuation to higher education)
- English, Scottish and Welsh Governments (2016) (class size)
- English, Scottish and Welsh Governments (2014/15) (exclusions)

## Employment

As discussed above, we measured local **employment** and **unemployment rates** using data from the 2011 Census.

## Area age profile

Similar to younger women, women in the middle age category may prefer to live in areas where the demographic profile is reflective their age and stage of life. We used 2011 Census data to measure the **proportion of the local population between the age of 35 and 49**.

## 3.4 Older women

### Social networks/ isolation

An important element of quality of life among older people is social networks and connections to others. Although it is not the only way in which older people may connect with others, living with others in the household may provide companionship and connection in older age. To capture this, we use data from the 2011 Census to measure the **proportion of women over 65 living alone**.

### Healthy life expectancy

As life expectancy has been steadily increasing in several countries all around the world, it is important to look not only at how many years people above the age of 65 have, i.e. the quantity, but also the quality (Jagger, 2015). To account for this, we used a measure of **women's healthy life expectancy at age 65** from the [ONS \(2013-2015\)](#). This measure was added to the core Life Expectancy domain for the Older Woman index.

### Mortality rate

High mortality rates are indicative of poor mental and physical health and lower quality of life. For example, those who are unemployed for long periods of time, people who smoke and who drink alcohol regularly, are more likely to live shorter lives (White, 2017). In many ways, mortality

rate is a similar concept to that of life expectancy. Rather than predicting the length of an individual's life at birth, it estimates the likelihood that a person will die, given specified factors. We included a measure of **female mortality rates** using data from [ONS \(2015\)](#).

### **Area age profile**

As with younger women and those in the middle age category, older women may prefer to live in areas where the demographic profile matches their age and stage of life. We used 2011 Census data to measure the **proportion of the local population over the age of 65**.





## 4. Creating the index

We used two stages of exponential transformation to combine our domains and indicators into our four indices. Exponential transformation ensures that indicators and domains share a common distribution, allowing us to avoid combining indicators with vastly different distributions, which could result in misleading results. It also allowed us to ensure that indicators do not fully cancel each other out when combined (i.e. that a high score on one indicator is not fully 'cancelled out' by a low score on another indicator).

This first stage in this process involved ranking LAs from best to worst along each indicator to account for the fact that our indicators were measured on different scales - for example median wage was measured in pounds per hour and crime rate measured in offences per 1,000 people. Indicators were then transformed using an exponential transformation (for further details on the transformation, see Appendix B: Calculating the index).

After transforming our indicators, we then used weighted averages of transformed indicators to form the domain scores. Domain scores were then transformed using the exponential transformation and final index scores were derived through weighted averages of each transformed domain. LAs were sorted from best to worst using their final index score, revealing the final ranking of the 380 LAs. This process was conducted separately for each index.

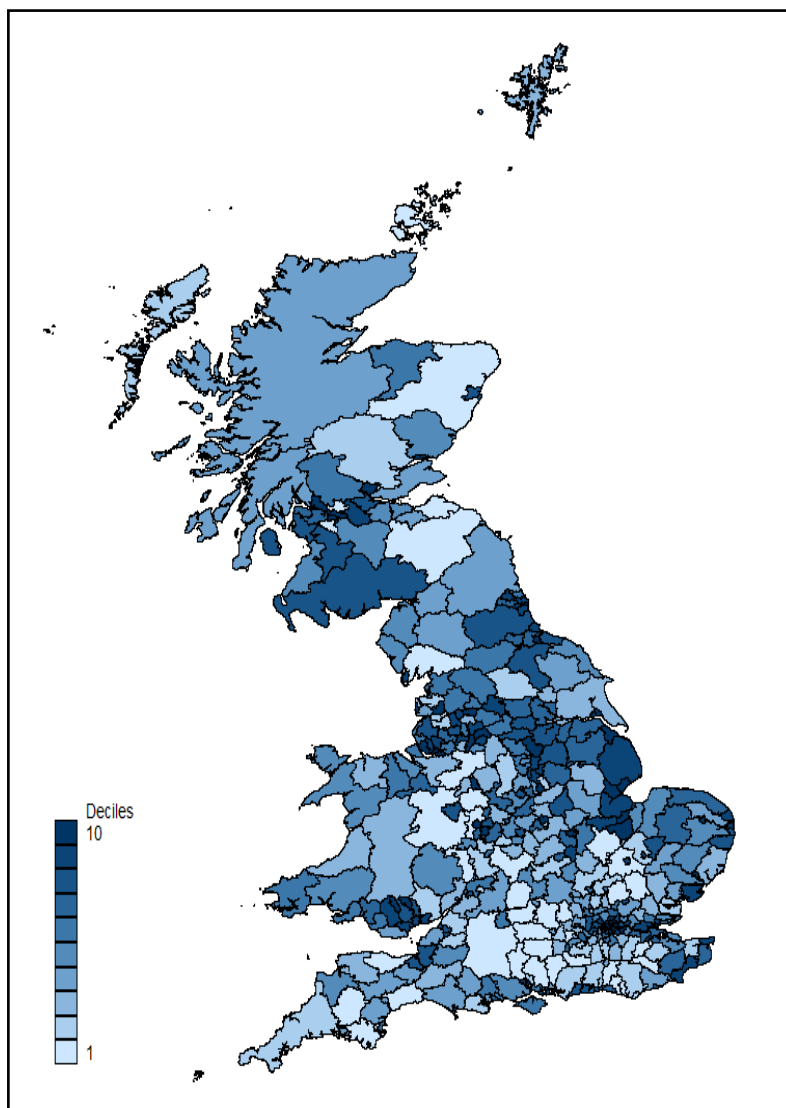




## 5. The best (and worst) LAs for Women

### 5.1 All women: The core index

Figure 1 The best place to live as a woman in Great Britain: Core index



The map in Figure 1 The best place to live as a woman in Great Britain: Core index shows the distribution of scores on our core index across local authorities in Great Britain. LAs falling in the first decile ranked best overall while those in the 10<sup>th</sup> ranked worst. Table 3 The best and worst LAs for women in Great Britain reveals the top and bottom ranked LAs. Two of the top ten, the East Dunbartonshire (1<sup>st</sup>) and East Renfrewshire (2<sup>rd</sup>) were located in Scotland, six were located in the South East of England and two in the West Midlands. The 10 worst ranked LAs were located across England.

**Table 3 The best and worst LAs for women in Great Britain**

Rank	Local authority	Region
<b>Best</b>		
1	East Dunbartonshire	Scotland
2	East Renfrewshire	Scotland
3	West Oxfordshire	South East
4	West Berkshire	South East
5	South Oxfordshire	South East
6	Winchester	South East
7	Mid Sussex	South East
8	Wycombe	South East
9	Stafford	West Midlands
10	Shropshire	West Midlands
<b>Worst</b>		
371	Camden	London
372	Wolverhampton	West Midlands
373	Westminster	London
374	City of London	London
375	Burnley	North West
376	Kingston upon Hull	Yorkshire and The Humber
377	Boston	East Midlands
378	Corby	East Midlands
379	Blackpool	North West
380	Islington	London

Table 4 Comparing East Dunbartonshire and Islington by domain compares the best and worst ranked LAs – East Dunbartonshire and Islington – across the eight domains of the core index.

East Dunbartonshire scored well across a range of core domains. It scored 11<sup>th</sup> in on education, with 75% of residents reporting NVQ3 level qualifications or higher and 59% reporting NVQ4 level qualifications or higher. The LA ranked 16<sup>th</sup> overall in the quality of the local environment, with the LA ranking in the top 50 in its PM10 concentration, SO2 concentration and access to green space. East Dunbartonshire ranked 40<sup>th</sup> on overall personal wellbeing, placing it 35<sup>th</sup> in life satisfaction and 42<sup>nd</sup> in happiness. The borough also ranked 46<sup>th</sup> in terms of income, with the median hourly wage among women equalling £15.07 per hour (ranking 41<sup>st</sup>).

Despite its high levels of education, environmental quality, wellbeing and income, East Dunbartonshire did not excel in every domain. With median house prices costing 7.5 times the local median income, it ranked 192<sup>nd</sup> out of 380 in housing affordability. It also ranked 159<sup>th</sup> on life expectancy at

birth, with an average life expectancy of 83.5 years among women in the area.

**[Table 4; Table 18]**

**Table 4 Comparing East Dunbartonshire and Islington by domain**

Domain	Rank	
	East Dunbartonshire	Islington
Income	46	105
Housing affordability	192	375
Personal wellbeing	40	379
Safety	79	369
Education	11	20
Life expectancy	159	205
Environment	16	379
Culture	147	84

Islington performed near the bottom of the distribution on wellbeing, environmental quality, housing affordability and safety. Scoring 379<sup>th</sup> out of 380 on personal wellbeing overall, residents of Islington reported among the lowest levels of happiness (371<sup>st</sup>) life satisfaction (372<sup>nd</sup>) and feelings that their life is worthwhile (379<sup>th</sup>). They also reported among the highest levels of anxiety (367<sup>th</sup>).

The borough also ranked second to last on the environmental quality domain, with particularly high concentrations of NO2 and PM10 (ranking 377<sup>th</sup> and 378<sup>th</sup>) and limited access to green space (ranking 358<sup>th</sup>). Housing in Islington was among the least affordable in Britain, with the median house priced at over 16 times the local median income. Islington was ranked 369<sup>th</sup> out of 380 in crime, with 122 reported offences per 1,000 people.

Islington ranked near the middle of the distribution on income and life expectancy. Although it ranked 16<sup>th</sup> in Great Britain on women's full-time wages (£16.35 per hour), a large gender wage gap (men's median income is 17% higher than women's) bumped the LAs domain ranking to 105<sup>th</sup>. Islington ranked 205<sup>th</sup> in terms of life expectancy, with women's average life expectancy birth 83.1 years.

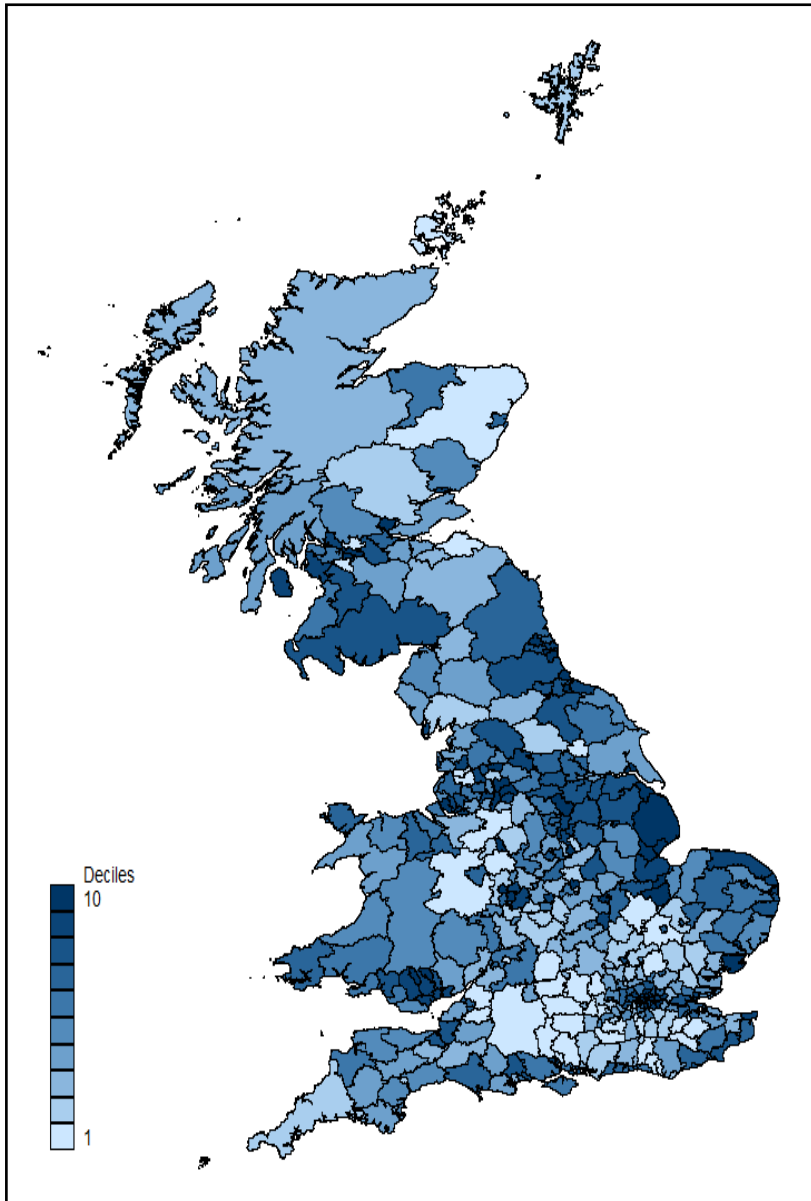
Islington scored in the top 100 LAs on two indicators: access to culture and entertainment and education. It ranked 84<sup>th</sup> overall on culture, with over two in five residents reporting having gone to a museum (42%) or the cinema (40%) in the past year and around one in three reporting have been to an art exhibition (36%) or a public library (31%). It also ranked 20<sup>th</sup> in the education domain with 70% of residents reporting NVQ3 or higher and 58% reporting NVQ4 or higher.

**[Table 4;Table 19]**



## 5.2 Younger women

**Figure 2 The best place to live as a woman in Great Britain: younger women index**



The map in Figure 2 The best place to live as a woman in Great Britain: younger women index shows the distribution of scores on our younger women index, with LAs falling in the first decile ranked best (pale blue) and those in the 10<sup>th</sup> ranked worst (dark blue). As shown in Table 5 The best and worst LAs for women under 30 in Great Britain, two of the top 10 LAs in Great Britain for women under 30 were in located in Scotland while the remaining eight were located in the South East of England. The bottom 10 LAs for women under 30 were located across England and Wales.

**Table 5 The best and worst LAs for women under 30 in Great Britain**

Rank	Local authority	Region
<b>Best</b>		
1	West Oxfordshire	South East
2	East Dunbartonshire	Scotland
3	Wycombe	South East
4	West Berkshire	South East
5	Bracknell Forest	South East
6	Winchester	South East
7	East Renfrewshire	Scotland
8	South Oxfordshire	South East
9	Tunbridge Wells	South East
10	Mid Sussex	South East
<b>Worst</b>		
371	Middlesbrough	North East
372	Corby	East Midlands
373	Leicester	East Midlands
374	Westminster	London
375	Boston	East Midlands
376	Blackpool	North West
377	Wolverhampton	West Midlands
378	Blaenau Gwent	Wales
379	Islington	London
380	Kingston upon Hull	Yorkshire and The Humber

The top ranked LA for young women, West Oxfordshire in the South East of England, ranked in the top 20 LAs on employment, one of the two domains specific to younger women. The LA ranked 6<sup>th</sup> on unemployment with an unemployment rate of 3.2% among women and ranked 57<sup>th</sup> on employment, with 77% of working-age women employed. On local demographics, the other domain specific to younger women, West Oxfordshire scored towards the bottom at 253<sup>rd</sup>. Only around one-fifth of the local population was aged 16-35 years old (ranking 237<sup>th</sup>).

West Oxfordshire scored well across a number of core domains, notably safety, culture, personal wellbeing and education. The LA scored 6<sup>th</sup> on the safety domain with a crime rate of 32 offences per 1,000 people. It scored 34<sup>th</sup> overall on access to culture and entertainment. West Oxfordshire scored 47<sup>th</sup> on personal wellbeing, with scores on happiness, life satisfaction and feeling that life is worthwhile in the top 100 out of 380 LAs. It also scored 52<sup>nd</sup> on local educational attainment with 47% of the population having NVQ4 or higher.

An important area where West Oxfordshire scored near the bottom was on housing affordability. Median housing prices in West Oxfordshire were nearly 10 times that of the local median income, ranking 295<sup>th</sup> in Britain. Such poor housing affordability suggests that while quality of life in West Oxfordshire may be high for women under 30, there may be substantial financial barriers to young women actually living there.

[Table 6; Table 20]

**Table 6 Comparing West Oxfordshire and Kingston upon Hull by domain**

Domain	Rank	
	West Oxfordshire	Kingston upon Hull
Income	117	304
Housing affordability	295	13
Personal wellbeing	47	342
Safety	6	367
Education	52	273
Life expectancy	114	370
Environment	80	375
Culture	34	220
Local demographics	253	44
Employment	16	366

Kingston upon Hull, the lowest-ranked LA for women under 30, performed poorly on employment, one of the key domains specific to young women, with an employment rate of 62 % (ranking 339<sup>th</sup>) and an unemployment rate of 12.4% (ranking 372<sup>nd</sup>). The LA ranked highly (44<sup>th</sup>) on local demographics with 30% of the local population single and aged 16-35.

Hull performed poorly across three key core domains: environment quality, life expectancy, and safety. It ranked last on SO2 concentration and among the bottom 15% of LAs on NO2 concentration and access to green space. The local average female life expectancy at birth was 80.2 years in Hull, ranking 370<sup>th</sup> out of 380 and the crime rate was 119 offences per 1,000 people in the LA, ranking 367<sup>th</sup>.

The one domain where Hull ranked near the top was housing affordability. The average price of housing in the LA was equal to approximately 4.4 times the median salary, ranking 13<sup>th</sup> in Great Britain.

[Table 6; Table 21]

## 5.3 Middle age group

**Figure 3 The best place to live as a woman in Great Britain: Middle age group index**

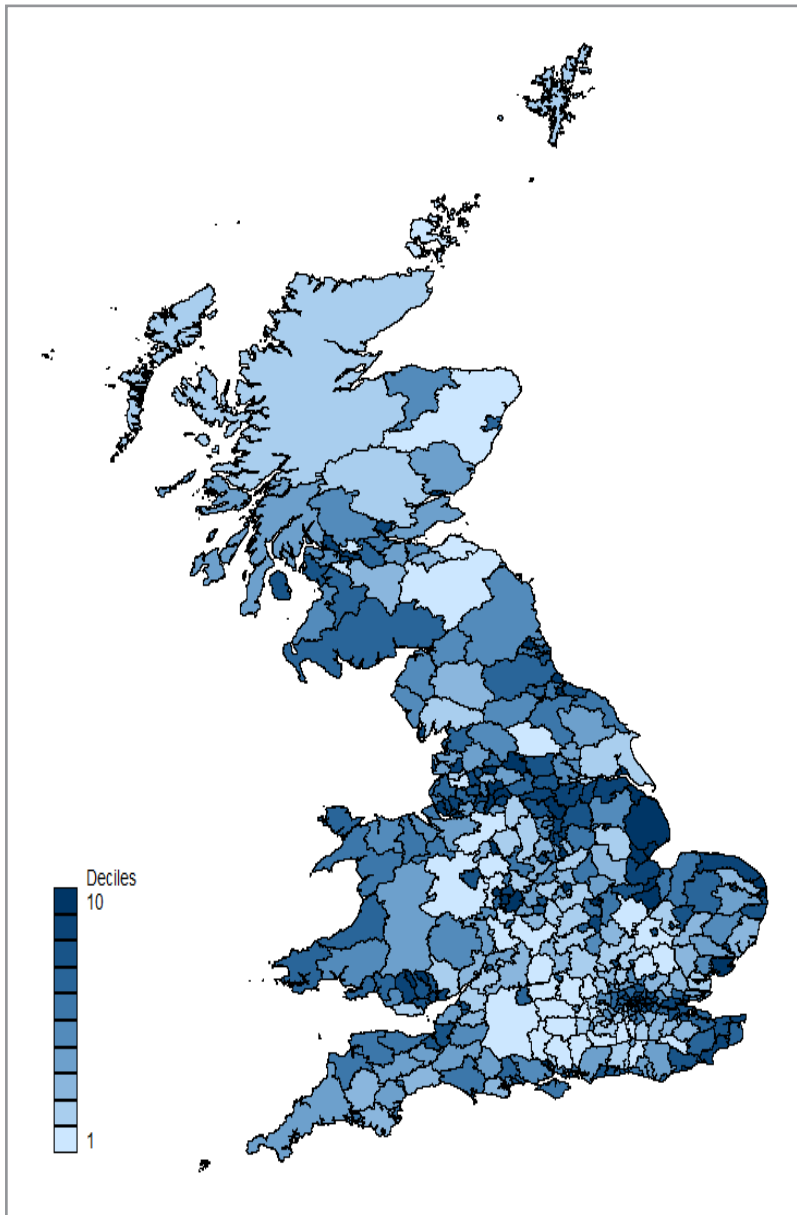


Figure 3 The best place to live as a woman in Great Britain: Middle age group index shows the distribution of scores on our index for women aged 30-65, with LAs falling in the first decile ranked best (pale blue) and those in the 10<sup>th</sup> ranked worst (dark blue). Four of the two highest ranked LAs for women in the middle age group were located in Scotland and six were located in the South East of England (Table 7 The best and worst LAs for women aged 30-65 in Great Britain). The 10 lowest-ranked LAs for this age group were located across England.

**Table 7 The best and worst LAs for women aged 30-65 in Great Britain**

Rank	Local authority	Region
<b>Best</b>		
1	East Dunbartonshire	Scotland
2	East Renfrewshire	Scotland
3	West Berkshire	South East
4	West Oxfordshire	South East
5	South Oxfordshire	South East
6	Wycombe	South East
7	Waverley	South East
8	Aberdeenshire	Scotland
9	Mid Sussex	South East
10	Orkney Islands	Scotland
<b>Worst</b>		
371	Boston	East Midlands
372	Middlesbrough	North East
373	Wolverhampton	West Midlands
374	North East Lincolnshire	Yorkshire and The Humber
375	Leicester	East Midlands
376	Sandwell	West Midlands
377	Manchester	North West
378	Kingston upon Hull	Yorkshire and The Humber
379	Blackpool	North West
380	Nottingham	East Midlands

East Dunbartonshire, the highest ranking LA for women in the middle age group, ranked 2<sup>nd</sup> overall on school quality, a key domain for this age group. With an average class size of 24.4 pupils (ranking 33<sup>rd</sup>) the LA reported the 10<sup>th</sup> highest proportion in Great Britain of young people continuing on to higher education (56%) and had the 8<sup>th</sup> lowest number of exclusions (11.4 per 1,000 pupils).

East Dunbartonshire scored closer to the middle on the other two domains specific to this age group, ranking 111<sup>th</sup> on employment opportunities and 183<sup>rd</sup> on local demographics – or how well the age range of the LA reflects the age range of the age group.

East Dunbartonshire ranked highly across many of the core domains, as discussed above.

**[Table 8; Table 22]**

**Table 8 Comparing East Dunbartonshire and Nottingham by domain**

Domain	Rank	
	East Dunbartonshire	Nottingham
Income	46	283
Housing affordability	192	49
Personal wellbeing	40	339
Safety	79	334
Education	11	278
Life expectancy	159	333
Environment	16	343
Culture	147	327
School quality	2	377
Local demographics	183	366
Employment	111	375

Nottingham, the LA ranked lowest for the 30-65 year old age group, ranked poorly on all three age group-specific domains. It ranked 377<sup>th</sup> out of 380 on school quality, driven largely by a low proportion of young people continuing on to higher education (21%) and a high exclusion rate (70.3 per 1,000 pupils). The LA ranked 375<sup>th</sup> on employment opportunities, with an unemployment rate of 13.4% and an employment rate of 59%. The LA also scored poorly on local demographics with 19% of the population aged 35-59 (ranking 366<sup>th</sup>).

Nottingham also ranked near the bottom across several core domains. It ranked 343<sup>rd</sup> on environment quality, driven by high concentrations of NO<sub>2</sub>, SO<sub>2</sub> and PM<sub>10</sub>. It ranked 339<sup>th</sup> on personal wellbeing, scoring in the bottom 10% of LAs on average life satisfaction and feeling that life is worthwhile. The area also scored poorly on the safety domain, with a crime rate of 99 offences per 1,000 people (scoring 334<sup>th</sup>).

An area where Nottingham ranked well was housing affordability (ranked 49<sup>th</sup>), with average housing prices estimated at 5.1 times the median salary.

**[Table 8; Table 23]**



## 5.4 Older women

**Figure 4 The best place to live as a woman in Great Britain: Older woman index**

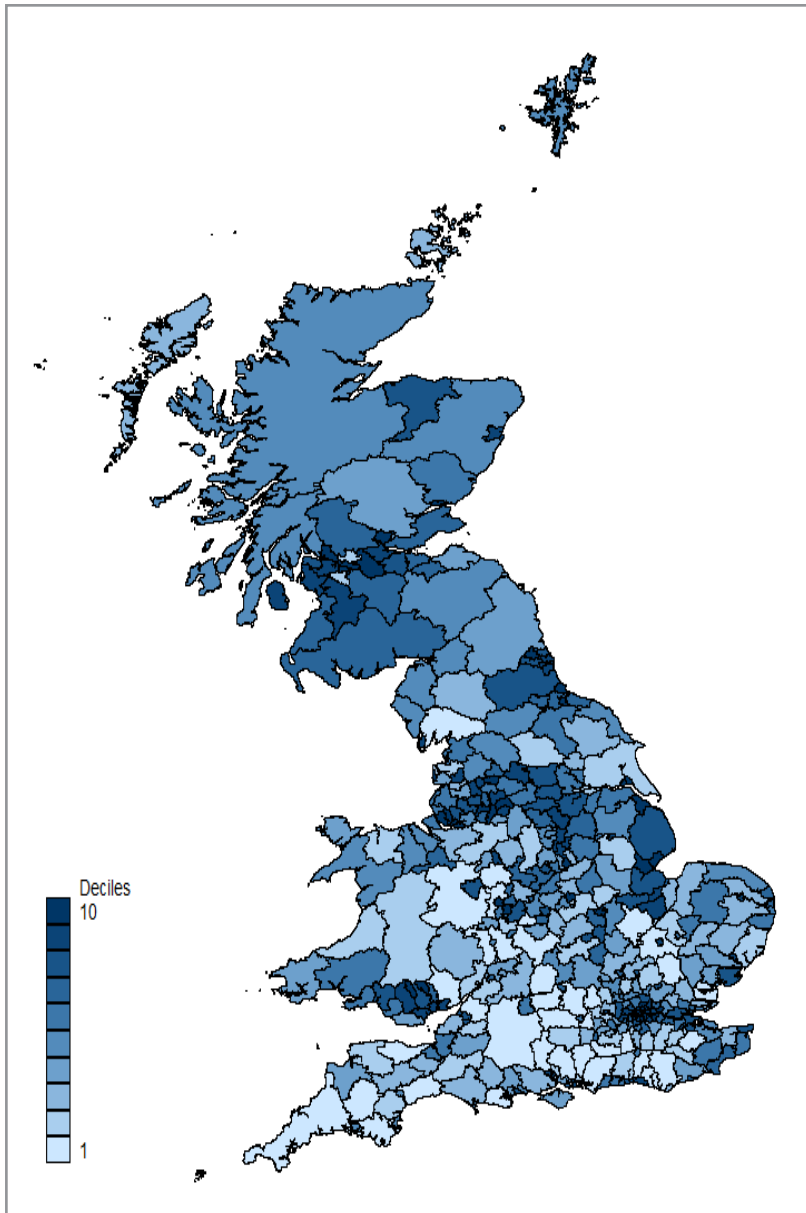


Figure 4 The best place to live as a woman in Great Britain: Older woman index shows the distribution of scores on our older woman index, with LAs falling in the first decile ranked best (pale blue) and those in the 10<sup>th</sup> ranked worst (dark blue). Six of the top ten LAs in Great Britain for women over the age of 65 were located in the South East, three were located in the South West and one in the West Midlands (Table 9 The best and worst LAs for women over 65 in Great Britain). The bottom ten LAs for this age group were located across England, including London, Yorkshire and the Humber, the North West and the East Midlands.

**Table 9 The best and worst LAs for women over 65 in Great Britain**

Rank	Local authority	Region
<b>Best</b>		
1	South Oxfordshire	South East
2	West Oxfordshire	South East
3	Winchester	South East
4	East Devon	South West
5	East Hampshire	South East
6	Shropshire	West Midlands
7	West Devon	South West
8	Test Valley	South East
9	South Hams	South West
10	Waverley	South East
<b>Worst</b>		
371	Southwark	London
372	Nottingham	East Midlands
373	Corby	East Midlands
374	Lambeth	London
375	Blackpool	North West
376	Hammersmith and Fulham	London
377	Kingston upon Hull	Yorkshire and The Humber
378	Hackney	London
379	Manchester	North West
380	Islington	London

South Oxfordshire, ranked highest in Great Britain for women over the age of 65, excelled on two indicators specific to the older women index: the mortality rate and the proportion of women over 65 living alone. The LA ranked 23<sup>rd</sup> on female mortality rates with 703 deaths per 100,000 people and ranked 32<sup>nd</sup> on the proportion of older women living alone, with just 36% living alone.

South Oxfordshire also performed well across a number of core domains. The LA ranked 31<sup>st</sup> on educational attainment, with 54% of residents having NVQ4 or higher. South Oxfordshire ranked 40<sup>th</sup> on life expectancy and 24<sup>th</sup> on safety with the average female life expectancy at birth 85 years and a crime rate of 38 offences per 1,000 people.

One area where South Oxfordshire ranked towards the bottom of the list was on housing affordability. The average cost of a home in the LA was over 10 times the median income (ranking 313<sup>th</sup>).

**[Table 10; Table 24]**

**Table 10 Comparing South Oxfordshire and Islington by domain**

Domain	Rank	
	South Oxfordshire	Islington
Income	82	105
Housing affordability	313	375
Personal wellbeing	136	379
Safety	24	369
Education	31	20
Life expectancy	40	299
Environment	91	379
Culture	34	84
% older women living alone	32	346
Local demographics	155	375
Mortality rate	23	202

The lowest ranked LA for older women, Islington, rated poorly across all three of the domains specific to older women. It ranked 375<sup>th</sup> in terms of local demographics with only 8.8% of the local population above the age of 65. It ranked 346<sup>th</sup> on the proportion of older women living alone, with 43.5% of older women living on their own. It also ranked 373<sup>rd</sup> out of 202<sup>nd</sup> on female mortality rate, with a rate of 867 deaths per 100,000 people.

As discussed above, Islington also performed poorly across several core domains, notably environment, wellbeing, housing affordability and safety.

**[Table 10;Table 25]**



## 6. How LAs stack up across domains

### 6.1 Income

Brentwood, England ranked 1<sup>st</sup> across Great Britain in the income domain, performing well on both median income the gender pay gap. The median gross hourly wage among women in Brentwood was £19.85 and the median gender pay gap was 1%.

The worst performing LA in the income domain was Sedgemoor, England. Sedgemoor's median wage was £9.25 among women – less than 50% of the median wage in the top ranked LA. Furthermore, the median income among men in Sedgemoor was 48% higher than that among women, placing the LA third to last in Great Britain on the gender pay gap.

**Table 11 Highest and lowest ranked LAs - Income**

Domain Rank	Local authority	Median income rank	Median income (£/hour)	Gender gap rank	Ratio of men's income to women's
<b>Best</b>					
1	Brentwood, E	1	19.85	25	1.01
2	Epping Forest, E	14	16.64	20	1.00
3	Hackney, L	21	16.08	24	1.01
4	East Renfrewshire, SC	8	17.61	41	1.03
5	Hillingdon, L	32	15.36	21	1.00
<b>Worst</b>					
376	Boston, EM	380	7.81	320	1.25
377	Shepway, SE	340	10.33	379	1.53
378	Breckland, E	378	8.89	348	1.30
379	Forest Heath, E	379	8.64	351	1.31
380	Sedgemoor, SE	375	9.25	378	1.48

### 6.2 Housing affordability

The local authorities with the most affordable housing were located in the North West of England and in Wales. Copeland, England had the most affordable housing, with the median price of housing equating to just over three times the median local annual income.

Unsurprisingly, the local authorities with the least affordable housing were located in Inner London. Median housing prices in the LA with the least affordable housing, Kensington and Chelsea were nearly 31 times the median local income.



**Table 12 Highest and lowest ranked LAs – Housing affordability**

Domain Rank	Local authority	Ratio of median housing price to median income
<b>Best</b>		
1	Copeland, NW	3.14
2	Blaenau Gwent, W	3.46
3	Burnley, NW	3.64
4	Merthyr Tydfil, W	3.86
5	Pendle, NW	3.96
<b>Worst</b>		
376	Hackney, L	16.53
377	Camden, L	18.59
378	Hammersmith and Fulham, L	19.32
379	Westminster, L	22.78
380	Kensington and Chelsea, L	30.68

## 6.3 Personal wellbeing

Eilean Siar, or the Outer Hebrides, Scotland was the best performing LA in the personal wellbeing domain. Residents of Eilean Siar scored among the top 5 LAs for their reported levels of happiness, life satisfaction, and feeling life is worthwhile and scored 14<sup>th</sup> for their reported levels of anxiety.

The LAs ranking lowest on the personal wellbeing domain were all located in England. Burnley scored the lowest in this domain, with residents scoring in the bottom 10 LAs for their reported levels of happiness, life satisfaction, feeling life is worthwhile and anxiety.



**Table 13 Highest and lowest ranked LAs – Personal wellbeing**

Domain Rank	Local authority	Happiness rank	Mean happiness score	Life satisfaction rank	Mean life satisfaction score	Worthwhile rank	Mean worthwhile score	Anxiety rank	Mean anxiety score
<b>Best</b>									
1	Eilean Siar, SC	1	8.24	4	8.22	5	8.32	14	2.26
2	Purbeck, SW	3	8.06	15	8.1	7	8.25	19	2.33
3	Amber Valley, EM	13	7.93	11	8.13	14	8.2	8	2.18
4	Orkney Islands, SC	4	8.05	5	8.16	40	8.08	1	1.85
5	Winchester, SE	5	8.04	17	8.07	10	8.23	26	2.37
<b>Worst</b>									
376	Preston, NW	372	7.1	377	7.06	376	7.43	333	3.16
377	Corby, EM	376	7.08	380	6.86	377	7.42	256	2.97
378	Greenwich, L	376	7.08	374	7.23	343	7.65	375	3.55
379	Islington, L	371	7.11	372	7.29	379	7.38	367	3.41
380	Burnley, NW	378	7.07	378	7.01	373	7.47	374	3.51

## 6.4 Safety

Three of the top five LAs in terms of safety were located in the East Midlands. North Kesteven was ranked best with a crime rate of 26 offences per 1,000 people.

The worst performing LAs on safety were located in Scotland and London. The crime rate in City of London, the lowest-performing LA in this domain, was 618 offences per 1,000 people. It is worth noting, however that this statistic (calculated as the number of offences occurring in an LA divided by the number of residents in the LA) is likely skewed by the fact that the City of London, despite being a business centre, is relatively sparsely populated.

**Table 14 Highest and lowest ranked LAs – Safety**

Domain Rank	Local authority	Number of offences per capita
<b>Best</b>		
1	North Kesteven, EM	0.0255
2	Rutland, EM	0.0277
3	North East Derbyshire, EM	0.0296
4	Forest of Dean, SW	0.0307
5	Broadland, E	0.0314
<b>Worst</b>		
376	Aberdeen City, SC	0.1347
377	Dumfries and Galloway, SC	0.1431
378	Glasgow City, SC	0.1821
379	Westminster, L	0.2064
380	City of London, L	0.6177

## 6.5 Education

All five LAs ranking highest in the education domain were located in England, with four out of the five located in London. The city of London, the top ranking LA in this domain, ranked first on both education measures, with 88% holding NVQ3 or higher and 88% holding NVQ4 or higher.

The bottom five LAs in the education domain were also located in England, with four of the five located in the Midlands. The lowest-ranking LA, Boston, ranked lowest across both education measures, with one in three (33%) attaining NVQ3 or higher and 14% having NVQ4 or higher.

**Table 15 Highest and lowest ranked LAs – Education**

Domain Rank	Local authority	NVQ4 rank	% NVQ4	NVQ3 rank	% NVQ3
<b>Best</b>					
1	City of London, L	1	87.6	1	87.6
2	Richmond upon Thames, L	2	71.6	2	82.4
3	Wandsworth, L	3	70.6	3	81.3
4	Cambridge, E	4	66.7	5	77.8
5	Lambeth, E	5	64.4	7	75.7
<b>Worst</b>					
376	Ashfield, EM	379	16.2	362	43.1
377	Waveney, E	370	20.6	376	36.6
378	East Lindsey, WM	374	19.1	373	39.0
379	Sandwell, WM	373	19.6	379	33.4
380	Boston, EM	380	13.6	380	32.9

## 6.6 Life expectancy

All five LAs with the longest female life expectancy at birth were located in the London and the South East of England. Hart was ranked highest with a life expectancy of nearly 87 years.

The LAs with the lowest female life expectancy at birth were located in Scotland and North West England. West Dunbartonshire, Scotland scored lowest in this domain with a life expectancy of just under 79 years.

**Table 16 Highest and lowest ranked LAs – Life expectancy**

Domain Rank	Local authority	Life expectancy
<b>Best</b>		
1	Hart, SE	86.7
2	Kensington and Chelsea, L	86.4
3	Camden, L	86.1
4	Westminster, L	86.0
5	Harrow, L	85.9
<b>Worst</b>		
376	North Lanarkshire, SC	79.6
378	Blackpool, NW	79.4
378	East Ayrshire, SC	79.4
379	Glasgow City, SC	78.8
380	West Dunbartonshire, SC	78.7

## 6.7 Environment

All five LAs with the highest rated environmental quality were located in Scotland. The top scoring LA in this domain, Moray, scored among the top 10 LAs on NO<sub>2</sub>, PM<sub>10</sub> and SO<sub>2</sub> concentration as well as access to green space.

Four of the five lowest-ranking LAs in this domain were located in Inner London and one was located in Yorkshire and the Humber. The City of London, the lowest-ranking LA in environmental quality, scored last on NO<sub>2</sub> and PM<sub>10</sub> concentration and third to last on access to green space.

**Table 17 Highest and lowest ranked LAs – Environment**

Domain Rank	Local authority	NO2 rank	NO2 concentration	PM10 rank	PM10 concentration	SO2 rank	SO2 concentration	Green space rank	Mean green space within 900 m
<b>Best</b>									
1	Moray, SC	4	3.43	5	7.29	2	0.44	10	3.21
2	Argyll and Bute, SC	3	3.23	3	6.59	5	0.50	21	1.89
3	Highland, SC	2	2.82	2	6.57	6	0.50	32	1.39
4	North Ayrshire, SC	27	5.06	6	7.36	9	0.58	2	35.75
5	Inverclyde, SC	36	5.65	4	7.13	17	0.66	1	87.69
<b>Worst</b>									
376	Westminster, L	379	26.92	379	17.33	295	1.40	79	0.96
377	Lambeth, L	370	20.79	370	16.34	199	1.16	363	0.24
378	North East Lincolnshire, Y	339	14.89	320	14.50	379	2.38	355	0.28
379	Islington, L	377	24.98	378	17.16	269	1.32	358	0.27
380	City of London, L	380	27.35	380	17.37	278	1.35	378	0.11



## 7. Conclusions

This analysis has provided a holistic analysis of women's quality of life in different areas of Great Britain, covering eight core domains as well as several age-specific domains relating to factors that are particularly important to women at different stages of life. Based on our index the best place to live in Great Britain for women overall and for women under the aged of 35-65 was East Dunbartonshire, Scotland. For women under the age of 30 the best place to live was West Oxfordshire, England and for women over the age of 65 it was South Oxfordshire, England.

This analysis revealed substantial regional inequalities in quality of life within countries and regions. Two local authorities featured in the top ten LAs in the core, younger and middle age group indices, East Dunbartonshire and East Renfrewshire, neighbour LAs that consistently ranked near the bottom like Glasgow City and West Dunbartonshire. Similarly, although LAs in London ranked near the bottom across our indices, nearby LAs such as South Oxfordshire, Wycombe and Waverley ranked near the top.

Despite substantial regional variation in overall ranking, regional trends across indicators and domains were evident. LAs in Scotland ranked highly in terms of wellbeing and the quality of the local environment (particularly air quality). With smaller class sizes and higher proportions of young people continuing on to higher education, they also tended to score higher on school quality, making many LAs in the country (such as East Dunbartonshire, East Renfrewshire and Aberdeenshire) ideal places to live for younger women. However, higher female mortality rates and lower life expectancies among older women made some LAs in Scotland less desirable places to live for older women.

LAs in England varied substantially in their rankings across domains and indices. For example, LAs in London performed well in terms of residents' educational attainment, income, access to entertainment and culture and life expectancy. However poor housing affordability, high levels of pollution and crime and poor levels of wellbeing ultimately outweighed these positive aspects, making them among the worst LAs for women in general and for younger and older women. LAs in the South East tended to be among the best in Great Britain for women of all age groups, sharing many of the positive attributes of London boroughs but with higher employment rates and quality of schools and longer healthy life expectancies.

LAs in Wales, while also quite diverse, tended to score highest on housing affordability and quality of environment, while scoring near the middle in the other domains.

Data availability and comparability issues precluded analysis of some factors that may play a significant role in determining the suitability of an area for women. For example, access to childcare is an important local characteristic for many women as is the quality of local schools; however these were factors we were unable to consider in our indices due to substantial differences in data collection procedures across countries.

Future analyses may circumvent this issue by calculating indices for each country separately.

Despite the limitations of this analysis, our indices have provided useful insight into the differences between British local authorities for women are the attributes that make certain areas stand out. Our analysis provides data on a broad range of factors influencing women's quality of life, allowing women to compare their areas with other areas on a range of nationally consistent measures.



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# Appendix A: Additional tables

**Table 18 Breakdown of indicator ranks and score – East Dunbartonshire**

Factor	Score	Rank
Median hourly wage (£)	15.07	41
Ratio of men's to women's median income	1.11	129
Ratio of mean housing prices to median income	7.48	192
Happiness	7.78	42
Life satisfaction	7.96	35
Worthwhile	8.03	63
Anxiety	2.73	134
Offenses per 1,000 people	0.0493	79
Life expectancy (years)	83.50	159
Proportion with NVQ4 or higher (%)	58.80	14
Proportion with NVQ3 or higher (%)	74.60	10
Proportion went to the cinema in past year (%)	33.91	184
Proportion went to an art exhibition in past year (%)	25.46	223
Proportion went to a public library in past year (%)	28.05	147
Proportion went to a museum in past year (%)	33.92	291
NO2 concentration	8.43	106
PM10 concentration	8.41	15
SO2 concentration	0.71	24
Mean green spaces (w/in 900 metres)	1.17	45

**Table 19 Breakdown of indicator ranks and score – Islington**

Factor	Score	Rank
Median hourly wage (£)	16.35	16
Ratio of men's to women's median income	1.17	217
Ratio of median housing prices to median income	16.40	375
Happiness	7.11	371
Life satisfaction	7.29	372
Worthwhile	7.38	379
Anxiety	3.41	367
Offences per 1,000 people	0.1220	369
Life expectancy (years)	83.10	205
Proportion with NVQ4 or higher (%)	58.10	16
Proportion with NVQ3 or higher (%)	70.00	27
Proportion went to the cinema in past year (%)	40.21	84
Proportion went to an art exhibition in past year (%)	36.23	17
Proportion went to a public library in past year (%)	30.85	84
Proportion went to a museum in past year (%)	42.20	84
NO2 concentration	24.98	377
PM10 concentration	17.16	378
SO2 concentration	1.32	269
Mean green spaces (w/in 900 metres)	0.27	358

**Table 20 Breakdown of indicator ranks and score – West Oxfordshire**

Factor	Score	Rank
Median hourly wage (£)	13.71	80
Ratio of men's to women's median income	1.16	205
Ratio of median housing prices to median income	9.70	295
Happiness	7.65	96
Life satisfaction	8.10	15
Worthwhile	8.06	53
Anxiety	2.72	129
Offences per 1,000 people	0.0316	6
Life expectancy (years)	84.00	114
Proportion with NVQ4 or higher (%)	46.70	59
Proportion with NVQ3 or higher (%)	61.90	100
Number of HEIs in region	18	67
Proportion went to the cinema in past year (%)	43.95	34
Proportion went to an art exhibition in past year (%)	35.57	67
Proportion went to a public library in past year (%)	31.50	34
Proportion went to a museum in past year (%)	45.14	34
NO2 concentration	7.48	74
PM10 concentration	12.97	184
SO2 concentration	1.21	229
Mean green spaces (w/in 900 metres)	1.00	68
Proportion of single people under 35 (%)	19.39	276
Proportion of population under 35 (%)	21.21	237
Employment rate (%)	77.10	57
Unemployment rate (%)	3.24	6

**Table 21 Breakdown of indicator ranks and score – Kingston upon Hull**

Factor	Score	Rank
Median hourly wage (£)	10.26	345
Ratio of men's to women's median income	1.12	151
Ratio of median housing prices to median income	4.38	13
Happiness	7.25	344
Life satisfaction	7.48	327
Worthwhile	7.65	343
Anxiety	3.04	287
Offences per 1,000 people	0.1194	367
Life expectancy (years)	80.20	370
Proportion with NVQ4 or higher (%)	29.50	298
Proportion with NVQ3 or higher (%)	50.60	285
Number of HEIs in region	11.00	249
Proportion went to the cinema in past year (%)	31.85	297
Proportion went to an art exhibition in past year (%)	24.30	296
Proportion went to a public library in past year (%)	24.63	299
Proportion went to a museum in past year (%)	40.00	111
NO2 concentration	15.28	343
PM10 concentration	13.93	266
SO2 concentration	2.54	380
Mean green spaces (w/in 900 metres)	0.39	328
Proportion of single people under 35 (%)	30.10	40
Proportion of population under 35 (%)	29.61	51
Employment rate (%)	62.40	339
Unemployment rate (%)	12.44	372

**Table 22 Breakdown of indicator ranks and score – East Dunbartonshire**

Factor	Score	Rank
Median hourly wage (£)	15.07	41
Ratio of men's to women's median income	1.11	129
Ratio of median housing prices to median income	7.48	192
Happiness	7.78	42
Life satisfaction	7.96	35
Worthwhile	8.03	63
Anxiety	2.73	134
Offenses per 1,000 people	0.0493	79
Life expectancy (years)	83.50	159
Proportion with NVQ4 or higher (%)	58.80	14
Proportion with NVQ3 or higher (%)	74.60	10
Proportion went to the cinema in past year (%)	33.91	184
Proportion went to an art exhibition in past year (%)	25.46	223
Proportion went to a public library in past year (%)	28.05	147
Proportion went to a museum in past year (%)	33.92	291
NO2 concentration	8.43	106
PM10 concentration	8.41	15
SO2 concentration	0.71	24
Mean green spaces (w/in 900 metres)	1.17	45
Proportion of young people going on to HE (%)	55.80	10
Exclusions per 1,000 pupils	11.40	8
Average class size	24.40	33
Proportion of population aged 35-49 (%)	21.51	183
Employment rate (%)	71.90	157
Unemployment rate (%)	4.66	89

**Table 23 Breakdown of indicator ranks and score – Nottingham**

Factor	Score	Rank
Median hourly wage (£)	10.38	335
Ratio of men's to women's median income	1.10	123
Ratio of median housing prices to median income	5.14	49
Happiness	7.36	287
Life satisfaction	7.35	366
Worthwhile	7.60	358
Anxiety	2.81	166
Offenses per 1,000 people	0.0986	334
Life expectancy (years)	81.40	333
Proportion with NVQ4 or higher (%)	29.60	295
Proportion with NVQ3 or higher (%)	51.70	265
Proportion went to the cinema in past year (%)	32.89	267
Proportion went to an art exhibition in past year (%)	23.91	327
Proportion went to a public library in past year (%)	26.60	230
Proportion went to a museum in past year (%)	33.56	327
NO2 concentration	15.49	345
PM10 concentration	14.49	319
SO2 concentration	1.57	330
Mean green spaces (w/in 900 metres)	0.75	137
Proportion of young people going on to HE (%)	21.10	376
Exclusions per 1,000 pupils	70.30	373
Average class size	27.20	186
Proportion of population aged 35-49 (%)	18.84	366
Employment rate (%)	58.60	365
Unemployment rate (%)	13.38	377



**Table 24 Breakdown of indicator ranks and score – South Oxfordshire**

Factor	Score	Rank
Median hourly wage (£)	15.69	27
Ratio of men's to women's median income	1.15	189
Ratio of median housing prices to median income	10.33	313
Happiness	7.51	177
Life satisfaction	7.79	112
Worthwhile	7.89	161
Anxiety	2.85	193
Offenses per 1,000 people	0.0381	24
Life expectancy (years)	85.00	26
Proportion with NVQ4 or higher (%)	53.90	24
Proportion with NVQ3 or higher (%)	67.90	45
Proportion went to the cinema in past year (%)	43.95	34
Proportion went to an art exhibition in past year (%)	35.57	67
Proportion went to a public library in past year (%)	31.50	34
Proportion went to a museum in past year (%)	45.14	34
NO2 concentration	9.64	167
PM10 concentration	12.90	176
SO2 concentration	0.91	60
Mean green spaces (w/in 900 metres)	0.60	213
Healthy life expectancy at 65 (years)	11.26	121
Mortality rate out of 100,000	703	23
Proportion of population aged 65+ (%)	18.16	155
Proportion of older women living alone (%)	35.69	32

**Table 25 Breakdown of indicator ranks and score – Islington**

Factor	Score	Rank
Median hourly wage (£)	16.35	16
Ratio of men's to women's median income	1.17	217
Ratio of median housing prices to median income	16.40	375
Happiness	7.11	371
Life satisfaction	7.29	372
Worthwhile	7.38	379
Anxiety	3.41	367
Offenses per 1,000 people	0.1220	369
Life expectancy (years)	83.10	205
Proportion with NVQ4 or higher (%)	58.10	16
Proportion with NVQ3 or higher (%)	70.00	27
Proportion went to the cinema in past year (%)	40.21	84
Proportion went to an art exhibition in past year (%)	36.23	17
Proportion went to a public library in past year (%)	30.85	84
Proportion went to a museum in past year (%)	42.20	84
NO2 concentration	24.98	377
PM10 concentration	17.16	378
SO2 concentration	1.32	269
Mean green spaces (w/in 900 metres)	0.27	358
Healthy life expectancy at 65 (years)	9.20	337
Mortality rate out of 100,000	867	202
Proportion of population aged 65+ (%)	8.75	375
Proportion of older women living alone (%)	43.49	346

# Appendix B: Calculating the index

## Calculating the index

Our index was calculated in the following steps:

1. Indicators and domains were sorted (lowest to highest).
2. LAs were ranked for each variable. Where the total number of LAs was 380, the LA with the highest performance in an item was ranked 1<sup>st</sup> and the worst was ranked 380<sup>th</sup>.
3. Ranking was reversed where a high score on an indicator was considered a negative outcome (for example, unemployment or anxiety).
4. Indicators were transformed into an exponential distribution<sup>3</sup> using an exponential transformation:

$$\text{Exponential transformation} = 23 * \ln \left( 1 - R * \left( 1 - \exp \left( -\frac{100}{23} \right) \right) \right)$$

Where:

- 23 is a fixed value that helps to deal with extreme cases (that is, with cases where a LA performs very good in terms of education, but very bad in terms of health).
  - $\ln$  is the natural logarithm function.
  - $\exp$  is the exponential function.
  - 100 is fixed (%).
  - R is the ratio between the ranking obtained in each item for each LA and the total number of LAs. For example, if Local Authority A is ranked 29 out of 380 LAs, R is equal to 29/380.
5. Weights were then applied for each indicator.
  6. Weighted averages were calculated for each LA using indicators' transformed ranks.
  7. An index score was obtained for each LA.
  8. Index score were sorted and ranked from lowest to highest to reveal the final ranking of LAs<sup>4</sup>.

## Missing values and imputations

Missing information was an important challenge in calculating the indices. Missing data came from two sources:

- Information not being available at Local Authority level;

<sup>3</sup> The exponential transformation is necessary to generate a common distribution (same max-min) plus it is not scale dependent (as some variables have different units).

<sup>4</sup> We follow this procedure for the Younger women, Middle age group and Older women indices separately.

- Redacted data for certain LAs to protect against disclosure of personal information.

We dealt with missing information by replacing the unobserved values with the regional average (e.g. average happiness score per region) where available. For example, because Understanding Society (USoc) does not include Local Authority District information without Secure Access licence, only regional data was available for our Culture domain. Therefore, we imputed the average regional figure to all the LAs belonging to the same area. That is, all LAs located in the North East are assigned the average value of the outcome of interest in the North East.

## Appendix C: Northern Ireland

The original intent of this analysis was to construct an index exploring the best places in the UK for women. However due to a lack of sufficiently comparable data on many of our core domains and measures, Local Authorities in Northern Ireland were excluded from our index. This section presents the available data on Local Authorities Northern Ireland and compares the results to those for LAs in Great Britain.

### Life expectancy

Women in Lisburn and Castlereagh had the longest life expectancy on average in Northern Ireland at 83.3 years. Those in the Belfast had the lowest life expectancy in Northern Ireland at 81 years. These figures fall near the middle of the distribution of life expectancies in Great Britain, where women in the leading LA on this measure, Hart, had a life expectancy of 86.7 and those in the worst LA, West Dunbartonshire, had a life expectancy of 78.7 years.

**Table 26 Female life expectancy in Northern Ireland**

Local authority	Life expectancy rank	Life expectancy (yrs)
Lisburn and Castlereagh	1	83.3
Mid Ulster	2	83.2
Causeway Coast and Glens	3	82.8
Ards and North Down	4	82.7
Mid and East Antrim	5	82.7
Fermanagh and Omagh	6	82.5
Newry, Mourne and Down	7	82.4
Armagh City, Banbridge and Craigavon	8	82.4
Antrim and Newtownabbey	9	82.0
Derry City and Strabane	10	81.7
Belfast	11	81.0

### Healthy Life expectancy

Women in Fermanagh and Omagh had the highest healthy life expectancy from the age of 65 in Northern Ireland at 15 years – similar to the second highest ranked LA in Great Britain, Perth and Kinross at 15.7 years. Women in the lowest ranked LA in Northern Ireland, Derry city and Strabane, had a healthy life expectancy of 8.1 years at 65 years old, equivalent to the LAs ranked 366<sup>th</sup> in Britain – Liverpool, Southwark and Blaenau Gwent.

**Table 27 Female healthy life expectancy in Northern Ireland**

Local authority	HLE rank	HLE at 65 (yrs)
Fermanagh and Omagh	1	15.0
Lisburn and Castlereagh	2	13.8
Mid and East Antrim	3	10.9
Causeway Coast and Glens	4	10.8
Armagh City, Banbridge and Craigavon	5	9.8
Ards and North Down	6	8.9
Belfast	7	8.9
Mid Ulster	8	8.9
Antrim and Newtownabbey	9	8.5
Newry, Mourne and Down	10	8.5
Derry City and Strabane	11	8.1

## Mortality rate

Mortality rates were lowest in Northern Ireland among women in Lisburn and Castlereagh, with 827 deaths per 100,000 people. Women in Cornwall and the Isles of Scilly had a similar mortality rate, ranking 158 in Great Britain. Belfast ranked worst in Northern Ireland with a female mortality rate of 1,017 per 100,000 people, equivalent to that of St. Helens, ranked 338 in Great Britain.

**Table 28 Female mortality rate in Northern Ireland**

Local authority	Mortality rank	Mortality (per 100,000)
Lisburn and Castlereagh	1	827.0
Causeway Coast and Glens	2	832.0
North Down and Ards	3	847.7
Mid Ulster	4	865.9
Newry, Mourne and Down	5	870.9
Mid and East Antrim	6	883.7
Fermanagh and Omagh	7	899.6
Derry and Strabane	8	909.4
Armagh, Banbridge and Craigavon	9	915.2
Antrim and Newtownabbey	10	925.3
Belfast	11	1,017.0



## Female unemployment

Lisburn and Castlereagh had the lowest female unemployment rate in Northern Ireland at 3.4% - similar to Craven, ranked 8<sup>th</sup> in Great Britain. Derry and Strabane had the highest unemployment rate among women at 8.3%, equivalent to Dundee City, ranked 313<sup>th</sup> in Great Britain.

**Table 29 Female unemployment in Northern Ireland**

Local authority	Unemployment rank	Unemployment (%)
Lisburn and Castlereagh	1	3.4
Antrim and Newtownabbey	2	3.9
North Down and Ards	3	4.1
Mid and East Antrim	4	4.5
Mid Ulster	5	4.9
Armagh, Banbridge and Craigavon	6	5.0
Fermanagh and Omagh	7	5.2
Newry, Mourne and Down	8	5.8
Causeway Coast and Glens	9	6.0
Belfast	10	6.2
Derry and Strabane	11	8.3

## Culture

Residents of Northern Ireland generally reported accessing culture and entertainment less frequently than did those in other regions. 26% of residents in Northern Ireland reported having been to the cinema in the past year, compared with 44% in the South East and 23% in the North East. 15% reported having been to an art exhibition, compared with 36% in London and 16% in Wales. 21% had been to a public library in the past 12 months compared with 32% in the South East and 21% in the South West. And finally, 21% reported having been to a museum, compared with 45% in the South East and 25% in the Wales.

## Personal Wellbeing

Residents of Mid and East Antrim reported among the highest levels of personal wellbeing in Northern Ireland, with high levels of happiness (8.2), life satisfaction (8.4), feeling that life is worthwhile (8.6) and low levels of anxiety (2.2), reporting similar scores on these measures to those ranked in the top five LAs in Great Britain on personal wellbeing. Those in Belfast reported among the worst scores in Northern Ireland on happiness (7.2), life satisfaction (7.4), feeling that life is worthwhile (7.5) and anxiety (3.4) although they still scored higher than those in the bottom five LAs in Great Britain for wellbeing.

**Table 30 Personal wellbeing in Northern Ireland**

Local authority	Life satisfaction rank	Mean life satisfaction score	Worthwhile rank	Mean worthwhile score	Happiness rank	Mean happiness score	Anxiety rank	Mean anxiety score
Mid and East Antrim	1	8.39	1	8.62	1	8.21	2	2.17
Mid Ulster	2	8.28	2	8.33	5	7.89	3	2.17
Causeway Coast and Glens	3	8.16	3	8.27	4	7.92	8	2.88
Antrim and Newtownabbey	4	8.05	4	8.23	2	8.03	1	2.07
Derry City and Strabane	5	7.92	6	8.07	7	7.72	9	2.93
Newry, Mourne and Down	6	7.85	5	8.16	9	7.51	7	2.87
Ards and North Down	7	7.79	9	7.83	8	7.61	6	2.84
Fermanagh and Omagh	8	7.79	10	7.80	3	7.97	4	2.29
Lisburn and Castlereagh	9	7.78	8	7.84	10	7.44	11	3.43
Armagh City, Banbridge and Craigavon	10	7.71	7	7.94	6	7.86	5	2.54
Belfast	11	7.38	11	7.54	11	7.23	10	3.41

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