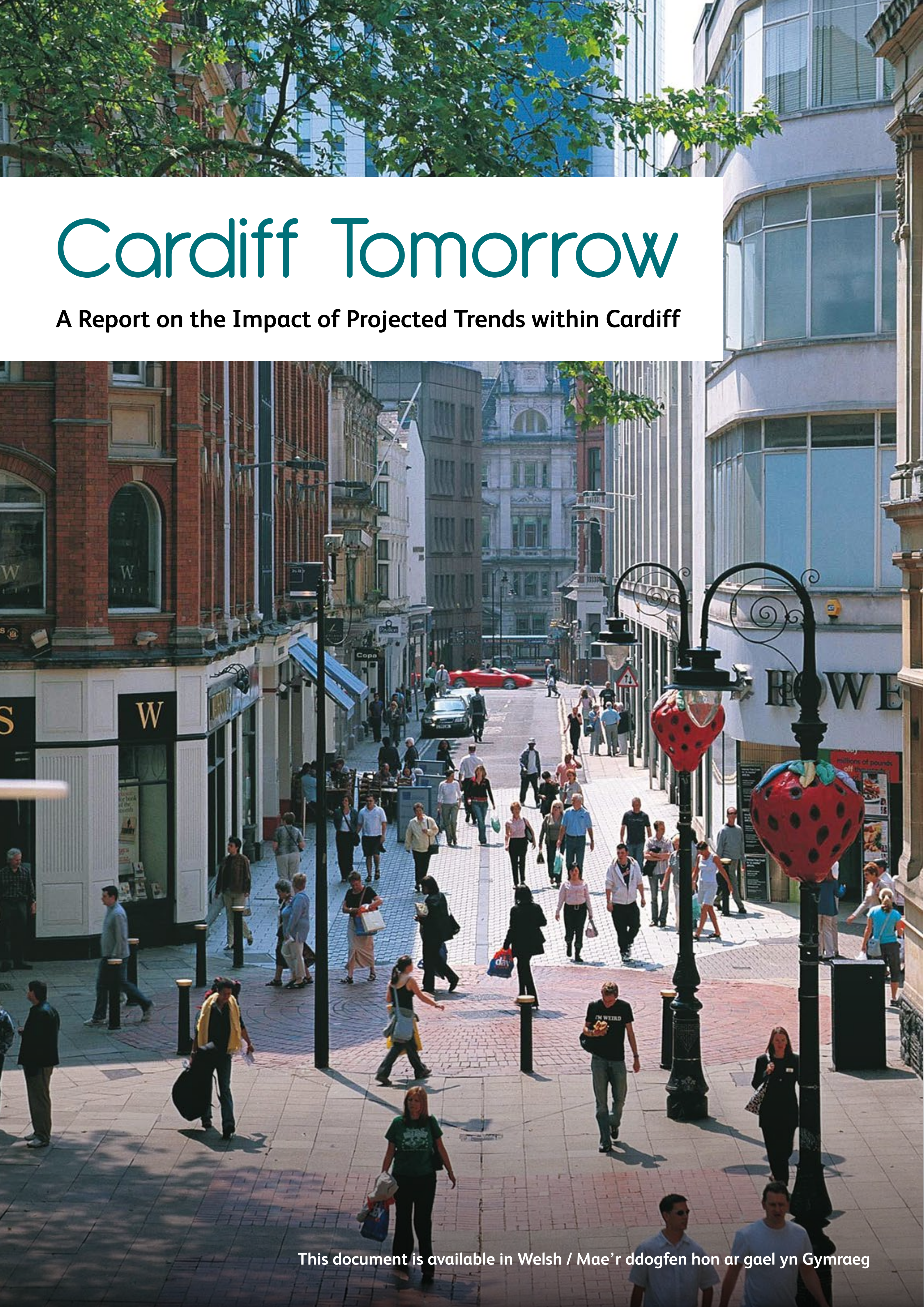
# Cardiff Tomorrow

**A Report on the Impact of Projected Trends within Cardiff**



This document is available in Welsh / Mae'r ddogfen hon ar gael yn Gymraeg

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# 1. INTRODUCTION

Analysis of future trends is a key theme under the Well-Being of Future Generations (Wales) Act 2015. Cardiff Council produced its first Future Trends Report in 2017. Five years on, this report provides an updated position on the statistics and figures from 2017.

In December 2021, Welsh Government published its equivalent report, 'Future Trends: 2021', which covers the long-term and emerging trends affecting Wales across four broad themes: People & Population, Inequalities, Planetary Health & Limits, and Technology.

This report focuses more closely on the trends relating to Cardiff, while acknowledging that other external factors, such as Brexit and the Covid-19 pandemic, may have a yet unseen impact on many of the datasets presented in this report. This report does not seek to present forecasts but seeks to identify future trends from existing statistical data.

Forecasting the future is an extremely difficult task. However, to make effective decisions over the long-term, we must use the data we have to attempt to find patterns and trends, and use this data to consider the problems, or opportunities, which may arise in the coming years.

# People & Population

## 2.1 DEMOGRAPHICS

### Population Projections: Context

When Cardiff's first Future Trends Report was prepared in 2017, population projections were based on Welsh Government's 2014 projections for Local Authorities. At the time, this data suggested that Cardiff's population would increase by 26% to 444,668 in 2039 - significantly higher than any other Welsh Authority, with Wrexham next in rank with a 10% increase.

The most recent population projections, which are 2018-based, show a significant change to predictions, with the population of Cardiff now predicted to only increase by 8.1%, from 357,353 in 2014/15 to 386,225 in 2038/39, and by 8.8% to 388,890 in 2042/43. The 2018-based population projections are available for the 25-year period, from 2018 to 2043. However, the report associated with the release focuses on the first 10 years of the projection period, as projections tend to become increasingly uncertain in the longer-term, as much may change over that timescale.

The differences between the 2014-based and 2018-based local authority population projections reflect not only the change in demographic trends seen during this period, but also the change in the methodology between the two sets of projections, as well as the change in the base year of the projection.

In terms of demographic changes, at a Wales level, the birth rate has continued to fall (with the total fertility rate falling from 1.78 in 2014 to 1.63 in 2018), and improvements in life expectancy have stalled, while migration patterns have been fluctuating. These changes resulted in Wales' population in 2018 being estimated at 3.14 million, 8,800 (0.3%) higher than was projected for 2018 by the 2014-based national population projections.

In terms of changes to methodology, the Welsh Government's Chief Statistician published an update in February 2020, giving an overview of the methodological changes that had been made to the local authority projections since the 2014- based local authority projections, including:

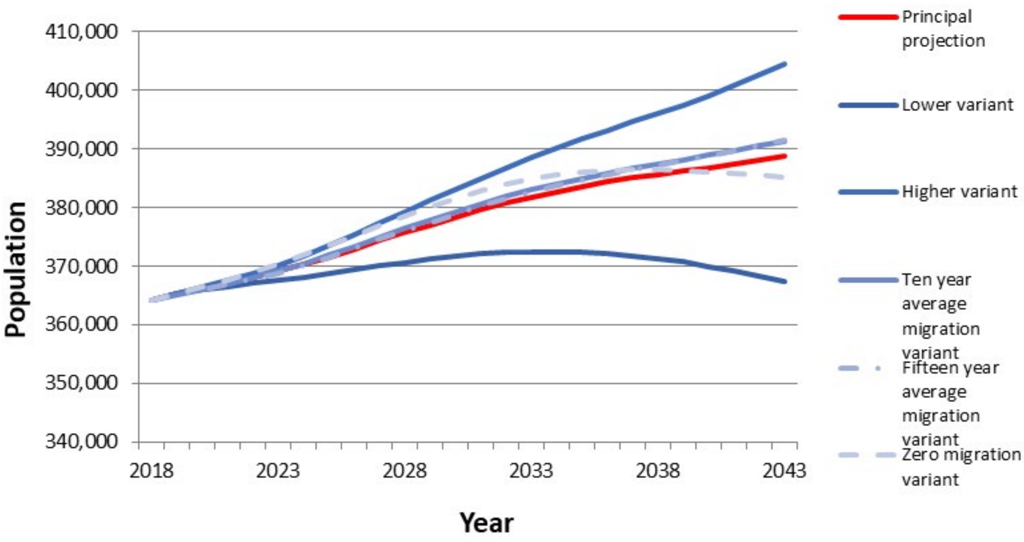
- Changing the assumptions for internal migration, so that they were based on migration rates rather than fixed numbers, and
- Constraining the sum of the local authority population projections, and some of the component parts, for the 22 local authorities in Wales to the 2018-based national population projections published by the Office for National Statistics (ONS).

Another update was issued in July 2020, announcing the publication date for the revised local authority population and household projections, and the decision to revert to not constraining the local authority population projections.

## Cardiff's Projected Population Change

2020 mid-year population estimates approximate Cardiff's population as being 369,202 and, as highlighted, 2018-based population predictions estimate that Cardiff's population will increase to 388,890 in 2042/43.

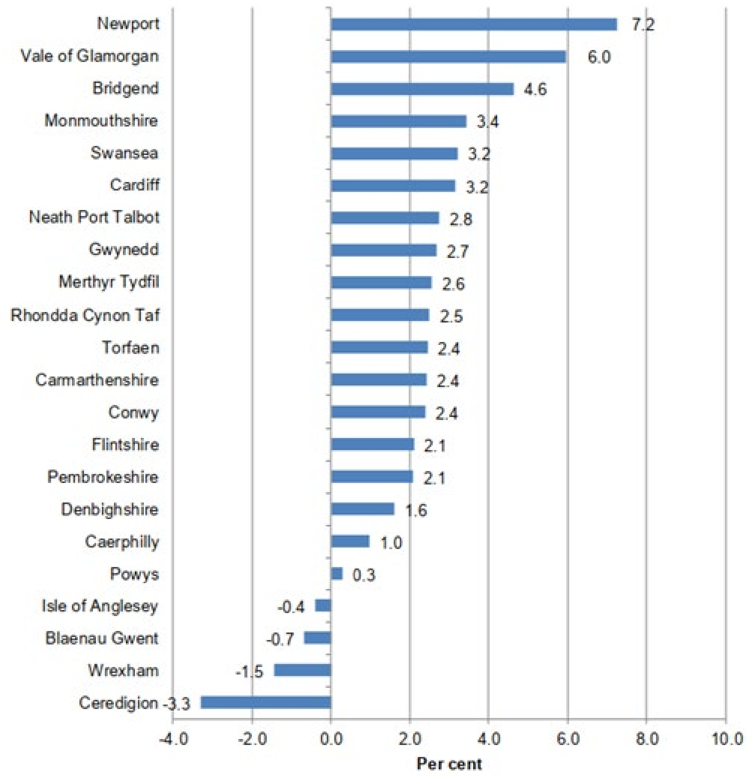
**Figure 1: Projection Total by Variant, Cardiff[1]**




## Projected Population Change by Local Authority

By focusing on the years 2018 to 2028, it is estimated that Cardiff will have the 5th highest increase in population, jointly with Swansea, with an increase of 3.2%. Newport will show the highest increase of 7.2%.Cardiff is also projected to continue to have the largest population of all the local authorities in Wales by 2028, at over 375,700 people. This is over 121,000 more people than the second largest local authority, Swansea, and is projected to account for almost 12% of the population in Wales.

**Figure 2: Percentage Change in the Principal Population Projections by Local Authority, 2018 to 2028**

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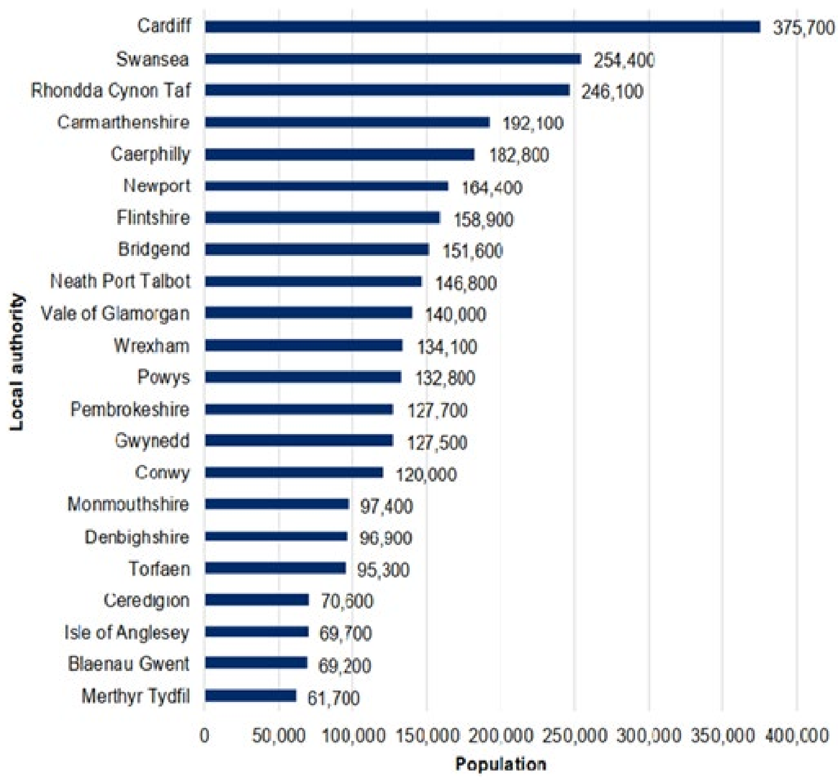
*[1] The 'principal' projection is the main projection, and is based on assumptions about future fertility, mortality and migration considered to best reflect demographic patterns at that time. Two other projections, or 'variant' projections, are also available alongside the principal projection. They are based on alternative (high versus low) scenarios of fertility, mortality and migration compared with the principal projection, providing an indication of uncertainty but not upper or lower limits of future demographic behaviour. Also included are variants based on alternative migration assumptions available in the future.*

The Cardiff Capital Region[2], which covers the Southeast of Wales, has a current population estimate in 2018 of 1,532,828, which is projected to increase in 2028 to 1,584,379, an increase of 3.4%.

The population of Wales as a whole is projected to increase over the next ten years by 2.7% and increase by 3.7% by 2043. The assumptions these projections are based on can be tested once the results of the 2021 Census are published in 2022.

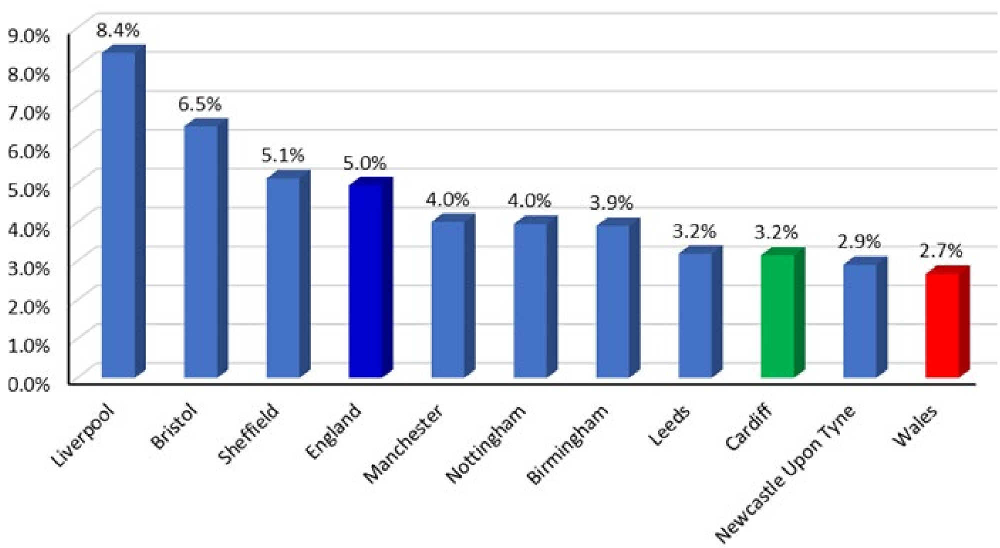
**Figure 3: Projected Population by Local Authority, 2028**




## Projected Population Change by Core City

Cardiff's projected 3.2% population increase (within the next 10 years) is the second lowest out of the Core Cities, as shown in Figure 4. This is a significant change from the 2017 analysis, where it was projected that Cardiff would have the largest increase in population over the next 20 years (above all Core Cities).

**Figure 4: Core Cities Projected Percentage Change in Total Population, 2018 to 2028**

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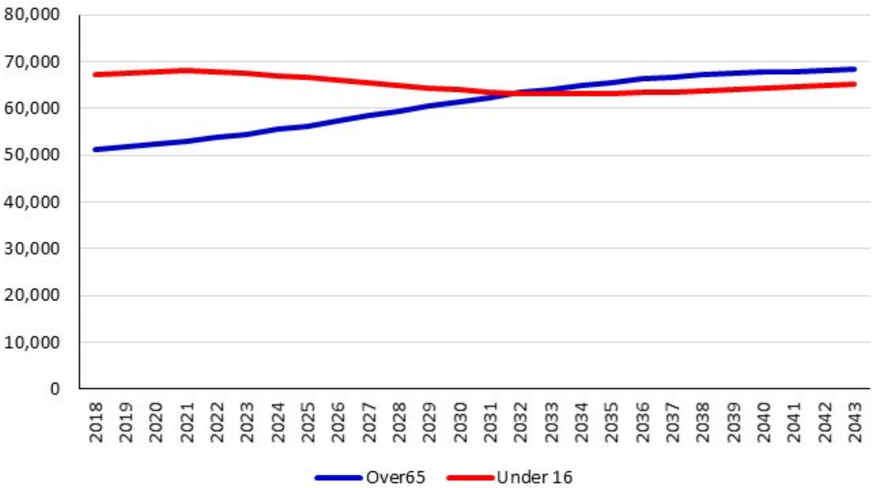
*[2] The Cardiff Capital Regional embraces the 10 local authority areas covering South East Wales – Blaenau Gwent; Bridgend; Caerphilly; Cardiff; Merthyr Tydfil; Monmouthshire; Newport; Rhondda Cynon Taf; Torfaen; and Vale of Glamorgan.*

## Projected Population Change by Age

Over the next ten years, the percentage of over 65s in Cardiff is set to increase by 15.7 % and will account for around 15.8 % of the entire population. The number of young people (aged under 16) is projected to decrease slightly year on year, accounting for around 17.3 % of the population in 2028.

**Figure 5: Projected Population of Cardiff by Age**

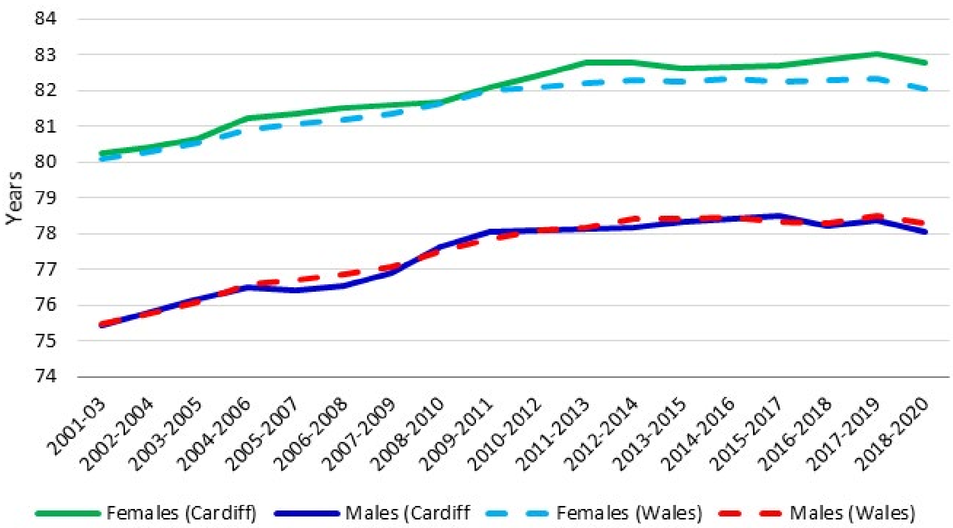



## Life Expectancy Trends

Life expectancy tables were published in 2021 by the ONS, with figures based on the number of deaths registered and mid-year population estimates over three consecutive years. The tables show that the life expectancy at birth in Cardiff for 2018-2020 is 82.77 years for Females and 77.34 for Males. This has decreased slightly when compared to 2017-2018, when the figures were 83.04 and 78.38 respectively.

However, as can be seen in Figure 6, life expectancy has been increasing since 2001/2003. In respect of females, the life expectancy in Cardiff has been above the Welsh average since 2009/11, whilst in respect of males, the life expectancy has consistently broadly followed the Welsh average. These statistics do not include any of the periods where Covid-19 will have had an impact. It is anticipated that there will be a further decrease in life expectancy once Covid-19 deaths are included.

**Figure 6: Cardiff Life Expectancy Trends**



## Cardiff's Replacement Local Development Plan

As part of the Cardiff Council Local Development Plan (LDP), Cardiff Council is required to undertake a full review of its adopted LDP at least once every four years. On 30 March 2021, Welsh Government approved the Cardiff Replacement LDP Delivery Agreement, and a consultation was subsequently carried out between 28 May and 23 July 2021 on the draft vision, issues, and objectives. There are many stages in preparing a LDP and the replacement plan is scheduled to be adopted in October 2024. The Replacement LDP will help shape Cardiff over the next 15 years to 2036 and will include a new strategy and policies to guide and manage growth and change.

## 2.2 MIGRATION

There is little information available regarding projected ethnicity changes in Cardiff. However, as part of the local authority population projections, there is information on migration.

The following table shows the projected inward and outward international migration, as well as the projected inward and outward internal migration for all local authorities in Wales[3].

**Figure 7: Projected Inward and Outward International Migration, and Inward and Outward Internal Migration by Local Authority, 2018 and 2028**

| | International migration | | | | Internal migration | | | |
|---|---|---|---|---|---|---|---|---|
| | Inward migration | | Outward migration | | Inward migration | | Outward migration | |
| | 2018-19 | 2027-28 | 2018-19 | 2027-28 | 2018-19 | 2027-28 | 2018-19 | 2027-28 |
| Isle of Anglesey | 120 | 120 | 60 | 60 | 2,400 | 2,500 | 2,300 | 2,200 |
| Gwynedd | 1,130 | 1,130 | 490 | 490 | 5,700 | 5,900 | 5,800 | 5,900 |
| Conwy | 280 | 280 | 200 | 200 | 4,900 | 5,100 | 4,200 | 4,200 |
| Denbighshire | 240 | 240 | 140 | 140 | 4,500 | 4,600 | 4,200 | 4,100 |
| Flintshire | 540 | 540 | 390 | 390 | 5,100 | 5,100 | 4,800 | 4,900 |
| Wrexham | 580 | 580 | 620 | 620 | 4,000 | 4,100 | 4,100 | 4,000 |
| Powys | 350 | 350 | 280 | 280 | 5,600 | 5,700 | 5,200 | 5,100 |
| Ceredigion | 620 | 620 | 390 | 390 | 5,200 | 5,500 | 5,800 | 5,400 |
| Pembrokeshire | 300 | 300 | 180 | 180 | 4,300 | 4,400 | 3,700 | 3,600 |
| Carmarthenshire | 530 | 530 | 320 | 320 | 6,800 | 6,900 | 5,900 | 5,900 |
| Swansea | 2,530 | 2,530 | 1,130 | 1,130 | 10,100 | 10,400 | 10,500 | 10,600 |
| Neath Port Talbot | 280 | 280 | 120 | 120 | 4,900 | 5,000 | 4,600 | 4,500 |
| Bridgend | 360 | 360 | 190 | 190 | 4,600 | 4,700 | 3,800 | 3,800 |
| Vale of Glamorgan | 340 | 340 | 200 | 200 | 5,400 | 5,400 | 4,700 | 4,700 |
| Cardiff | 5,450 | 5,450 | 3,490 | 3,490 | 20,600 | 21,200 | 22,500 | 22,700 |
| Rhondda Cynon Taf | 820 | 820 | 330 | 330 | 7,100 | 7,200 | 6,900 | 6,900 |
| Merthyr Tydfil | 180 | 180 | 90 | 90 | 1,600 | 1,600 | 1,500 | 1,500 |
| Caerphilly | 180 | 180 | 130 | 130 | 4,900 | 4,900 | 4,700 | 4,700 |
| Blaenau Gwent | 110 | 110 | 70 | 70 | 1,900 | 1,900 | 1,800 | 1,800 |
| Torfaen | 100 | 100 | 70 | 70 | 2,800 | 2,800 | 2,500 | 2,500 |
| Monmouthshire | 230 | 230 | 150 | 150 | 4,700 | 4,800 | 4,200 | 4,100 |
| Newport | 1,000 | 1,000 | 590 | 590 | 6,100 | 6,100 | 5,700 | 5,900 |

The table shows that, out of the local authorities in Wales, the highest level of projected inward and outward international migration can be seen in Cardiff. It is difficult to predict which ethnic groups will contribute to this projected increase due to global political and environmental changes.  Brexit, for example, and changes within the international environment, is expected to influence the number of migrants from countries outside of the EU.

*[3] Net migration is the difference between the number of people moving into an area and the number of people moving out of an area. It is negative when more people move out of an area than move in. It is positive when more people move into an area than move out.*

# Health & Social Care[4]

[4] Please note: In Cardiff's 2017 Future Trends report, information was included from Daffodil, which is a web-based system developed by the Institute of Public Care (IPC) for the Welsh Government. The system pulls together - in one place - the information needed to plan what care services might be required in the local area in the future. Information held on this system has changed since the last report and is now more related to care services.

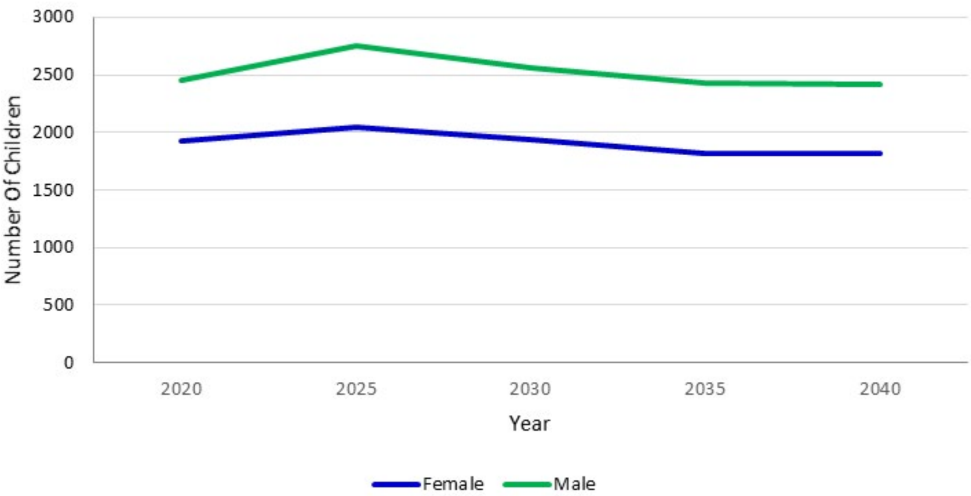
## 3.1 OBESITY

Data in relation to obesity is available in respect of school aged children and is taken from the 'Health Behaviour in School Aged Children' (HSBC) Survey 2017/18. The survey is conducted every four years amongst school children in years 7 to 11 (aged 11 to 16 years).

In Cardiff, the number of children aged 11 to 16 years who are obese is projected to increase by 7.2% by 2028. Subsequently, between 2028 and 2040, the number of children aged 11 to 16 years who are obese is projected to decrease by 3%.

It appears that males are more prone to obesity than females, with a prediction that over the 20-year period, 32% more males than females will be subject to obesity/overweight issues.

**Figure 8: Predicted Number of Children Aged 11 to 16 Years who are Overweight or Obese in Cardiff, 2020 to 2040**




## 3.2 DAILY LIVING

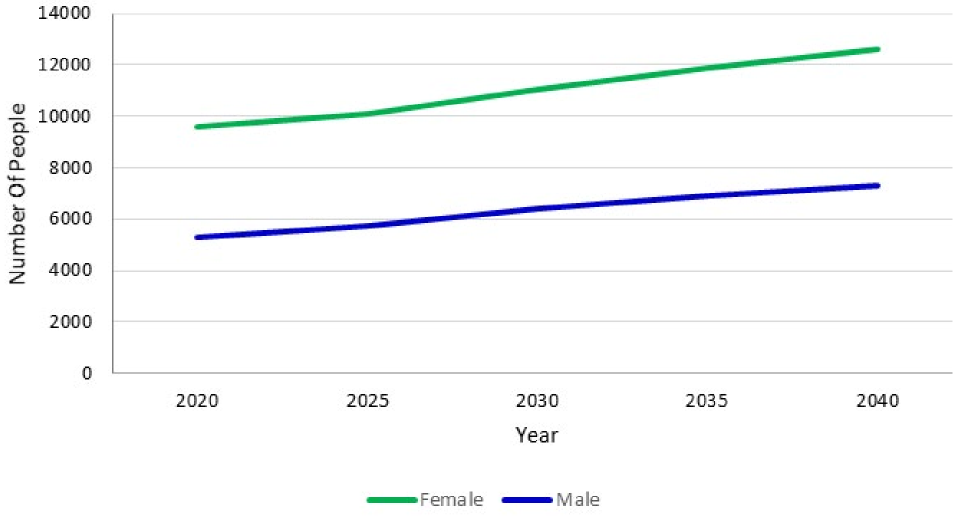
The need for social care is often measured through Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs). ADLs are activities relating to personal care and mobility around the home (e.g., eating, bathing, toileting etc.) and are important aspects of living independently.

The following figures, taken from Daffodil, show the predicted rise in the number of people living in Cardiff who will struggle with daily living activities and therefore may need assistance via social care. There is predicted to be a 25.4% increase in the number of people requiring assistance to carry out daily living activities between 2020 and 2040. It should also be noted that a higher percentage of females are predicted to struggle with activities of daily living than males. This may be due to the differences in life expectancy.

**Figure 9: Predicted Number of People who will Struggle with Activities of Daily Living by Age Range, 2020 to 2040**

| Age Range | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|
| 65-69 | 2,904 | 3,156 | 3,476 | 3,401 | 3,181 |
| 70-74 | 2,420 | 2,401 | 2,624 | 2,909 | 2,864 |
| 75-79 | 2,583 | 3,196 | 3,193 | 3,520 | 3,947 |
| 80+ | 6,955 | 7,085 | 8,158 | 8,960 | 9,924 |

**Figure 10: Predicted Number of People Aged 65 and Over who will Struggle with Activities of Daily Living, 2020 to 2040**




## 3.3 INFORMAL CARE

The main data source in respect of informal care is the 2011 Census, which shows the number of hours of care provision given by individuals on an informal basis.

Figure 11 shows the number of people in Cardiff who are providing care on an informal basis for between 1 to 50+ hours (unpaid). It will be noted that there are considerably more females providing informal care than males; however, over the period of 20 years it is predicted that the number of males providing care will increase by 10.3 %, whilst the number of females will only increase by 3.7 %.

**Figure 11: Predicted Number of People Providing Unpaid Care in Cardiff, 2020 to 2040**

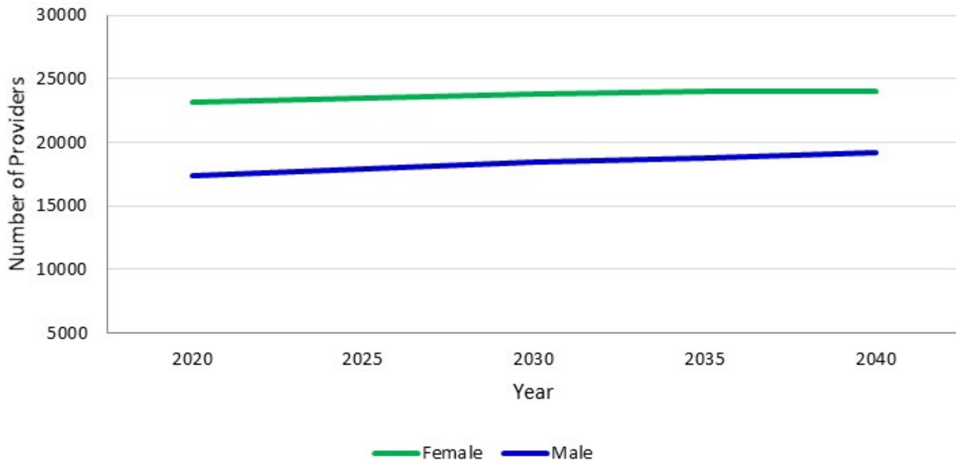


Figure 12 shows projected changes in the age range of care providers by the number of hours of provision given per week. It should be noted that these figures will be superseded once the results of the 2021 Census are published.

The projected change, over a 20-year period, in the number of people providing unpaid care varies significantly across the age groups; those under 50 years of age who provide unpaid care is projected to increase by just 1.5%, whilst those over 50 is projected to increase by a significantly higher percentage of 18.2%.

**Figure 12: Projected Changes in the Age Range of Care Providers in Cardiff by the Number of Hours of Provision Given per Week, 2020 to 2040**

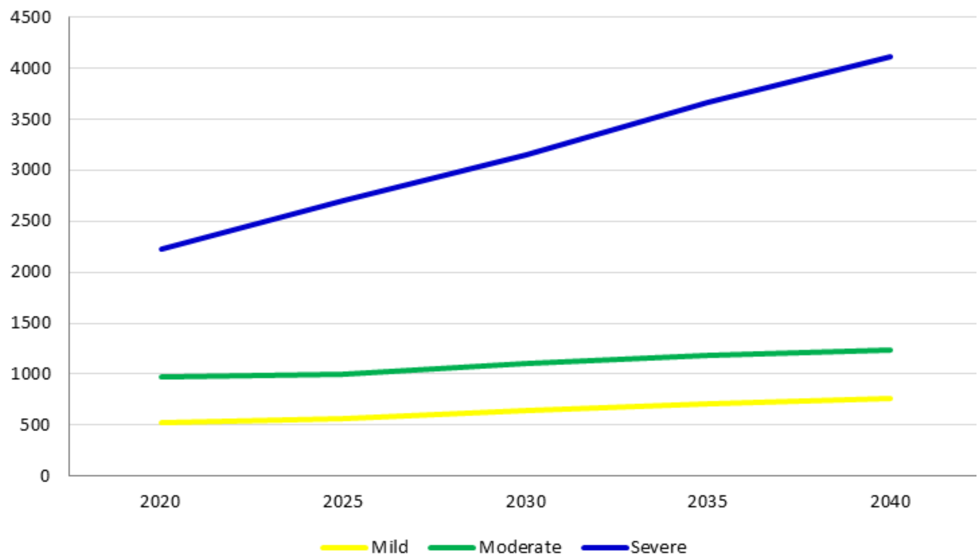
| Age Range | 2020 | | | 2040 | | | Differential | | |
|---|---|---|---|---|---|---|---|---|---|
| **No Of Hours** | **1 to 19** | **20 to 49** | **50+** | **1 to 19** | **20 to 49** | **50+** | **1 to 19** | **20 to 49** | **50+** |
| **0-5** | 745 | 102 | 99 | 680 | 93 | 91 | -8.7% | -8.8% | -8.1% |
| **16-17** | 303 | 54 | 31 | 328 | 58 | 33 | 8.3% | 7.4% | 6.5% |
| **18-19** | 534 | 137 | 85 | 583 | 150 | 93 | 9.2% | 9.5% | 9.4% |
| **20-24** | 1,764 | 440 | 375 | 1,887 | 471 | 401 | 7.0% | 7.0% | 6.9% |
| **25-29** | 1,604 | 394 | 509 | 1,682 | 414 | 530 | 4.9% | 5.1% | 4.1% |
| **30-34** | 1,437 | 362 | 636 | 1,547 | 390 | 680 | 7.7% | 7.7% | 6.9% |
| **35-39** | 1,619 | 430 | 779 | 1,523 | 404 | 725 | -5.9% | -6.0% | -6.9% |
| **40-44** | 1,814 | 454 | 765 | 1,904 | 477 | 800 | 5.0% | 5.1% | 4.6% |
| **45-49** | 2,360 | 521 | 785 | 2,572 | 568 | 855 | 9.0% | 9.0% | 8.9% |
| **50-54** | 2,979 | 639 | 924 | 2,912 | 623 | 902 | -2.2% | -2.5% | -2.4% |
| **55-59** | 3,005 | 699 | 1,074 | 2,843 | 661 | 1,015 | -5.4% | -5.4% | -5.5% |
| **60-64** | 2,198 | 559 | 1,066 | 2,136 | 544 | 1,037 | -2.8% | -2.7% | -2.7% |
| **65-69** | 1,392 | 407 | 1,040 | 1,525 | 446 | 1,139 | 9.6% | 9.6% | 9.5% |
| **70-74** | 930 | 339 | 1,043 | 1,097 | 400 | 1,232 | 18.0% | 18.0% | 18.1% |
| **75-79** | 495 | 223 | 781 | 756 | 340 | 1,193 | 52.7% | 52.5% | 52.8% |
| **80-84** | 298 | 144 | 566 | 443 | 214 | 842 | 48.7% | 48.6% | 48.8% |
| **85+** | 183 | 88 | 396 | 276 | 134 | 607 | 50.8% | 52.3% | 53.3% |

## 3.4 DEMENTIA

Prevalence of dementia is derived from a study which estimates the number of older people aged 65 and over living with dementia in the UK (2019-2040) and the costs of dementia care (Wittenberg et al 2019). Projections were produced using an updated version of a model developed by the Care Policy and Evaluation Centre (CPEC) at the London School of Economics for the Modelling Outcome and Cost Impacts of Interventions for Dementia (MODEM) study.

Figure 13 shows the estimated number of people over 65 in Cardiff who will be suffering from the various stages of dementia. This gives some indication as to the impact there will be on social care.

**Figure 13: Trends within Cardiff of Persons Over 65 Suffering from Dementia, 2020 to 2040**

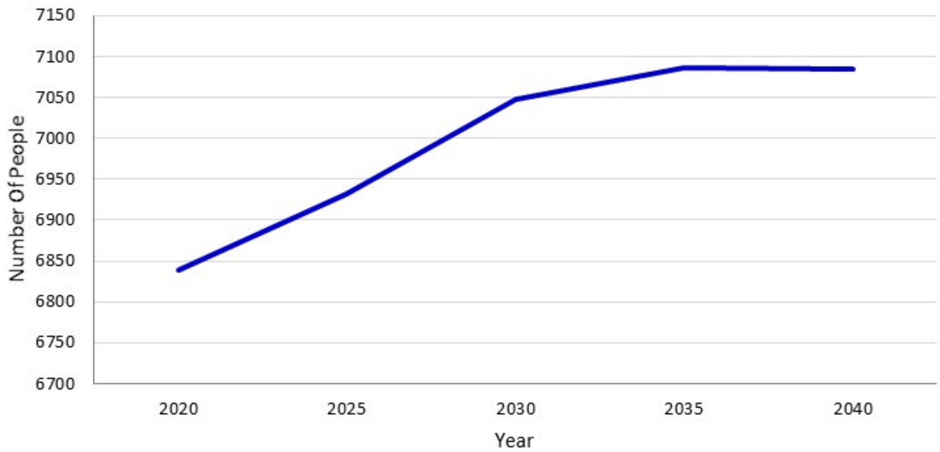


## 3.5 DRUG USE

To identify problematic drug use[5] that may lead to use of Social Services, the problematic drug use estimate for individuals aged 15 to 64 years has been used from the most recent substance misuse in Wales publication (NHS Wales Public Health Wales and Welsh Government 2019).

The following chart shows that it is predicted that the number of people with a history of drug misuse in Cardiff will increase year-on-year until 2035, when the numbers will level out giving an overall increase of 246 individuals (or 4 % ).

**Figure 14: Predicted Number of People Aged 15 to 64 with a History of Drug Misuse within Cardiff, 2020 to 2040**

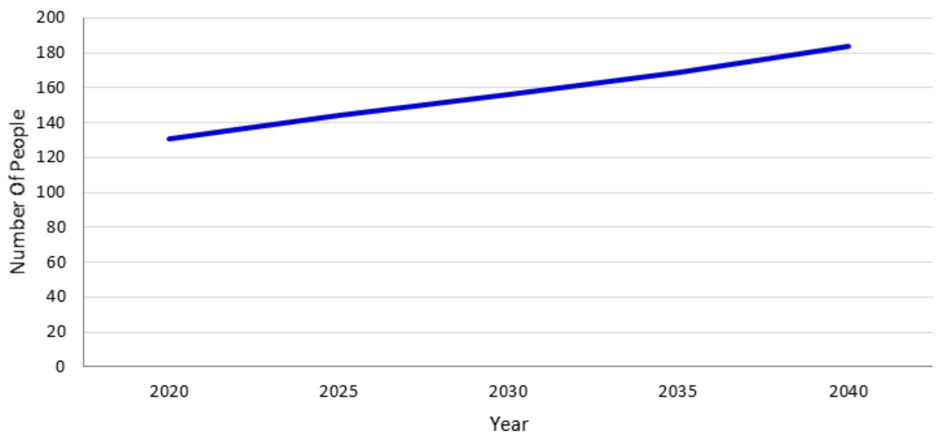



## 3.6 FALLS

Data on inpatient hospital admissions due to a fall are from the Patient Episode Database for Wales (PEDW) for adults aged over 60. This has been used together with the mid-2018 ONS population data to calculate a prediction of the trend for the next 20 years in relation to persons over 60 who may be admitted to hospital because of a fall.

The number of people aged 60 and over who are admitted to hospital as a result of a fall is predicted to increase year-on-year in Cardiff, resulting in a 40.5 % increase by 2040.

**Figure 15: Predicted Number of People Aged 60 and Over to Suffer from Falls in Cardiff, 2020 to 2040**




[5] *The definition of Problematic Drug Use (PDU) is injecting drug use or long duration/regular use of opioids, cocaine and/or amphetamines.*

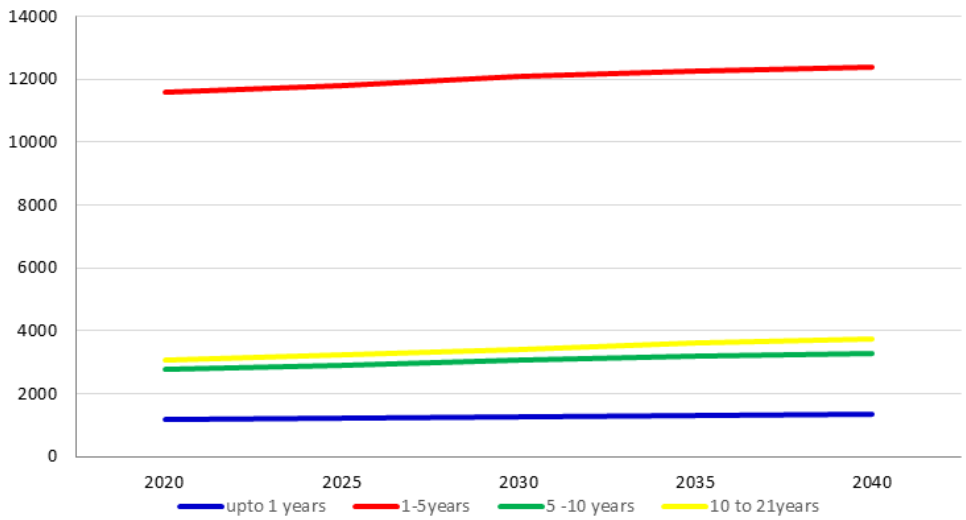
## 3.7 CANCER

Cancer prevalence data show the number of people alive on 31 December 2015 who have been diagnosed with cancer at some point in their lives. Cancer incidence, prevalence and mortality data are provided by the Welsh Cancer Intelligence & Surveillance Unit (WCISU), which maintains a register of confirmed cancer cases in Wales.

The data is split by age and time since diagnosis. The most commonly diagnosed cancers are breast, prostate, lung and colorectal. Baseline incidence and prevalence data are for 2015, the most recent year of data for prevalence. Population rates were calculated using the 2015 mid-year population estimates for Wales.

Figure 16 shows the predicted number of people living with cancer for different timescales. The largest number of people falls within those living with cancer for 1 to 5 years. All groups are expected to increase slightly over the next 20 years, with those living with cancer for up to one year showing an increase of 16.1% over the 20-year period. Those living with cancer for 1 to 5 years will increase by 6.9% and those living with cancer for 5 to 10 years and 10 to 21 years will increase by 18.8% and 22.7% respectively.

**Figure 16: Predicted Number of People Living with Cancer in Cardiff, 2020 to 2040**




Further analysis of these statistics is shown in the following table, which shows the breakdown of the above predicted by age category.

**Figure 17: Predicted Number of People Living with Cancer in Cardiff by Age Category, 2020 to 2040**

| Predicted Number of people Living with Cancer for upto 1 year | | | | | | Predicted Number of people Living with Cancer for 5 to 10 yrs | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Age Range | 2020 | 2025 | 2030 | 2035 | 2040 | Age Range | 2020 | 2025 | 2030 | 2035 | 2040 |
| 0-49 | 178 | 180 | 182 | 183 | 183 | 0-49 | 357 | 359 | 365 | 367 | 367 |
| 50-64 | 342 | 339 | 326 | 325 | 331 | 50-64 | 701 | 696 | 669 | 666 | 679 |
| 65-74 | 337 | 351 | 385 | 399 | 383 | 65-74 | 840 | 875 | 959 | 994 | 955 |
| 75+ | 308 | 343 | 373 | 410 | 456 | 75+ | 877 | 975 | 1061 | 1167 | 1298 |
| Predicted Number of people Living with Cancer for 1 to 5 yrs | | | | | | Predicted Number of people Living with Cancer for 10 to 21 yrs | | | | | |
| Age Range | 2020 | 2025 | 2030 | 2035 | 2040 | Age Range | 2020 | 2025 | 2030 | 2035 | 2040 |
| 0-49 | 10017 | 10089 | 10242 | 10296 | 10296 | 0-49 | 306 | 308 | 313 | 314 | 314 |
| 50-64 | 118 | 117 | 112 | 112 | 114 | 50-64 | 648 | 644 | 618 | 616 | 627 |
| 65-74 | 495 | 515 | 564 | 585 | 562 | 65-74 | 886 | 922 | 1011 | 1048 | 1007 |
| 75+ | 959 | 1066 | 1159 | 1275 | 1418 | 75+ | 1221 | 1358 | 1477 | 1625 | 1807 |

## 3.8 FUEL POVERTY

Figures 18 and 19 show the number of people who are predicted to suffer from fuel poverty[6] in Cardiff. The measure is calculated using the Low Income, High Costs (LHC) indicator of the Housing Survey.
The calculation was undertaken prior to the significant increase in fuel costs in 2021 and it is therefore anticipated that these figures will be significantly impacted by these increases if they continue. Using the current calculations, it is anticipated that there will be a 10.4% increase over the next 20 years in the number of people living with fuel poverty in Cardiff.

**Figure 18: Predicted Number of People Living with Fuel Poverty in Cardiff, 2020 to 2040**

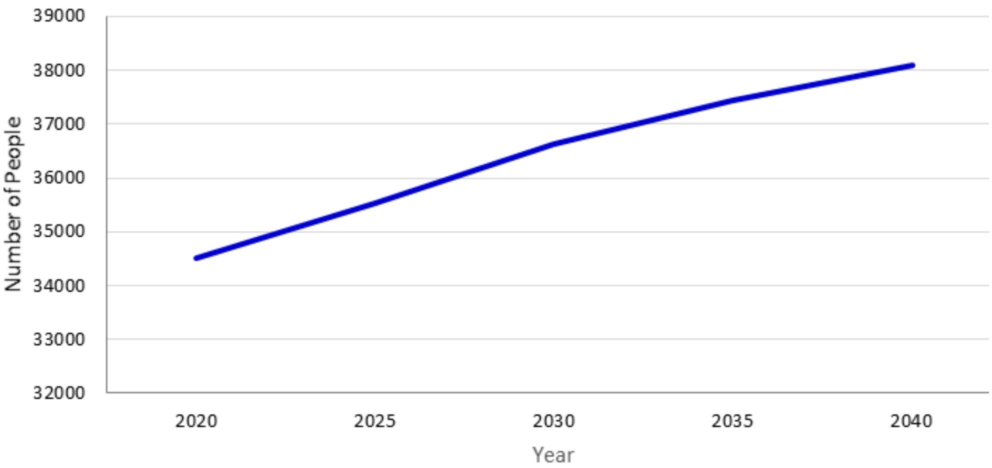



**Figure 19: Predicted Number of People Living with Fuel Poverty in Cardiff by Age Range, 2020 to 2040**

| Age Range | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|
| **16-24** | 7,944 | 8,237 | 9,064 | 9,049 | 8,550 |
| **25-34** | 7,866 | 7,863 | 7,533 | 7,857 | 8,388 |
| **35-44** | 2,711 | 2,794 | 2,869 | 2,847 | 2,717 |
| **45-54** | 2,866 | 2,735 | 2,806 | 2,910 | 2,976 |
| **55-64** | 5,721 | 5,871 | 5,595 | 5,343 | 5,487 |
| **65-74** | 2,859 | 2,975 | 3,262 | 3,382 | 3,247 |
| **75+** | 4,542 | 5,049 | 5,491 | 6,043 | 6,719 |
| **Total** | 34,509 | 35,524 | 36,620 | 37,431 | 38,084 |

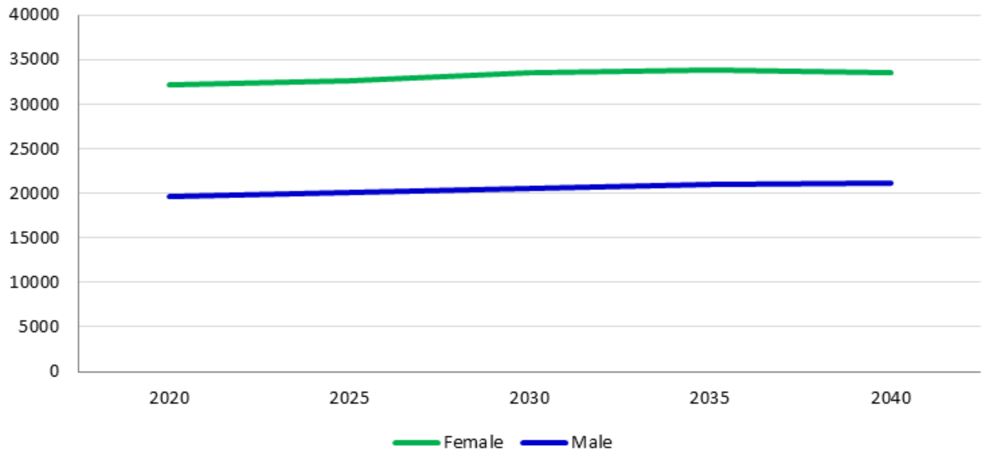
*[6] Under the LHC indicator, a household is considered fuel poor if they have required fuel costs that are above average and were they to spend that amount would be left with a residual income below the official poverty line. The LHC considers income, energy requirements and fuel prices at a household level.*

## 3.9 MENTAL HEALTH

Mental health information is based on the Social Care Wales Population Projections published on the Welsh Government Daffodil Cymru Platform.

In respect of the number of people over sixteen years of age who are predicted to suffer from a common mental disorder, projections over a 20-year period are shown in Figure 20. It is predicted that over a 20-year period there will be a 4.2% increase in the number of females with a common mental disorder and a 7.9% increase in respect of males.

**Figure 20: Predicted Number of People Over 16 with Common Mental Disorders in Cardiff, 2020 to 2040**




Furthermore, over the next 20 years there is predicted to be an increase in persons suffering from Psychotic Disorder, Antisocial Personality Disorder, Bipolar Disorders and Borderline Personality Disorder.

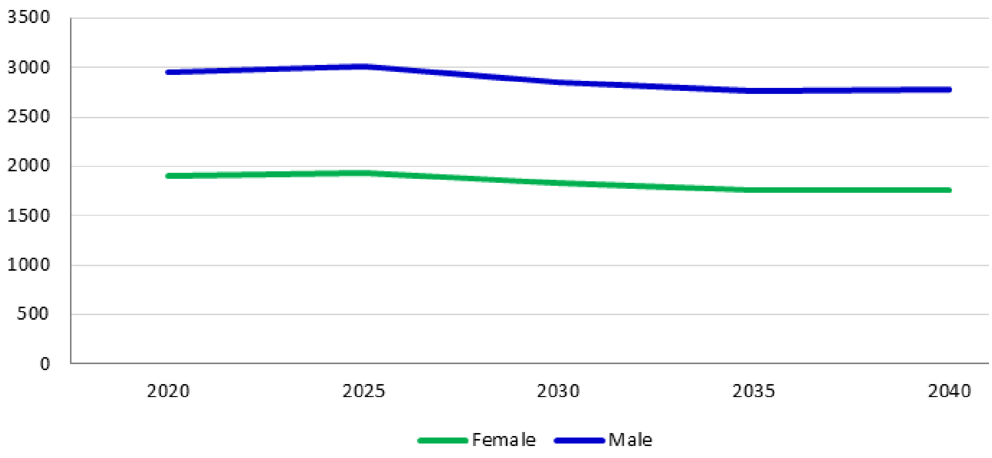
**Figure 21: Predicted Number of People in Cardiff Suffering from Various Mental Health Conditions**

| Condition | 2020 | | 2040 | | % Age Increase | |
|---|---|---|---|---|---|---|
| | Females | Males | Females | Males | Females | Males |
| **Psychotic Disorder** | 926 | 635 | 945 | 669 | 2.1% | 5.4% |
| **Antisocial Personality Disorder** | 2429 | 6365 | 2509 | 6800 | 3.3% | 6.8% |
| **Bipolar Disorders** | 3036 | 3373 | 3122 | 3611 | 2.8% | 7.1% |
| **Borderline Personality Disorder** | 4096 | 2489 | 4270 | 2661 | 4.2% | 6.9% |

Across the four classifications, there are significant differences by gender, with females having the highest number of individuals who suffer from Psychotic Disorders and Borderline Personality Disorders, whereas males are represented more in Antisocial Personality and Bipolar Disorders. Males show a larger percentage increase across all four categories.

In relation to children and young people (those under 16 years of age), Figure 22 shows the predicted trend for those suffering from some form of mental disorder. It will be noted that males have a higher representation than females. However, there is a predicted decrease in the number of children and young people with mental disorders across both genders between 2020 and 2040; a 7.4% decrease in respect of females and 6.1% decrease in respect of males.

**Figure 22: Predicted Number of Children and Young People with Mental Disorders**




## 3.10 HEALTH PLANNING

During the consultation for the 2017-18 Cardiff Infrastructure Plan, people living in Cardiff and the Vale were asked what they want from their health service, placing residents at the centre of the planning process. A summary of this consultation is included as Appendix I – Health Service Consultation. The 2018-21 plan outlines the progress made under the same headings as the consultation, framing strategic development in line with public opinions.

Listening to seldom heard groups has particularly become an area of focus. Working in collaboration with partners, plans have been developed to reach the following groups:

- Homeless people
- Travelers
- Asylum seekers
- Black, Asian or Minority Ethnic Communities
- Carers
- People with sensory loss
- Transgender communities
- People with some Mental Health conditions
- Sex Workers

Covid-19 has had a significant impact on the planning and delivery of services within the Health Board. In March 2020, the Integrated Medium-Term Strategy (IMTP) process was paused, and Quarterly Frameworks were introduced for NHS Wales.

*[7] Integrated Medium-Term Plan 2018-2021*
*[8] The term 'seldom-heard groups' refers to under-represented people who access services. Many factors can contribute to people who use services being seldom heard, including disability, ethnicity, sexuality, communication impairments, mental health problems, homelessness, and geographical isolation.*
*[9] Cardiff and Vale University Health Board Annual Report (2020-21)*

Some of the lasting impacts of the pandemic on services include:

- Additional infection prevention and control measures, reducing the efficiency of services.
- Extended waiting times
- Reduced confidence for both clinicians and patients in the wake of the pandemic
- Increases complexity of service delivery, with the need to separate some patient groups to minimise virus transmission.

As of March 2021, the following risks were identified as posing the greatest risk to the delivery of the Health Board's strategic objectives:

1. Workforce
2. Financial Sustainability
3. Sustainable Primary and Community Care
4. Patient Safety
5. Sustainable Culture
6. Capital Assets
7. Test, Trace and Protect
8. The risk of inadequate planned care capacity
9. Risk of Delivery of IMTP

It is predicted that over the next ten years, there will be an increase in demand for both Health and Social Care services. It is also evident that the current workforce employment issues across both sectors will be a major concern in delivering these services. Trying to solve these workforce problems will be a key area of focus moving forward.

# Housing & Jobs

## 4.1 LOCAL DEVELOPMENT PLANNING

A new Local Development Plan (LDP) is currently being prepared to make provision for growth in new homes and jobs over the next 15 years to 2036. The plan will help meet demand for housing from natural population growth and people moving into the city to live and work and will address the need for new affordable homes for people experiencing homelessness and people on the Council's waiting list. It will also anticipate the level of jobs required over the planning period.

In accordance with Welsh Government guidance, a consultation has been held on three growth scenarios, using local authority household projection figures as a starting point for assessing future requirements. The latest (2018) Welsh Government population and household projections, based on past rates, suggest that about 900 homes per year are needed for the lifetime of the plan. However, these figures are based on the last 10 years, where there has been an under-provision of houses to meet housing needs. Taking this into account, the following options were put forward to aid debate and allow consideration of different levels of growth in jobs and homes:

| | | |
|---|---|---|
| **OPTION A (Baseline)** | About 19,000 new homes in total<br>(*residual requirement for an additional 2,140 new homes)<br>About 30,000 new jobs in total<br><br>This equates to 1,267 homes per annum for the plan period (2021 to 2036) | Based on Council's target for economic growth over the plan period to 2036.<br>Models the population impact of an average annual employment growth of +1,600 per year over the plan period.<br>Assumes net migration of 740 people per annum.<br>Delivers Council's economic aspirations |
| **OPTION B** | About 24,000 new homes in total<br>(*residual requirement for an additional 7,640 new homes)<br>About 32,300 new jobs in total<br><br>This equates to 1,600 homes per annum for the plan period (2021 to 2036) | Policy based dwelling led option.<br>Models population impact of an average annual dwelling growth of +1,600 dwellings per annum over the plan period.<br>In general conformity with the Future Wales National Growth Area objectives<br>Delivers additional affordable housing to meet evidenced needs<br>Delivers Council's economic aspirations<br>Could deliver the regeneration of mixed-use areas within the city. |
| **OPTION C** | About 30,500 new homes in total<br>(*residual requirement for an additional 14,790 new homes)<br>About 43,000 new jobs in total<br><br>This equates to 2,033 homes per annum for the plan period (2021 to 2036 | Based on 2014 population and household projection figures and equivalent to growth levels contained in adopted LDP.<br>These projections use historical population data for the period 2001 to 2014.<br>In general conformity with Future Wales National Growth Area objectives.<br>Delivers Council's economic aspirations<br>Delivers additional affordable housing to meet evidenced needs.<br>Could deliver the regeneration of mixed-use areas<br>Provides a greater range of choice and supply of housing sites |

**After taking account of homes that can reasonably expect to come forward over the plan period*

It should be noted that the final option put forward in the Preferred Strategy (draft LDP) could differ following consideration of the feedback on these options and further analysis. In addition, work will be undertaken to assess the most up-to-date and appropriate figures to use as work on the LDP progresses.

## 4.2 CHANGING DEMOGRAPHICS

Development of the growth scenarios will need to take into account demographic change that will impact on the different levels and types of housing provision including requirements for market, affordable and social housing.

### An Ageing Population

Over the next ten years, the percentage of over 65s in Cardiff is set to increase by 15.7% and will account for around 15.8% of the entire population. This group will impact on demand for supported housing, support services and need for adaptations. Since the publication of the Cardiff Housing Strategy, a Cardiff Older Persons Housing Strategy 2019-2023 has been published. The strategy sets out how the Council and partners will shape and deliver housing and related services for older people that meet a variety of needs and aspirations, and how this provision can help address wider health and social care priorities. The key issues set out in the strategy are:

- **An increasing aging population:** By 2037, the number of people aged 65 to 84 will increase by 42%, while those aged 85 and over will nearly double. This is likely to result in more people needing specialist accommodation or assistance that cannot be delivered in their current homes.

- **The comparative benefits of older persons' housing:** The cost of extra care housing is on average 57% of the weekly cost of residential care. This together with higher incidence of age-related health conditions and mobility issues will put major pressures on social care services and budgets.

- **Understanding housing need:** There are a range of social rented and private retirement housing offers for older people in Cardiff; however, provision is limited outside the north and west of the city. There is an estimated additional need for 3,051 homes of older persons' accommodation by 2035.

- **Meeting future demand:** A range of schemes for building new older person/care ready affordable homes are already planned and these will deliver 741 new homes by 2030, of which 434 will be Council homes.

- **Supporting independence:** Cardiff 's independent living services provide a wide range of support focused on helping older people to stay independent at home. Considerable success has been achieved with 75% of clients supported to stay at home without the need for social services intervention. Cardiff Council has invested in the provision of home adaptations.

- **Providing housing advice:** When asked, older people were often unaware of the different housing options available and concerned about the financial, legal, and practical issues associated with moving.

- **Supporting downsizing:** There are considerable advantages to older people in downsizing to more appropriate accommodation and this can play a significant part in helping them to stay independent at home. Offering older people attractive housing options could encourage them to downsize, providing them with more sustainable accommodation while also freeing up much needed family accommodation.

- **Sheltered housing schemes:** The provision of on-site support in sheltered schemes will be important in meeting the increasing needs of the older population. There is an opportunity to provide different models of support such as "sheltered plus" or "extra care light" as options to meet the range of needs of the older population.

- **Social housing allocation:** There is a need to review the waiting list and allocation arrangements to fully reflect the housing choices and wider needs of older people.

- **Residential and nursing care:** There is an opportunity to make greater use of new technology to support people to stay in their own homes. Residential care placements have decreased markedly over the last five years due to services now being available in the community to support increasingly frail people at home.

- **The importance of community:** Cardiff has a wide range of services to help prevent social isolation and promote wellbeing; many are based around the Council's community Hubs. Several new initiatives are being developed to further this, including new community wellbeing Hubs in the north and west of the city and proposals to open the facilities in older persons' housing complexes to the wider community.

## Homelessness Services

In 2018, Cardiff Council carried out a comprehensive review of homelessness in Cardiff, resulting in the Cardiff Homelessness Strategy for 2018-2022 being published. Key points set out in the strategy include:

- **Increased Demand:** Demand for services has increased significantly. Applications for help have increased by 68% since April 2015. Households threatened with homelessness have increased by 103%.

- **Early Intervention:** During 2017/18, Cardiff prevented 73% of households from becoming homeless where help was sought at an early stage. This was the third highest result in Wales. However, many households do not seek help prior to becoming homeless and there is a need to increase accessibility and availability of services so that more people access assistance at an early stage.

- **Financial Issues:** Mortgage and rent arrears was the chief cause of the threat of homelessness in 2017/18 with 707 cases, a 247% increase on the previous year. Wider social issues such as the impact of welfare reform are contributing to a significant increase in the number of people experiencing financial difficulties leading to rent arrears.

- **Private Rented Sector:** Loss of rented or tied accommodation, other than through rent arrears, is also a major cause of homelessness in Cardiff. Evidence suggests that landlords are selling their properties and leaving the private rental market. High levels of rent in Cardiff, as well as the reluctance of landlords to let to benefit claimants, have been identified as barriers to effectively using this resource. There is a need to better support landlords and increase incentives for them to house homeless applicants.

- **Family Breakdown:** There has been an 81% increase in clients losing accommodation provided by parents, relatives, or friends from April 2015 to March 2018. This became the biggest cause of homelessness in Cardiff in 2017/18. There is a need to build on the current family mediation arrangements. There are also concerns that changes to the Cardiff Housing Allocation Scheme in 2015, which affected the priority status of applicants living at home, are contributing to the increase in those presenting with parental notices and revisions to the Allocation Scheme are necessary to address this.

- **Specialist Pathways:** There are a high number of households in Cardiff needing to move on from accommodation provided by the National Asylum Support Services following a decision on their case. A review of the pathway is required to ensure these clients receive help prior to losing their accommodation. Prison leavers account for a significant number of people accessing homelessness services. There is limited opportunity for prevention with the majority of prisoners. A review of the pathway for these households is required to assess if there is scope for improved prevention work.

- **Vulnerable Groups:** many clients have complex issues resulting from Adverse Childhood Experiences, leading to issues such as mental health and substance dependency. Often these clients can struggle to maintain any form of accommodation resulting in a revolving door of homelessness. A person-centred, trauma informed approach is needed with multi-agency input, to address the underlying causes of homelessness.

- **Relieving Homelessness:** Cardiff has a wide range of high-quality temporary and supported housing and has successfully avoided the use of bed and breakfast accommodation since January 2006. However, the number of clients entering temporary accommodation has increased while the number moving on to permanent accommodation has decreased in recent years. This has resulted in longer periods spent in temporary provision. There is a need to improve move-on options to prevent long stays in temporary accommodation

- **Social Housing:** There are almost 8,000 households on the waiting list and approximately 400 new applicants join each month. Demand for social housing cannot be met by the current supply despite ambitious new build plans. The Private Rented Sector is essential in addressing the needs of homeless households.

- **Equalities:** A high proportion of single young men and those from certain ethnic backgrounds are becoming homeless and reasons for this need to be explored.

The Covid-19 pandemic has had a particularly significant impact on homelessness services; in the first 3 weeks of the crisis, 140 clients were rehoused into accommodation where they could shield/ self-isolate. In total, 182 units of accommodation were established during the crisis, with multi-agency supported provided to clients. The experience of the response to the pandemic has made clear the pressing need to continue to provide additional accommodation with multi-agency support into the long term.  As a result, a transformative 'No Going Back' homelessness strategy has been developed, with key areas of work moving forward include providing additional emergency accommodation, creating a rapid re-housing plan in line with Welsh Government guidelines and developing leasing schemes and move-on provision.

## 4.3 DEMAND FOR SOCIAL HOUSING

There is a high demand for social housing in Cardiff and a limited number of properties become available to let each year. Cardiff Council, Cadwyn, Cardiff Community, Hafod, Linc Cymru, Newydd, Taff, United Welsh and Wales & West Housing Associations operate a Common Housing Waiting List for social housing.

To offer applicants the widest choice of accommodation, they are considered for suitable properties regardless of landlord. All applicants are given the opportunity to express preferences about the areas of the city in which they want to live and will be offered up-to-date information about likely waiting times for social housing in their preferred areas.

**Figure 24: Demand for Social Housing in Cardiff**


Cardiff Council has set a target of building at least 1,000 new Council homes by May 2022 and at least 2,000 new Council homes in the longer term to meet the increasing demand for good quality, affordable social housing.

The need for housing is increasing year-on-year and the Council is committed to delivering new Council housing schemes and finding new and innovative ways of doing this. The Council's programme currently represents the largest Council housing build programme in Wales and will see around £350 million invested into delivering a variety of new Council homes in volume and at pace.

Cardiff Councils aspiration to build Council homes directly complements the Welsh Government's target of delivering 20,000 affordable homes throughout Wales over this term of government.

# Education & Skills

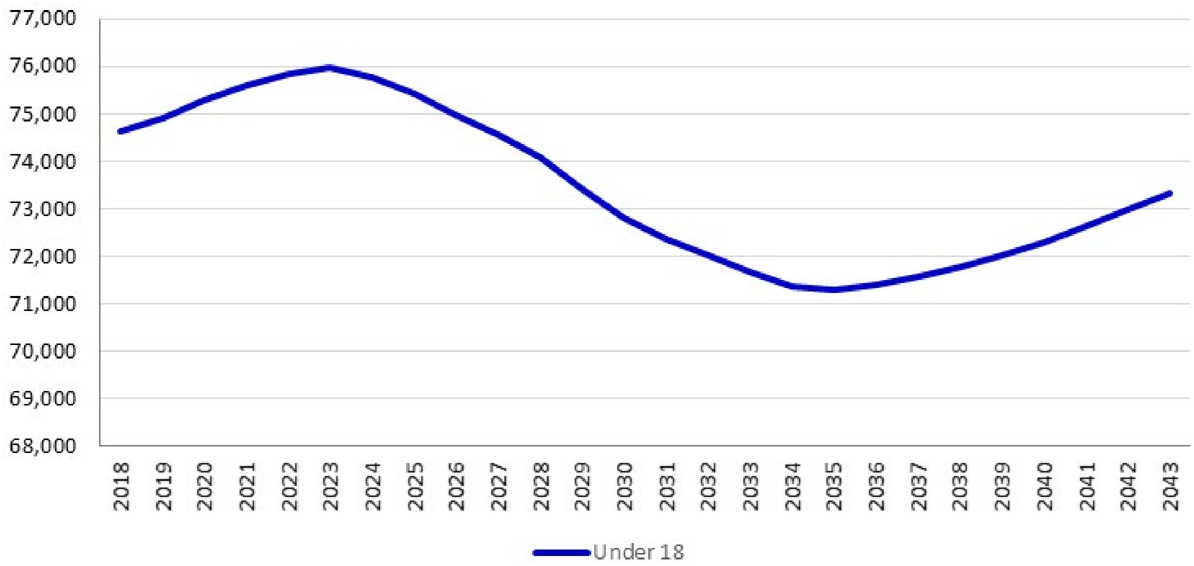
## 5.1 DEMAND ON SCHOOLS

### Under 18 Population Projections

In the previous Future Trends Report, Welsh Government population projections indicated that in 2036, there was projected to be 25% more people aged under 18 than there were in 2016. This compared to projections for Wales as a whole, where the population for this age group was projected to grow by just 0.8%.

These projections have changed significantly, with the 2018-based projections now predicting that Cardiff will have an average 0.4% increase in people aged under 18 year-on-year to 2023. After 2023, there is predicted to be a year-on-year average decrease of 0.5% to 2036, resulting in a projected reduction of the under 18 population of 4.4% by 2036. The Wales (total) projection has also changed from a projected growth of 0.8%, to a projected decrease in the under 18 population between 2018 and 2036 of 3.6%.

**Figure 25: Under 18 Population of Cardiff, 2018 to 2043**




From 2036 onwards, it is predicted that the under 18 population will once again start to increase on a yearly average of 0.4% to 2043, which will mean that between 2036 and 2043, the under 18 population is expected to increase by 2.7%. Overall, between 2018 and 2043, the under 18 population is expected to decrease by 1.7%.

The significant difference in projections has been further analysed. If a comparison is made between the projections for 2018 and 2036, for the age group of 1–12-year-olds, in respect of every age category, Wales showed a decrease, with significant decreases for 5-10-year-olds. This was replicated in respect of Cardiff. This is significantly different from the previous report in 2017, which showed that in respect of Cardiff, every age group showed an increase, varying between 6% and 9.5%

For 13-17-year-olds, Wales is projected to show an increase in every age group, varying between 0.8% and 9.6%, with the largest increase being in 15-16-year-olds. Within Cardiff, the largest projected increase is in the 16-year-old age group, which is predicted to rise by 12.3%, with the lowest being the 13-year-old age group, which is projected to rise by 5.4%.

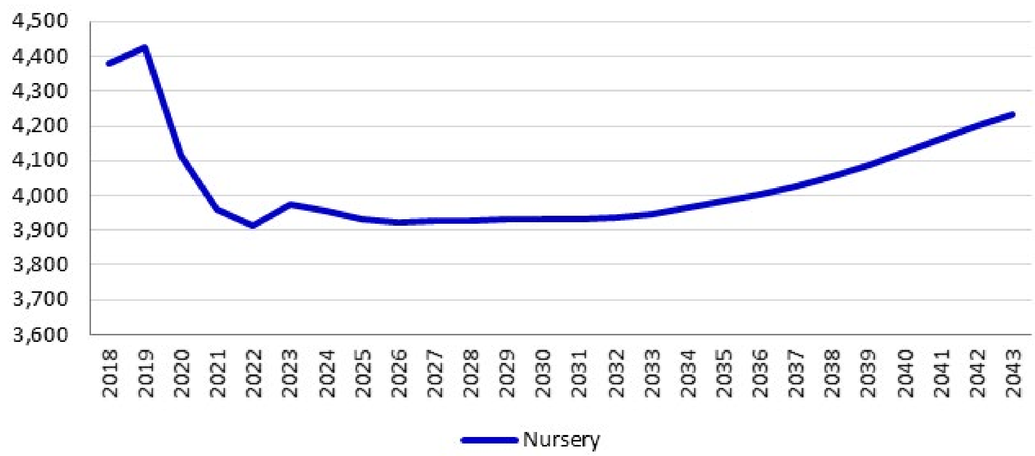
These new projections are in stark contrast to those previously published and could impact future demand planning for schools in Cardiff. However, it must be taken into consideration that, similarly, future published projections could again differ significantly from the 2018-based projections. When planning school places, experience has shown that Welsh Government population projections are best used in a wider context, rather than in isolation. Combining projections with other sources also tends to produce a more accurate picture.

Furthermore, over the past 25 years, birth rates in Cardiff have followed a cyclical pattern. It is possible that there will continue to be rises and falls in the birth rate that differ from Welsh Government projections, particularly when less-common events, such as the impact of the pandemic, are factored in. Birth rates have fallen below each of the three Welsh Government population projection trajectories published in 2011, 2014 and, most recently, in 2020 (based on 2018 data). It could also potentially rise at a higher rate in future years.

## Nursery Pupils: Projections

In Cardiff, children can start nursery at the age of 3. Prior analysis of Welsh Government population projections suggested that there would be an 8.7% increase in the number of 3-year-olds, from 4,496 in 2016 to 5,361 in 2036. However, the latest projections place the number of 3-year-olds in 2018 at 4,380, reducing to 4004 by 2036. After 2036, the numbers start to increase again, reaching a high of 4,233 by 2043, however, this is still a reduction on the 2018 total of 3.4%. There are, as of November 2021, 5,664 Nursery Places within maintained school provision in Cardiff - this is an increase of 198 places (3.6%) when compared to 2017. The current mid-year estimate (2020) puts the 3-year-old population at 4,168, which is 53 children over the projected figure.

**Figure 26: Nursery Pupils Yearly Projections in Cardiff, 2018 to 2043**



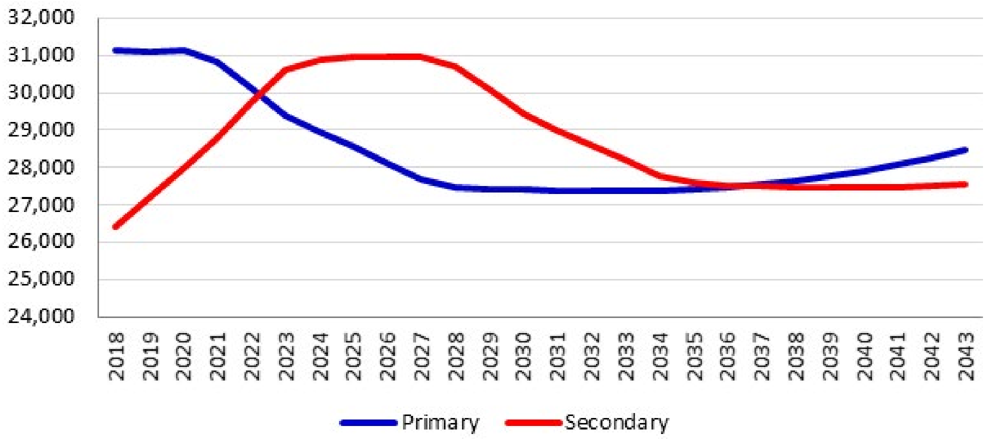

It is pertinent to note that Cardiff Council also collects GP registration data from the NHS each year. The most recent update, in 2021, indicates an academic year cohort of c3,626 children – which is approximately 430 children below the Welsh Government projection for 0-year-olds in the 2021 calendar year[10].

However, it is reasonable to conclude, based on past population cycles, that whilst the timing and rate of change is uncertain, the number of pupils enrolling beyond 2025 is likely to increase. A sufficient but sustainable level of surplus capacity should therefore be retained in schools to respond to future population changes.

*[10] As Cardiff Council's own projected number of 5-year-olds in the period 2021-2025 is based on NHS GP registration data supplied in August 2021, a high-level of confidence can be given to these short-term projections. Any short or medium-term school place planning in Cardiff must take account of the most recent birth rate data available as the primary source, supported by Welsh Government projections*

## Primary and Secondary Pupils: Projections

**Figure 27: Primary and Secondary Pupils Yearly Projections in Cardiff, 2018 to 2043**




Pupils aged 4 before 31 August will attend primary school until aged 11. Prior Welsh Government population projections indicated that there would be an increase of 5,656 children between the age of 4 and 10 years by 2036 (an 18% increase). However, the new projections show a reduction of 3,669 by 2036 (11.8%), and a reduction of 2,668 by 2043 (8.6%) in the number of children requiring primary school places. This decrease will see the population at this age decrease from 31,148 to 27,428.

There are currently 32,231 primary school places available in Cardiff, which is an increase of 1,242 places (4%) when compared to 2017. The current population mid-year estimate (mid-2020) puts the population of children in Cardiff aged between 4-10 at 31,355, which is 231 children more than the population projection figure. This is a difference of 0.7%.

In respect of children of secondary school age, from 11-17, the previous, Welsh Government, projections showed an increase of 9,318 children from 25,057 in 2016 to 34,375 in 2036. This is an increase of 37.2%. The new projections show an increase of 1,111 between 2018 and 2036, from 26,400 to 27,511, which is an increase of only 4.2%. The projections for these children differ from the primary school age as they show a steady increase to 2026, before reducing year-on-year until 2034, when the total then remains constant. There are currently 24,127 places available within secondary schools, which is an increase of 49 places (0.2%) when compared to 2017. The population mid-year estimate (mid-2020) puts the population of children aged 11-17 at 28,101, which is 94 children more than the population projection figure (a difference of 0.3%).

Furthermore, a 2020 report commissioned by Cardiff Council from Edge Analytics – specialists in demographic modelling – to inform school place planning, compared various projection scenarios[11]. Whilst there are many different combinations of assumptions that can be applied in the projection of pupil numbers, it is clear that there will be a fall in Cardiff's primary pupil numbers over the next 10 years, coupled with a rise in secondary pupil numbers[12]. Given the various projections and inherent uncertainty, school place planning must be adaptable to alternative scenarios of growth, demand, and distribution.

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[11] *Including Welsh Government 2018-based projections; Cardiff Council's baseline data projections – based on pre-school NHS and school census data; and two dwelling construction-led projections, based on annual housing growth in conjunction with principle and upper variant fertility rates (as considered by Welsh Government).*

[12] *It should be noted that Cardiff Council's primary school projections are based on PLASC and NHS data and hence identified existing cohorts. Modelling should therefore be considered as short-term projections, especially in younger cohorts.*

# Transport

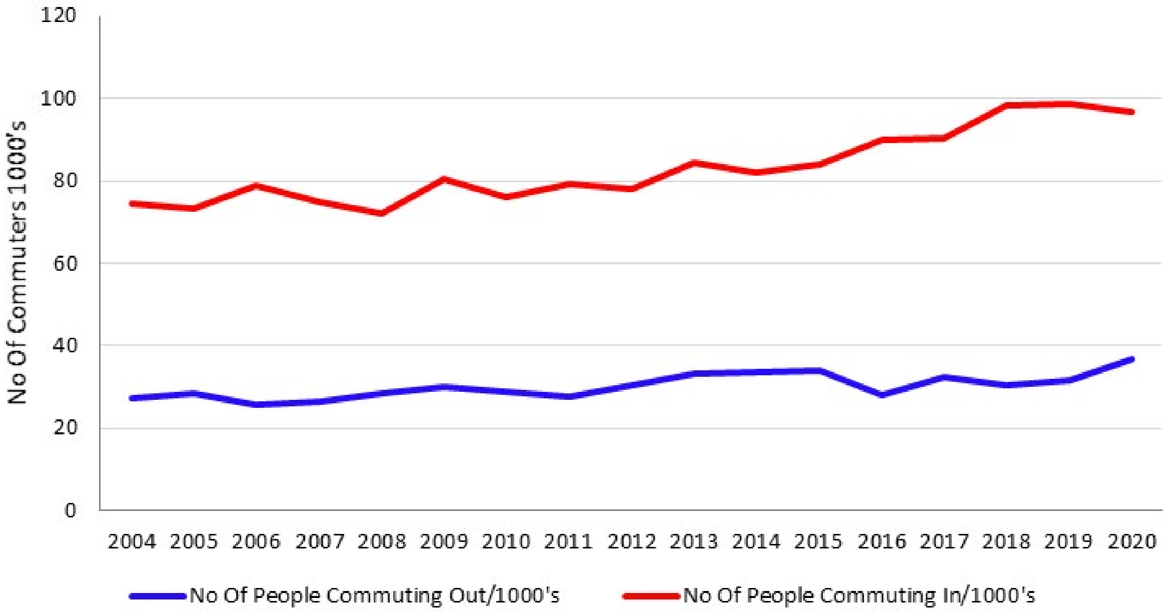
## 6.1 COMMUTING

The Stats Wales Website contains information on commuting patterns, with information taken from the Annual Population Survey. This data has been adjusted over time and is now updated to 2020[13].

Information is available from 2004 to 2020. Over this 16-year period, there has been an increase in the number of commuters.

At the beginning of 2020, there were 247,500 people working within the Cardiff Local Authority boundary. 150,700 of these resided within Cardiff, while the remaining 96,800 commuted into Cardiff daily from surrounding areas (39% of the Cardiff workforce). In addition to this figure, a further 36,800 persons commuted out of Cardiff to workplaces in other areas. The following chart shows the number of commuters over a 16-year period (in 1000's).

**Figure 28: Commuting Trends in Cardiff, 2004 to 2020**

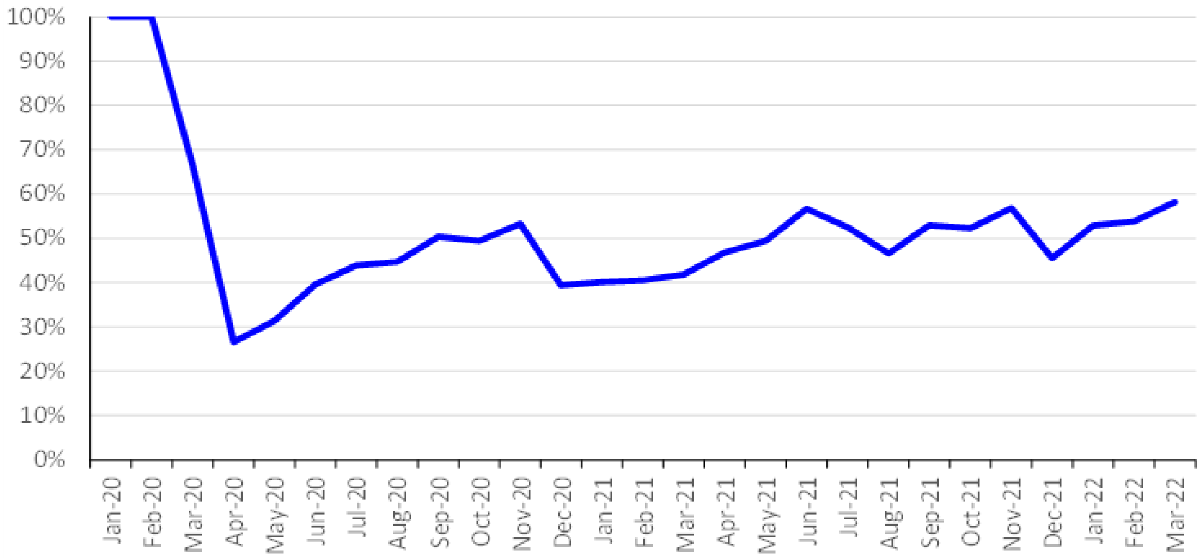



Whilst trends over this 16-year period have shown increases and decreases, the average increase of commuters into the city over this period has been 1,324 per year. In respect of commuters out of the city, the average increase over the 16-year period was 600 per year.

However, commuting patterns have fundamentally changed since March 2020, in response to the Covid-19 Pandemic, with many people now working from home or a combination of working from home and from the office (hybrid working). Commuting trends during the pandemic (based on mobility data) are presented below, where it can be seen that currently commuting remains just below 60% of pre-pandemic levels.

[13] *The data is predominantly based on pre-pandemic levels.*

**Figure 29: Commuting Trends Relative to Pre-Covid Levels**




It is anticipated that commuting numbers will continue to recover over the coming months, although with many employers now adopting hybrid working as a model for the long-term/foreseeable future, it may be many years in practice before commuting is back up to the levels last seen in 2019. Furthermore, Welsh Government, in their Smarter working Strategy (March 2022), have set out a long-term vision for 30% of the workforce to be working from home.

It should also be noted, however, that commuting represents only 15% of all the trips by all journey purposes across the day (as of 2019 or 12% in 2020, according to the National Travel Survey), and that traffic levels in Cardiff (all journey purposes) have now returned to near pre-pandemic levels.

## 6.2 TRANSPORT & LIVEABILITY

Transport has a major influence on the factors which make cities liveable. Transport contributes to prosperity by providing access to jobs for people and to customers, and markets for businesses. The way people travel – how much they walk, cycle, or use public transport and how dependent they are upon a private car – can have a significant impact on people's health and the cleanliness, safety, and sustainability of the local environment.

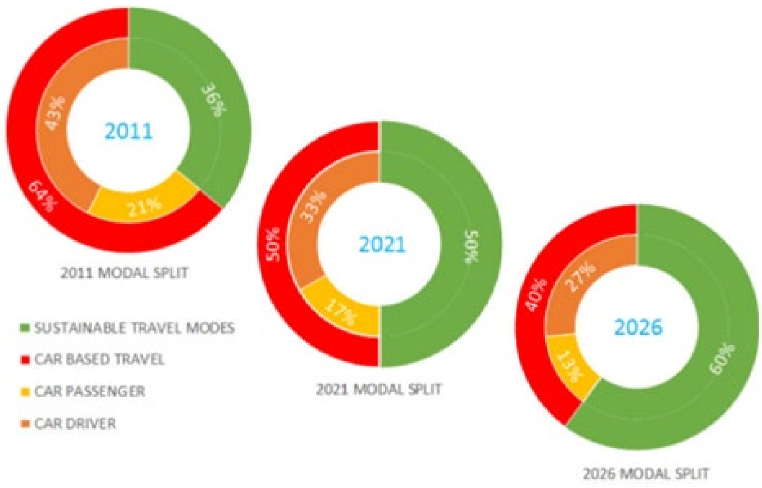
On average, people spend around an hour travelling each day, so the ease and comfort of daily trips to work, school, and shops can have a significant bearing on an individual's quality of life. The link between transport and liveability is recognised in the Council's vision for transport:

*"An integrated transport system that offers safe, efficient and sustainable travel for all, where public transport, walking and cycling provide real and desirable alternatives to car travel, which contributes to making Cardiff Europe's most liveable capital city."*

The transport strategy is underpinned by two main plans – the Local Development Plan (LDP) and Local Transport Plan (LTP) – which are also the main tools for securing the transport improvements needed to help Cardiff grow and become a truly liveable city.

The LTP was approved by the Welsh Government in May 2015 and sets out the main transport infrastructure proposals and aspirations for the period 2015-2030. This includes the period also covered by the LDP (2026). The LTP schemes will complement the transport infrastructure that we will negotiate and secure (with the backing of the LDP policies) from the developers of major sites through the planning process. The LTP has set certain targets to 2026 in relation to the modes of travel within Cardiff, as shown in Figure 30.

**Figure 30: Cardiff's Transport Targets**




## Future Pressures

Future growth will have an impact on the transport network within Cardiff. The current LDP provides for 41,000 (net) new homes and up to 40,000 jobs by 2026, which will significantly intensify pressures on the transport network.

Pressures from inbound commuting also adds pressure on the network. Cardiff is the centre of regional employment and, every day, large numbers of commuters travel into the city. Most workers (between 76% and 84%) who make the daily trip into Cardiff from neighbouring local authority areas travel by car (Census 2011).

**Figure 31: Inbound Commuting into Cardiff**

## Shift to Sustainable Transport

There is a high dependency on car travel within Cardiff. Use of sustainable transport has increased in areas of central Cardiff, but residents in the outer suburbs remain heavily reliant on cars for daily travel. To enable these car users to make the switch, they will require practical alternatives which can compete with the perceived convenience of a car.

Many daily trips are short, local and within easy walking distance. However, the quality of the pedestrian infrastructure and facilities varies across the city and improvements are needed to make sure that roads and streets are pedestrian friendly, with the needs of pedestrians considered first.

Cycling in Cardiff is growing. Over half of residents feel that, overall, Cardiff is a good place to cycle. However, the city's network of routes is very fragmented and conditions on many roads make them unattractive to ride on. This explains why 8 in 10 Cardiff residents think that safety for cycling needs to be improved (Bike Life Cardiff Report 2015).

The quality of the public transport network is a major challenge for Cardiff. Significant changes to the city's bus network, supported by substantial investment in bus infrastructure, will be necessary to make buses an attractive and practical alternative to the car for daily travel in Cardiff.

# Economy

## 7.1 EMPLOYMENT

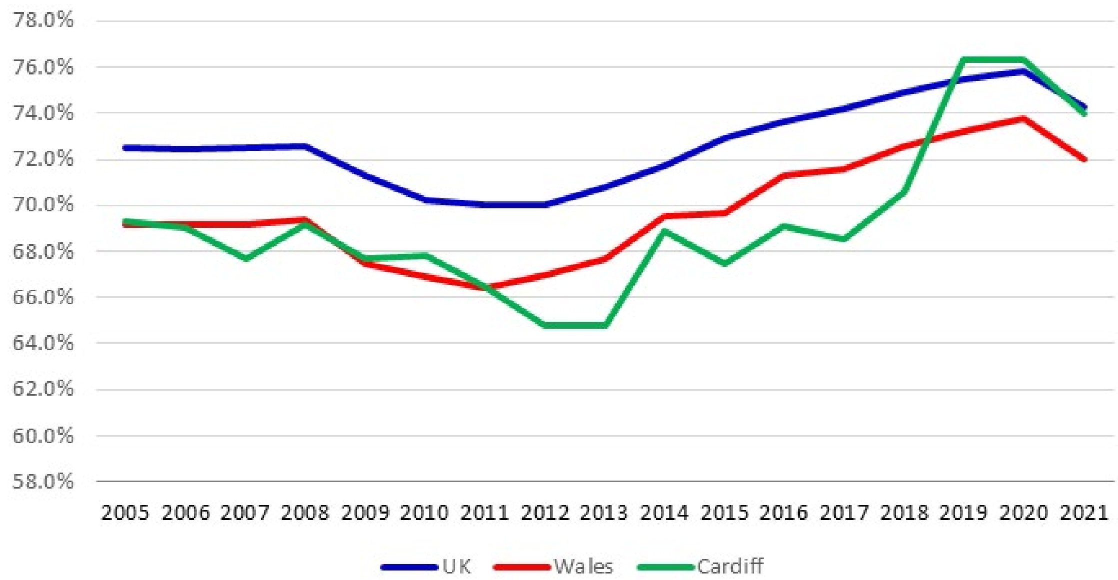
### Employment Rate: Overview

Using data from the ONS Annual Population Survey (accessed via NOMIS), there were 1.42 million people in employment in Wales between June 2020 and June 2021, which is no substantial change from 2017. This is a rate of 72% of those aged 16-64, up 0.4% from 2017. There was an increase year-on-year to 2020, when the rate was 73.8%, before falling back to 72% in 2021.

Since 2017, the total number of people in employment in the UK has risen by 0.2 million, which is an increase of 0.6% to 31.9 million. This is a rate of 74.3% of those aged 16-64, up from 74.2% in 2017. A similar trend is seen across Wales as a whole, where there was a year-on-year increase to 2020, when the rate was 75.8%, before falling back to 74.3% in 2021.

Within Cardiff, the total number in employment in 2020/21 was 188,800, which is an increase of 17,300 (10%) from 2017. This is a rate of 74.5% of those aged 16-64, which is an increase of 6% from 2017, when the rate was 68.5%. Cardiff has followed a similar trend to the UK and Wales, showing an increase from 2017 to 2020, when the rate was 76.3%, before falling back to 74.5% in 2021.

**Figure 32: Employment Rate, Persons (Percentage of those Aged 16-64), 2005 to 2021**




Both Wales and Cardiff have consistently been behind the UK in employment rate. Since 2010/11, Cardiff was below the Welsh employment rate until 2019, when Cardiff rose above both the Welsh and UK rates, before falling back in 2021 to 0.3% below the UK rate, but still above the Welsh Rate by 2%.

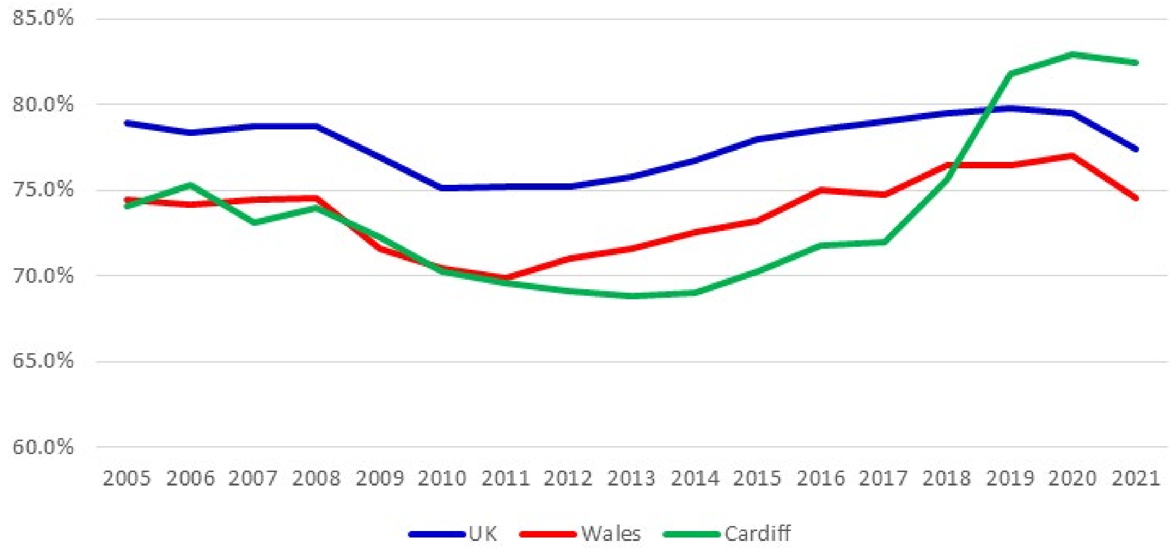
In 2004/05, Cardiff accounted for 11.4% of persons employed within Wales. In 2016/17 this figure increased, with Cardiff accounting for 13.3%.

## Employment Rate: Males and Females

Again, using data from the ONS Annual Population Survey (accessed via NOMIS), there were 741,300 males in employment in Wales for the year 2020/21, a similar figure to 2016/17. This is a rate of 74.6% of those aged 16-64, which is an increase of 0.1% when compared to 2016/17. The number of males in employment in the UK over the same period decreased by 174,500 (1%) to 16.7 million. This is a rate of 77.4% of those aged 16-64, down 1.6% when compared to 2016/17.

There were 105,300 males in employment within Cardiff for the year 2020/21, which is an employment rate of 82.5%, which is 10% higher than 2016/17, when the total number of males employed was 89,600. In 2016/17, Cardiff accounted for 12.1% of the male persons employed within Wales. In 2020/21 this figure increased, with Cardiff now accounting for 14.2%.

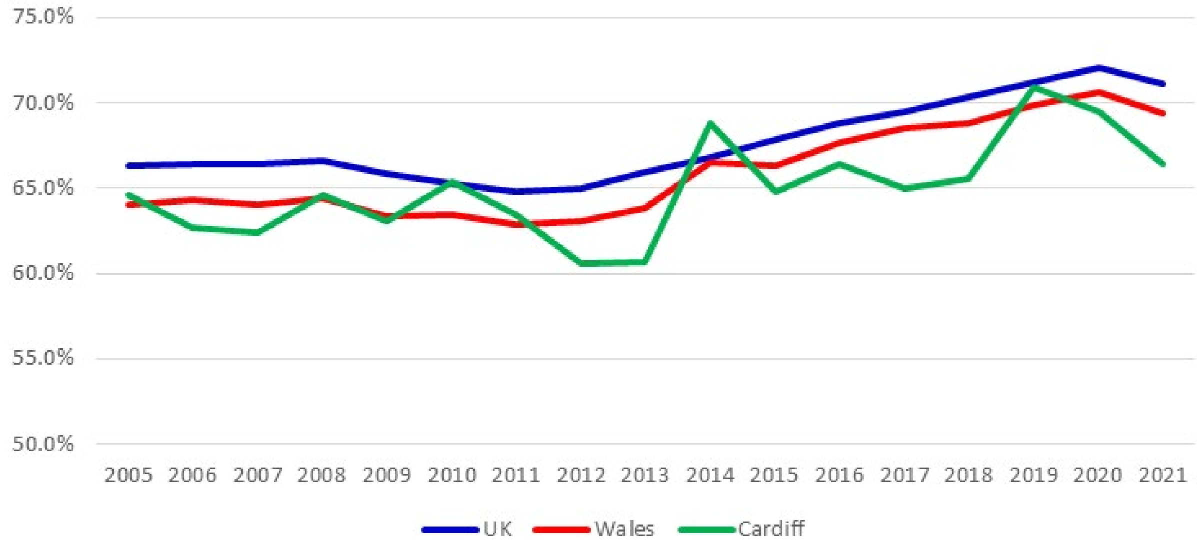
**Figure 33: Employment Rate, Males (Percentage of those Males Aged 16-64), 2005 to 2021**




There were 679,700 females in employment in Wales in 2020/21, down by 1,900 (0.3%) when compared to 2016/17. This is a rate of 69.4% of those aged 16-64, up from 68.5% in 2016/17. The number of females in employment in the UK was 15.3 million, up 449,700 (3%) when compared to 2016/17. This is a rate of 71.1% of those aged 16-64, up from 69.5% in 2016/17.

In Cardiff, however, there were 83,500 females in employment, up 1,500 (1.8%) when compared to 2016/17. This is a rate of 66.4% of those aged 16-64, up from 65.5% in 2016/17. In 2016/17, Cardiff accounted for 12% of the female persons employed within Wales. In 2020/21 this figure has increased, with Cardiff now accounting for 12.2%.

**Figure 34: Employment Rate, Females (Percentage of those Females Aged 16-64), 2005 to 2021**




Figures 33 and 34 highlight that there has been changes to the employment picture since 2017, with the employment rate for males increasing considerably, whilst in respect of females, the rate has fluctuated and fallen back to just 1.4% above the 2017 rate.

In respect of overall employment rate, for 2020/21, the rate is above the seventeen-year average for Cardiff of 69.3% at 74.0%. In respect of the 82.5% employment rate for males in 2020/21, the rate is above the seventeen-year average of 73.7%. In respect of females, the rate of 66.4% is also above the seventeen-year average of 65.0%. These figures show considerable improvement since 2017, despite the effects of the Covid-19 Pandemic.

In 2020/21, there were distinct differences between the male and female workforce, with 87.1% of males in full-time employment and 12.9% classed as part-time. In respect of females, the split has improved since the last report, with 66.5% in full-time employment and 33.5% part-time.

## Employment Monitoring Data

The Cardiff LDP 5th Monitoring Report, published in October 2021, states that, regarding employment:

*"Monitoring data shows continuing strong performance. Of particular importance is data regarding net job creation -there is a requirement for 40,000 new jobs over the plan period 2006-2026. 20,900 jobs were created between 2006 and 2015 and therefore the target for the remaining plan period is 19,100 jobs or 1,750 jobs annually. Since the first AMR (16/17), the number of jobs has been steadily increasing and the latest AMR shows an increase of 9,000 jobs since the first AMR (16/17)."*

From June 2006, the Stats Wales website shows that there was a total of 151,800 persons in employment in Cardiff. Figure 35 shows the percentage increases and decreases year-on-year between 2005/06 and 2020/21.

**Figure 35: Year-on-Year Percentage Increases in Employment in Cardiff, 2006 to 2021**

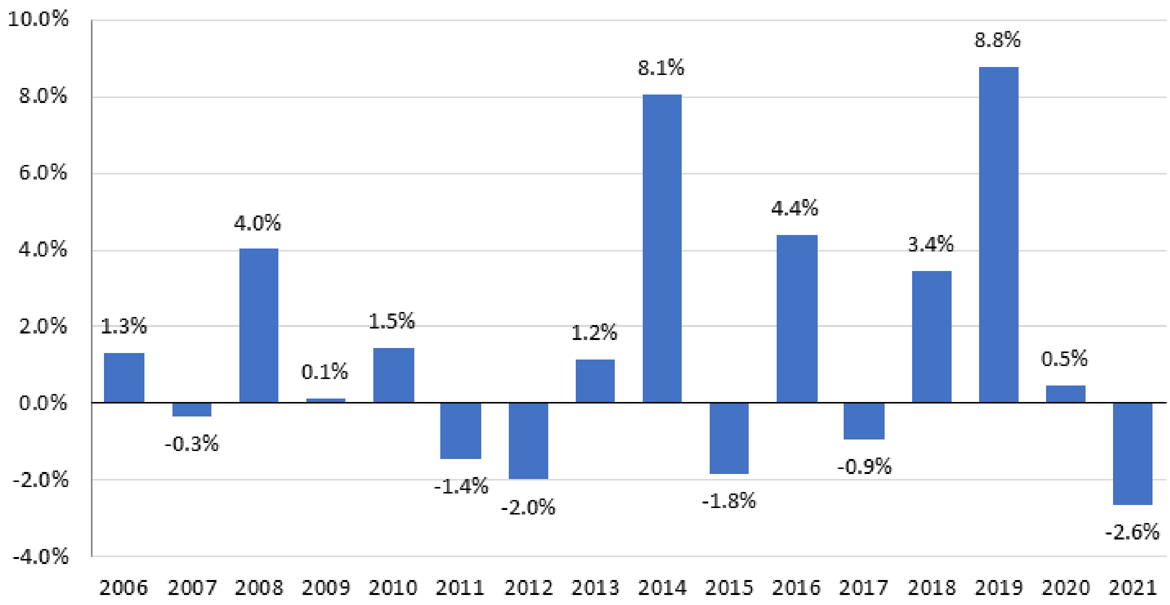



Figure 35 highlights that there have been some significant changes year-on-year over the last seventeen years. Overall, there has been an increase of 39,000 in the number of people employed in Cardiff, with 188,800 now registered as employed. This is equivalent to a 1.5% annual increase, which is considerably more than what was predicted in 2008 (0.2% per annum).

If this annual average (of a 1.5% increase) continues until 2026, then Cardiff will see a further increase of 26,000 in the number of people employed. This will give a 74% employment rate for 16-64-year-olds; however, it should be considered that the pensionable age is due to increase over the coming years; by 2026 it will be at 66 for both men and women[14].

[14] *Further analysis has been carried out in terms of employment type using the data from the ONS Annual Population Survey accessed via NOMIS. However, responses to the survey in Cardiff were low, meaning that the results are not statistically robust and therefore have not been included in this report.*

## 7.2 QUALIFICATIONS

Information from the NOMIS Labour Market statistics record the percentage of 18-64-year-olds with qualifications under the National Qualifications Framework. Data on this goes back to 2008. Figures 36 to 39 show the yearly trends taken from Stats Wales for Cardiff compared to Wales as a whole. This information is taken from the ONS Annual Population Survey.

**Figure 36: Yearly Trend for Percentage of 18- to 64-Year-Olds with Qualifications NQF Level 4 or Above, 2008 to 2020**

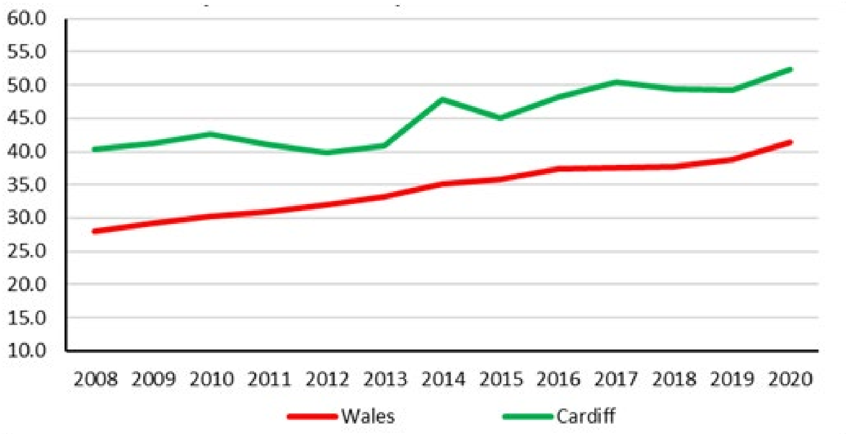



**Figure 37: Yearly Trend for Percentage of 18- to 64-Year-Olds with Qualifications NQF Level 3 or Above, 2008 to 2020**

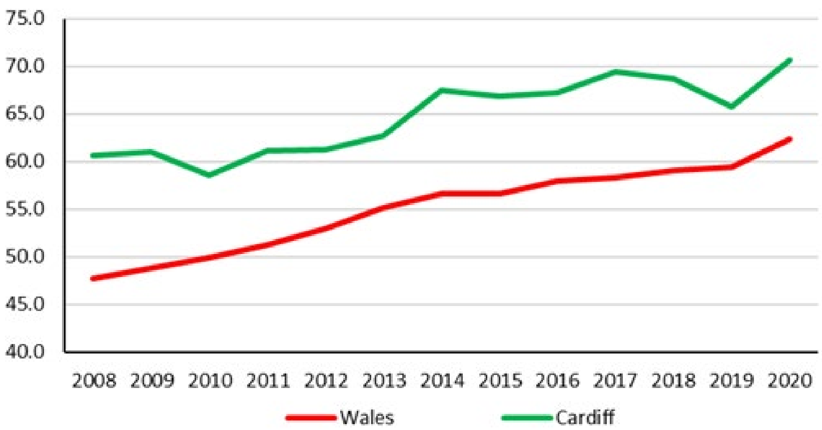



**Figure 38: Yearly Trend for Percentage of 18- to 64-Year-Olds with Qualifications NQF Level 2 or Above, 2008 to 2020**

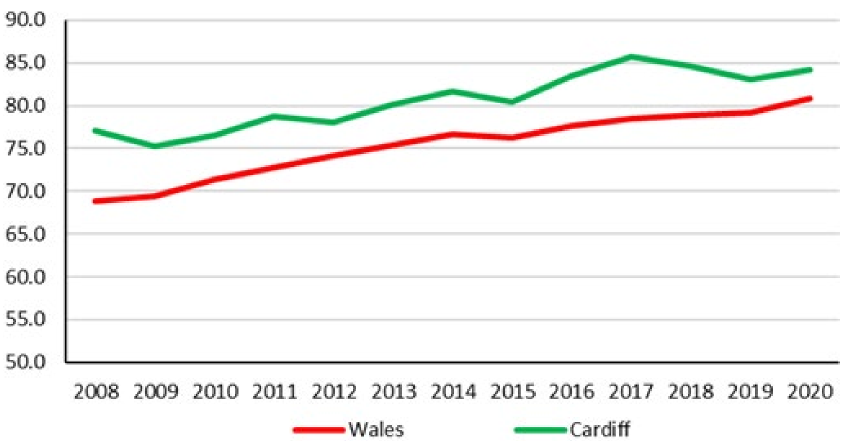
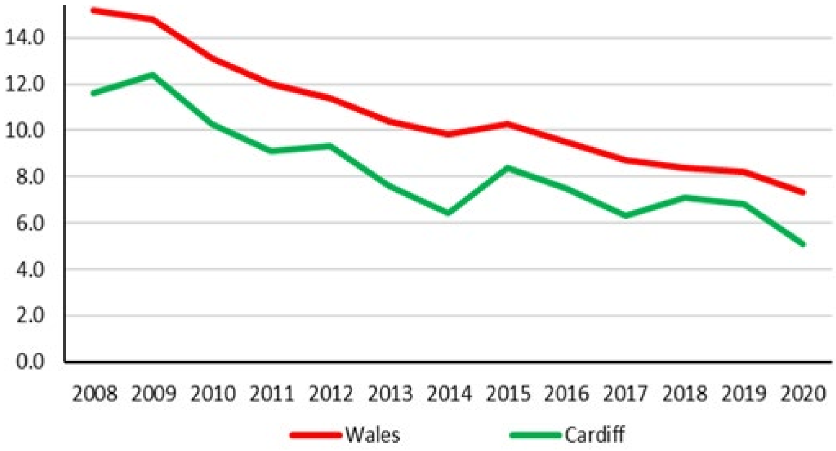


**Figure 39: Yearly Trend for Percentage of 18- to 64-Year-Olds with No Qualifications, 2008 to 2020**




These charts show that Cardiff has consistently out-performed Wales in respect of those aged 16-64 who have attained some form of qualification. Cardiff has seen a steady decrease in the percentage of people within this age group who have no qualifications. If these trends continue, this will put the workforce of Cardiff in good stead for the future.

## 7.3 ECONOMIC INACTIVITY

The NOMIS Labour Market Profile shows that for the year July 2020 to June 2021, Cardiff has performed better than Wales as a whole and slightly worse than the UK in terms of economic inactivity. Cardiff has 22.6% of persons aged 16-64 who are classed as being economically inactive, whilst Wales has 24.6% and the UK has 21.6%. This is a significant improvement since 2017, when Cardiff was performing worse than Wales and the UK, recording 28% of 16-64-year-olds being inactive.

**Appendix II – Economic Activity**[15] breaks down economic activity in terms of those who want and job and those that don't, as well as the reason for economic activity. The charts show that a high proportion of those who are economically inactive are classed as students, with an average percentage over this period of 45.5% for Cardiff, whilst for Wales and Great Britain the averages are 27.6% and 28.5% respectively.

In relation to those who are economically inactive due to Looking After Family/ Home, since a peek in 2006/07 of 27.5%, Cardiff has shown a year-on-year decrease - to 16% in 2020/21. This is a significant improvement when compared to Wales (16.1%) and Great Britain (19.3%).

Cardiff has also shown a considerable improvement in relation to long-term sickness, with the yearly average being 18.1% compared to the Welsh average of 28.9% and the Great Britain average of 23.8%.

Those who are recorded as being economically inactive due to retirement is considerably lower in Cardiff (8%) than in Wales (13.6%) and in Great Britain (13.5%). It should be considered that this relates to those who are of working age but who are classed as being retired.

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*[15] The charts in Appendix II are taken from the NOMIS website NOW, which produces figures for Great Britain instead of the UK.*

## 7.4 OUT OF WORK BENEFITS

There has been a significant improvement, both nationally and within Cardiff, in relation to persons aged 16-64 who are claiming out of work benefits. The below chart shows the reduction within Cardiff, from 8.4% in October 1992 to 4.8% in October 2021, which is an improvement of over 25%. Both the male and female percentages have followed the Welsh and British trends.

**Figure 40: Claimant Count – Year Trend, 1992 to 2021**

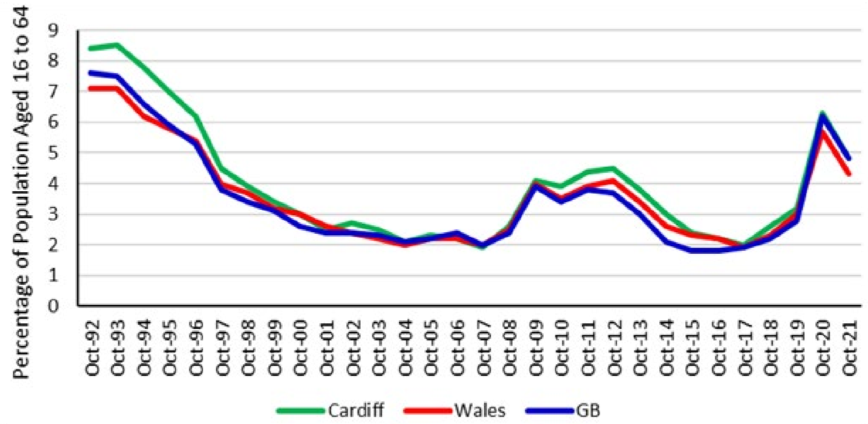



**Figure 41: Male Claimant Count – Yearly Trend, 1992 to 2021**

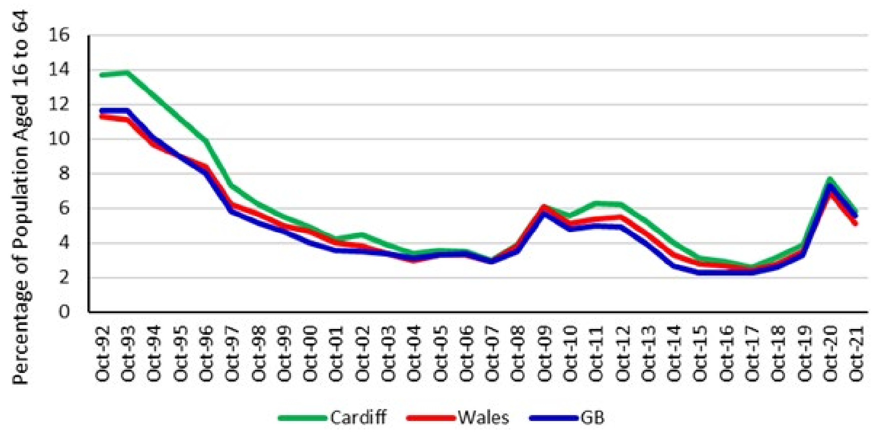
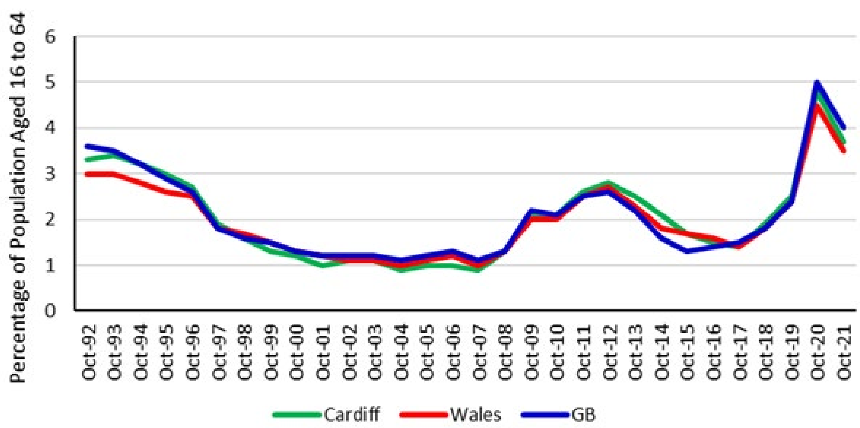



**Figure 42: Female Claimant Count – Yearly Trend, 1992 to 2021**



The decrease in claimants can be seen across all age groups. However, as figures 43 to 45 highlight, in respect of claimants aged 18 to 24, Cardiff is below the UK and Wales average, whilst for the age groups of 25 to 49 years and 50+ years, Cardiff is above the average. It should be noted that there has been an increase in claimants over the period of the Covid-19 Pandemic[16].

**Figure 43: 18 to 24 Years Claimant Count, 2013 to 2021**

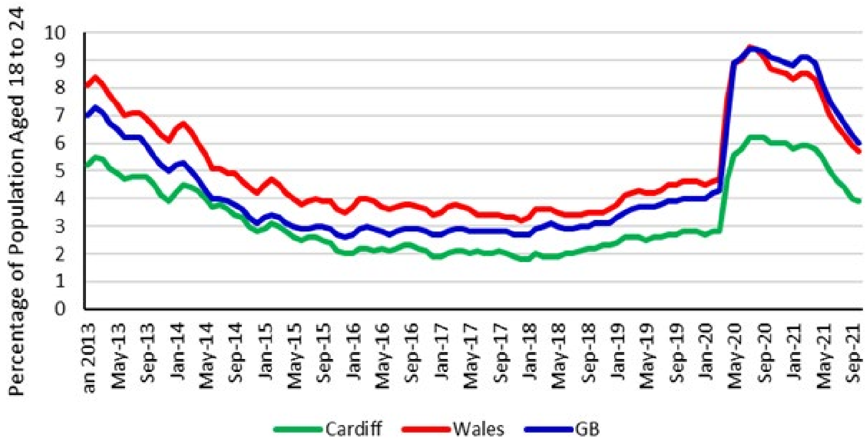



**Figure 44: 25 to 49 Years Claimant Count, 2013 to 2021**

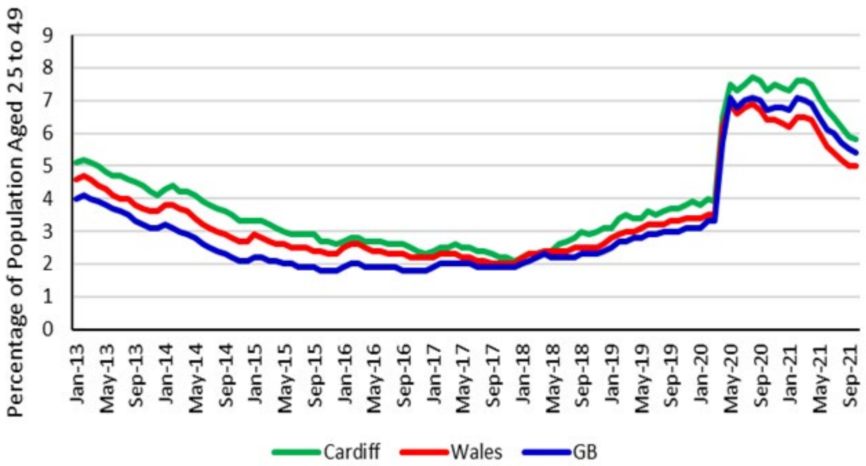
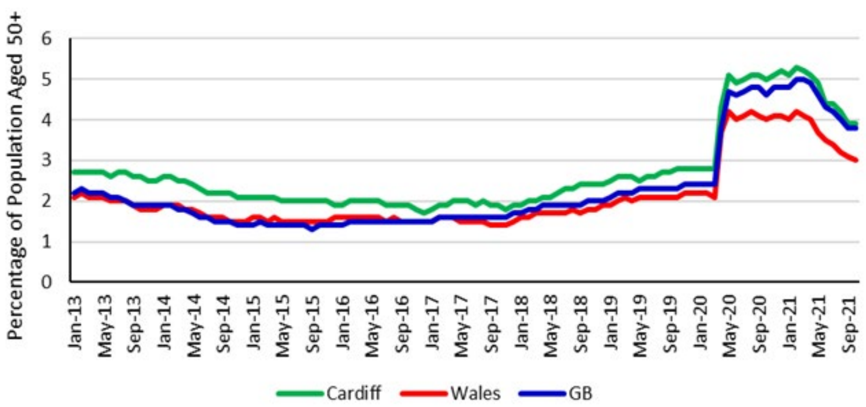



**Figure 45: 50+ Years Claimant Count, 2013 to 2021**




[16] *In the 2017 Future Trends Report, information was obtained from NOMIS regarding working aged persons who were claiming benefits. However, the reporting of this has been discontinued, with the most recent data being from November 2016. This is believed to be due to the introduction of Universal Credit. Experimental statistics in relation to Universal Credit were not available at the time of writing this report.*

## 7.5 FUTURE SKILLS BASE

### Employer Skills Survey

In March 2021, a report was published for Welsh Government based on the Employer Skills Survey 2019, covering Southeast Wales.

The report looked at recruitment and external challenges and highlighted the following key points:

- Just over one in six employers in Southeast Wales (17%) reported having vacancies at the time of the survey, which was a greater proportion than across the rest of Wales (15%). This was in line with findings in Southeast Wales in 2017 (19%).

- When considering vacancies as a proportion of employment, there was around one vacancy for every thirty employees in Southeast Wales (3.2%), the same proportion as across Wales as a whole (3.2%), and in line with results in 2017 (2.8%). This equated to 20,000 vacancies, an increase from 16,900 in 2017.

- Although the majority of vacancies were not proving hard to fill due to shortages of applicants with the required skills, qualifications or experience, difficulties recruiting employees due to skill-shortages can be a significant problem to employers. In Southeast Wales, 6% of employers had vacancies that were providing hard to fill due to skills, qualifications or experience shortages, in line with the figure across Wales (5%) and results in 2017 (6%).

- In total, 25% of vacancies were considered hard to fill due to skill shortages in Southeast Wales, in line with the skill-shortage density across Wales (24%) and matching results in 2017. This was equivalent to around 4,900 skill-shortage vacancies (SSVs) across Southeast Wales.

- The most common skill that employers found lacking among applicants was specialist skills or knowledge needed to perform the role (contributing to 64% of SSVs) followed by team working (45%). The ranking of skills most commonly lacking among applicants had changed slightly, with the ability of applicants to manage their own time no longer as prominent as in 2017, while a lack of ability to read and understand instructions was higher in the ranking.

- By far the most common consequence of struggling to recruit new staff due to shortages in required skills, qualifications or experience was an increased workload for other staff (85%), in line with levels across Wales (84%) and results in 2017 (83%).

The results of the 2019 survey in Southeast Wales were very consistent with those in 2017, and presents a similar picture across Wales, with some notable exceptions:

- The proportion of employees that had skills gaps was higher in Southeast Wales than across Wales, while a smaller proportion of staff had underutilised skills and qualifications.

- Since 2017, the proportion of the workforce being trained had increased, potentially in response to these skills gaps. Despite proportions of staff with skills gaps being higher than across Wales, employers in Southeast Wales were not turning to apprenticeships more than employers in Wales generally, with the proportion of the workforce undertaking an apprenticeship in line with national figures. It will be important to track this higher proportion of the workforce with skills gaps in Southeast Wales moving forward, and whether the increase in the proportion of staff being trained is accompanied by a reduction in the prevalence of skills gaps.

**Figure 46: Key Findings of the Employer Skills Survey 2019 Compared to the Findings of the 2017 Survey**

| | South East Wales | | Wales |
|---|---|---|---|
| | 2017 | 2019 | 2019 |
| **Vacancies and skill-shortage vacancies (SSVs)** | | | |
| % of establishments with any vacancies | 19 | 17 | 15 |
| % of establishments with any hard-to-fill vacancies | 8 | 8 | 7 |
| % of establishments with SSVs | 6 | 6 | 5 |
| % of all vacancies that are SSVs | 25 | 25 | 24 |
| Number of vacancies | 16,900 | 20,000 | 40,800 |
| Number of skill-shortage vacancies | 4,200 | 4,900 | 9,800 |
| **Skills gaps** | | | |
| % of establishments with any staff not fully proficient | 14 | 14 | 13 |
| Number of staff not fully proficient | 29,200 | 28,900 | 50,900 |
| % of staff not fully proficient | 4.9 | 4.6 | 4.0 |
| **Training** | | | |
| % of establishments training any staff over the last 12 months | 62 | 64 | 62 |
| % of establishments providing off-the-job training in the last 12 months | 46 | 45 | 45 |
| % of workforce trained | 58 | 65 | 65 |
| Total days training | 1.8m | 1.9m | 4.2m |
| Training days per trainee | 5.0 | 4.7 | 5.1 |
| Training days per employee | 2.9 | 3.1 | 3.3 |
| **Apprenticeships** | 2016 | 2019 | 2019 |
| Currently have apprentices on site or offer apprenticeships | 16 | 17 | 16 |
| % of employers planning to offer apprenticeships in the future | 29 | 28 | 27 |
| Number of apprentices per 1,000 employees | 18 | 15 | 16 |
| % aware of Traineeship programme in Wales | N/A | 29 | 28 |

As well as the Employer Skills Survey 2019 report, a slide pack was published highlighting core results. Key charts are included in Appendix III – Employer Skills. In South East Wales, 2,767 interviews were conducted with employers of two or more employees, covering all business sectors.

## Automation

Analysis undertaken by the Office for National Statistics has found that, as technology develops, some jobs will be lost due to automation. Lower-skilled or routine jobs are at greater risk of future automation than high skilled occupations.

Roles classified as 'low-skill' are therefore deemed to be at greatest risk, with elementary occupations including waiters, waitresses and shelf fillers having the highest probability of automation in the future. Roles deemed to be 'high-skill' were found to be at lowest risk of automation, particularly those of professional occupations or managers, directors, and senior officials. The three occupations deemed to be at the lowest risk of automation are medical practitioners, higher education teaching professionals, and senior professionals of educational establishments.

**Figure 47: Probability of Automation by Major Job Category, UK, 2017 (ONS, 2019)**


Furthermore, those in employment aged 20-24 have been found to be at greatest risk of job automation, with 15.7% of those employed within roles deemed to be 'high risk'. This risk decreases with age until its lowest point at 35-39 years (1.3%), at which point risk begins to rise again up to the 60- 65 age group (7.7%).

Analysis from the Office for National Statistics also shows that in 2017, 70.2% of the roles at high risk of automation were held by women. People who work part-time are also more likely to work in roles at higher risk of automation.

### Digital Skills

Digital skills are now being required by employers in occupations across all skill levels. Even amongst low-skill jobs, 77 % of job postings in the UK are in occupations that require digital skills, increasing to 85 % for middle-skill jobs and 83 % of high-skill jobs. Analysis from the World Economic Forum indicates that technology-related skills will account for the most valued skills by 2025. However, areas that cannot be replicated through the use of technology, such as emotional intelligence, persuasion and negotiation, will retain their value and remain in demand for the foreseeable future.

## 7.6 BUSINESSES

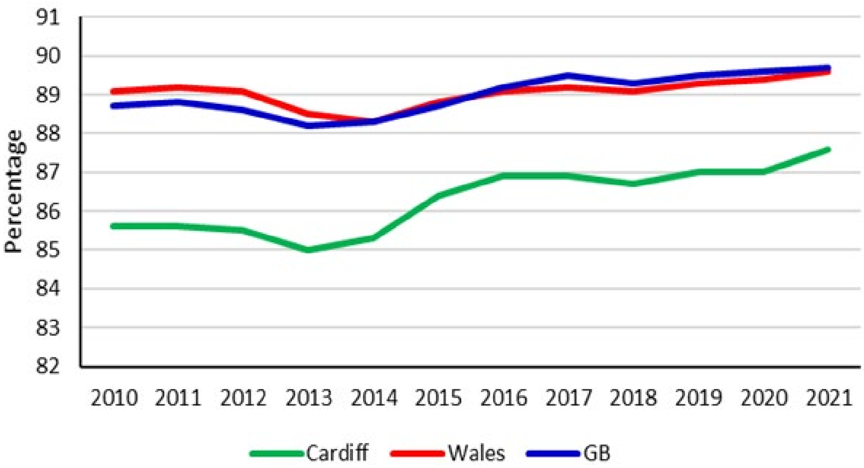
The NOMIS Labour Market Profile contains data on UK Business Counts. The data contained in the Profile are compiled from an extract taken from the Inter-Departmental Business Register (IDBR)[17], recording the position of units as of March of the reference year. The IDBR contains information on VAT traders and PAYE employers in a statistical register, which provides the basis for the Office for National Statistics (ONS) to conduct surveys of businesses. The Profile presents analysis of businesses at both an enterprise and local unit level[18].

### Enterprises

In 2021, within Cardiff, 87.6 % of the enterprise businesses were recorded as 'micro', with 0 to 9, employees. This is lower than the Welsh and Great Britain percentages of 89.1 % and 88.7 % respectively. The actual number of micro enterprises within Cardiff in 2021 was 10,490, which is a 10.8 % increase on the 2016 total of 9,465.

In relation to small enterprises, with 10 to 49 employees, Cardiff has a total for 2021 of 1,190, which is an increase of 35 (3 %) on the 2016 total of 1,155. The percentage of enterprises of this size within Cardiff is greater than both Wales and Great Britain.

**Figure 48: Yearly Trends Micro (0 to 9) Enterprises**

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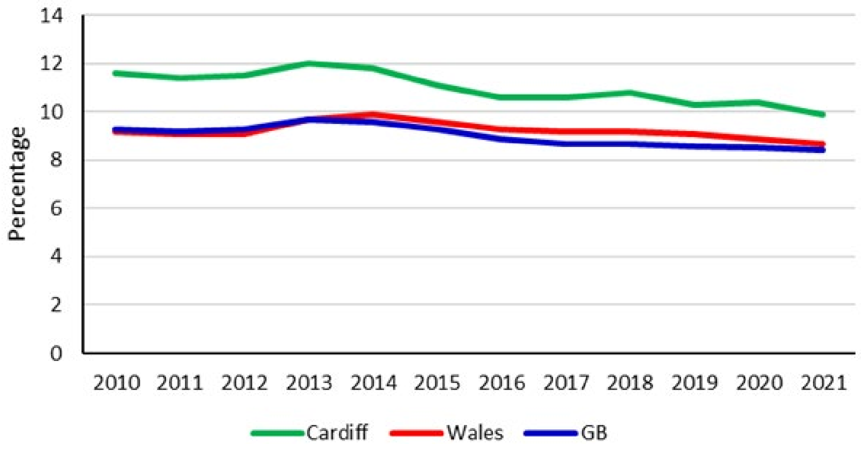
[17] *The employment information on the IDBR is drawn mainly from the Business Register Employment Survey (BRES). As this is based on a sample of enterprises, estimates from previous returns and from other ONS surveys have also been used. For the smallest units, either PAYE jobs or employment imputed from VAT turnover is used. Estimates in the tables presented in this section are rounded to prevent disclosure.*

[18] *An enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE (Pay-As-You-Earn) records) which has a certain degree of autonomy within an enterprise group. An individual site (for example a factory or shop) in an enterprise is called a local unit.*

**Figure 49: Yearly Trends Small (10 to 49) Enterprises**




The number of medium sized enterprises, employing 50 to 249 people, has increased by 11.9% since 2016, to a total of 235, whilst the number of large enterprises, with 250 or more employees, has decreased by 30%, with 60 now registered compared to 65 in 2016.

**Figure 50: Yearly Trends Medium (50 to 249) Enterprises**

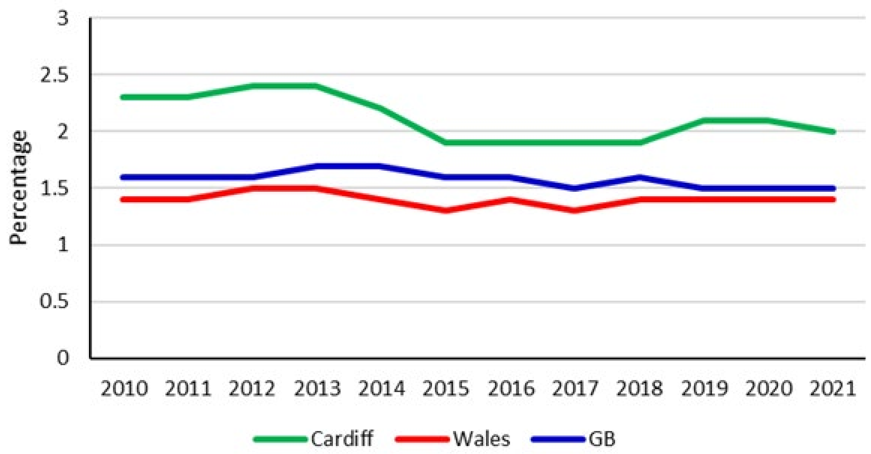
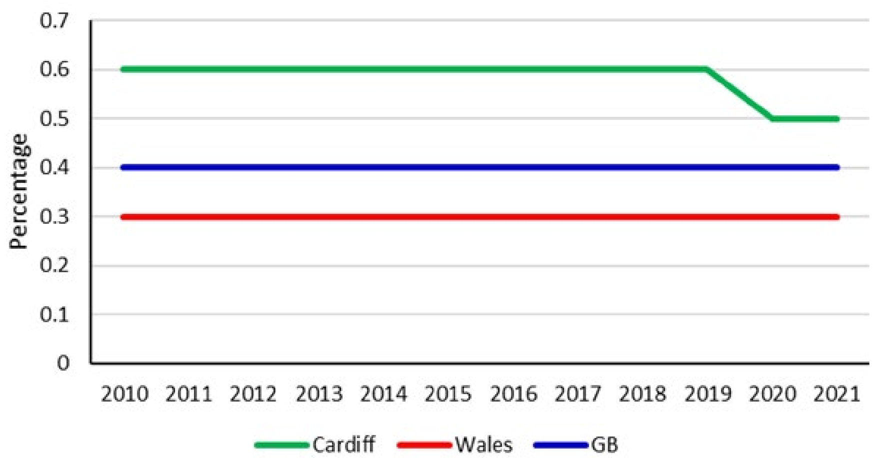



**Figure 51: Yearly Trends Large (250+) Enterprises**



## Units

In relation to individual micro units, there are 12,370 within Cardiff that employ 0 to 9 employees. This is an increase of 870 units (7.6 %) on the 2016 total of 11,500. Small units, employing 10 to 49 persons, have increased by 30 units (1.3 %). Medium units, employing 50 to 249 employees, have increased by 10 (1.7 %). Large units, employing 250 or more employees, have increased by 5 units (4.5 %) when compared to 2016 with 110 units.

From this analysis, it would lead to the assumption that the improvement in employment is due to the increase in micro units and micro enterprises or it could be due to an increase in size in relation to the larger units/enterprises.

When considering units by industry type (figure 52), Cardiff has had a significant percentage increase in the number of Transport & Storage units in recent years (86 % increase between 2016 and 2021).

**Figure 52: Units by Industry Type in Cardiff, 2016 to 2021**

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Differential Between 2016/2021 |
|---|---|---|---|---|---|---|---|
| 1 : Agriculture, forestry & fishing (A) | 40 | 40 | 40 | 50 | 40 | 50 | 25% |
| 2 : Mining, quarrying & utilities (B,D and E) | 90 | 80 | 80 | 90 | 90 | 80 | -11% |
| 3 : Manufacturing (C) | 490 | 480 | 480 | 470 | 470 | 530 | 8% |
| 4 : Construction (F) | 1,210 | 1,290 | 1,350 | 1,350 | 1,370 | 1,450 | 20% |
| 5 : Motor trades (Part G) | 390 | 380 | 400 | 410 | 400 | 410 | 5% |
| 6 : Wholesale (Part G) | 520 | 520 | 510 | 500 | 500 | 520 | 0% |
| 7 : Retail (Part G) | 1,580 | 1,580 | 1,550 | 1,540 | 1,530 | 1,620 | 3% |
| 8 : Transport & storage (inc postal) (H) | 360 | 370 | 370 | 410 | 440 | 670 | 86% |
| 9 : Accommodation & food services (I) | 1,080 | 1,090 | 1,140 | 1,150 | 1,190 | 1,190 | 10% |
| 10 : Information & communication (J) | 980 | 1,040 | 1,030 | 1,060 | 1,120 | 1,070 | 9% |
| 11 : Financial & insurance (K) | 630 | 640 | 630 | 640 | 650 | 600 | -5% |
| 12 : Property (L) | 610 | 630 | 640 | 670 | 680 | 710 | 16% |
| 13 : Professional, scientific & technical (M) | 2,280 | 2,330 | 2,270 | 2,300 | 2,330 | 2,250 | -1% |
| 14 : Business administration & support services (N) | 1,450 | 1,480 | 1,440 | 1,470 | 1,470 | 1,430 | -1% |
| 15 : Public administration & defence (O) | 170 | 170 | 180 | 170 | 170 | 190 | 12% |
| 16 : Education (P) | 440 | 490 | 460 | 460 | 460 | 460 | 5% |
| 17 : Health (Q) | 1,140 | 1,170 | 1,150 | 1,100 | 1,110 | 1,110 | -3% |
| 18 : Arts, entertainment, recreation & other services (R,S,T and U) | 1,110 | 1,110 | 1,100 | 1,130 | 1,150 | 1,150 | 4% |
| Column Total | **14,570** | **14,910** | **14,820** | **14,960** | **15,170** | **15,490** | 6% |

## Employment by Industry

The Business Register and Employment survey (BRES) Open Access Data is available on NOMIS for the period of 2015 to 2020. This database contains information on employment within Cardiff by industry. Figure 53 therefore shows total employment by industry and includes employees plus the number of working owners[19].

**Figure 53: Total Employment by Industry in Cardiff, 2015 to 2020**

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Differential Between 2015/2021 |
|---|---|---|---|---|---|---|---|
| 1 : Agriculture, forestry & fishing (A) | 75 | 600 | 75 | 125 | 125 | 150 | 100% |
| 2 : Mining, quarrying & utilities (B,D and E) | 5,000 | 4,500 | 5,000 | 5,000 | 6,000 | 5,000 | 0% |
| 3 : Manufacturing (C) | 10,000 | 9,000 | 8,000 | 9,000 | 9,000 | 9,000 | -10% |
| 4 : Construction (F) | 7,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 14% |
| 5 : Motor trades (Part G) | 3,500 | 3,000 | 2,500 | 3,000 | 4,000 | 3,000 | -14% |
| 6 : Wholesale (Part G) | 6,000 | 6,000 | 4,500 | 4,000 | 6,000 | 4,000 | -33% |
| 7 : Retail (Part G) | 21,000 | 20,000 | 19,000 | 19,000 | 18,000 | 16,000 | -24% |
| 8 : Transport & storage (inc postal) (H) | 6,000 | 5,000 | 5,000 | 6,000 | 4,500 | 4,500 | -25% |
| 9 : Accommodation & food services (I) | 15,000 | 17,000 | 14,000 | 15,000 | 16,000 | 16,000 | 7% |
| 10 : Information & communication (J) | 5,000 | 8,000 | 13,000 | 8,000 | 9,000 | 9,000 | 80% |
| 11 : Financial & insurance (K) | 12,000 | 12,000 | 13,000 | 14,000 | 14,000 | 13,000 | 8% |
| 12 : Property (L) | 2,500 | 3,500 | 3,000 | 4,000 | 4,000 | 4,000 | 60% |
| 13 : Professional, scientific & technical (M) | 16,000 | 14,000 | 17,000 | 17,000 | 17,000 | 17,000 | 6% |
| 14 : Business administration & support services (N) | 22,000 | 22,000 | 23,000 | 21,000 | 20,000 | 20,000 | -9% |
| 15 : Public administration & defence (O) | 15,000 | 15,000 | 16,000 | 16,000 | 18,000 | 22,000 | 47% |
| 16 : Education (P) | 22,000 | 22,000 | 22,000 | 21,000 | 22,000 | 22,000 | 0% |
| 17 : Health (Q) | 28,000 | 29,000 | 30,000 | 31,000 | 30,000 | 28,000 | 0% |
| 18 : Arts, entertainment, recreation & other services (R,S,T and U) | 10,000 | 10,000 | 11,000 | 11,000 | 9,000 | 10,000 | 0% |
| Column Total | **204,000** | **208,000** | **214,000** | **212,000** | **213,000** | **212,000** | 4% |

If 2015 is compared with 2020:

- The largest numerical increase in employment is in the Public Administration and Defence category, showing an increase of 7,000 (47%). The next highest is Information and Communication, with an increase of 4,000 (80%). If 2015 is compared with 2020:

- The largest percentage increase is within the Mining, Quarrying and Utilities Industry, with an increase of 100%, however, this industry only employs 0.7% of those employed in Cardiff.

- The Health industry is the largest employment industry, accounting for 13.2% of those in employment, but this industry has shown no increase in the numbers of people employed when compared to 2015. After year-on-year growth until 2018, the number of employees has decreased to the same level as in 2018.

- Whilst Transport & Storage has shown the highest percentage increase in units (86%), the number of employees has decreased by 25%.

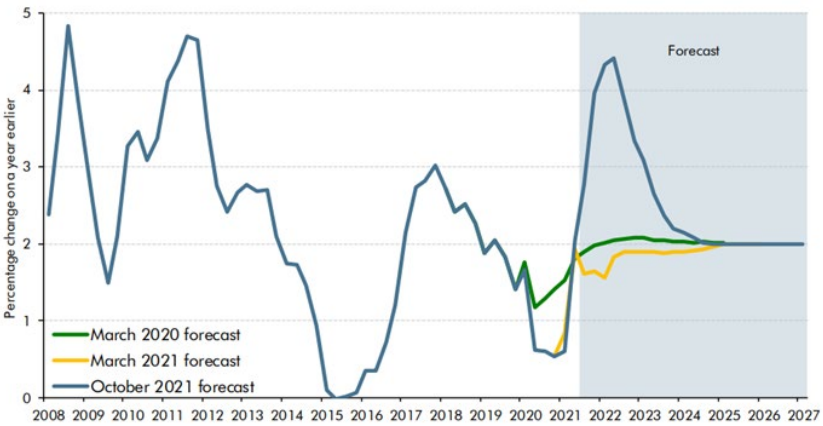
- The Retail and The Wholesale sectors have shown reductions, of 24% and 33% respectively, in the number of employees and have shown a growth of only 3% and 0% in respect of units.

*[19] BRES includes self-employed workers, as long as they are registered for VAT or PAYE schemes. Self-employed people not registered for these, along with HM Forces and Government Supported trainees, are excluded.*

## 7.7 PUBLIC SECTOR FINANCE

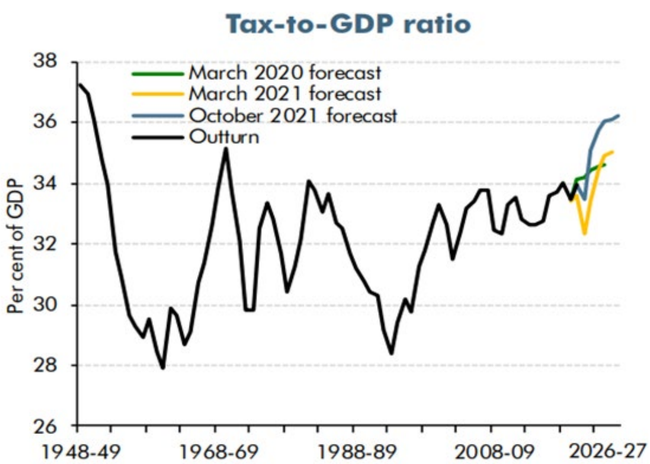
The Office for Budget Responsibility (OBR) published its medium-term forecasts in the Economic and Fiscal Outlook – October 2021. The report goes into detail on inflation, GDP, government borrowing, tax rates, and the impact of the Covid-19 pandemic. It includes forecasts up to 2026-27. Inflation increased above 3% in August 2021, and it is expected to peak at 4.4% in mid-2022 before falling back to its 2% target. Based on the latest forecast, borrowing still peaks at a post-war high of £320 billion, or 15.2 per cent of GDP, in the last fiscal year. This is £35 billion lower than initial forecasts undertaken in March 2021. This difference is due in large a part to underspending by government departments, especially in the case of the NHS Test and Trace Programme.

**Figure 54: CPI Inflation**




On a positive note, the OBR recognises that many forecasts have underestimated the UK's adaptability to pandemic conditions, meaning the long-term economic 'scarring' effects may be minimal. Regarding tax revenue, the combination of corporate and personal tax rises announced means that more tax rises have been announced this year than in any single year since 1993 (in the aftermath of Black Wednesday). These tax rises, coupled with the fiscal drag assumed in the forecast, raise the overall tax burden from 33.5% of GDP pre-pandemic to above 36% per cent of GDP at the forecast horizon, which would be the highest level since the early 1950s.

**Figure 55: Tax Revenues**




As the strain of the Covid-19 pandemic on public services eases, public spending has fallen back from its peacetime high of 53% of GDP in 2021, to just below 42% of GDP in the final three years of the forecast period. This is still nearly 2% higher than pre-pandemic spending. However, the shape of the post-pandemic state reflects societal and demographic changes, such as increased spending on the NHS, social care, and pensions, reflecting the increase in the proportion of the population which are over 65.

# Climate Change and the Environment

## 8.1 CLIMATE CHANGE

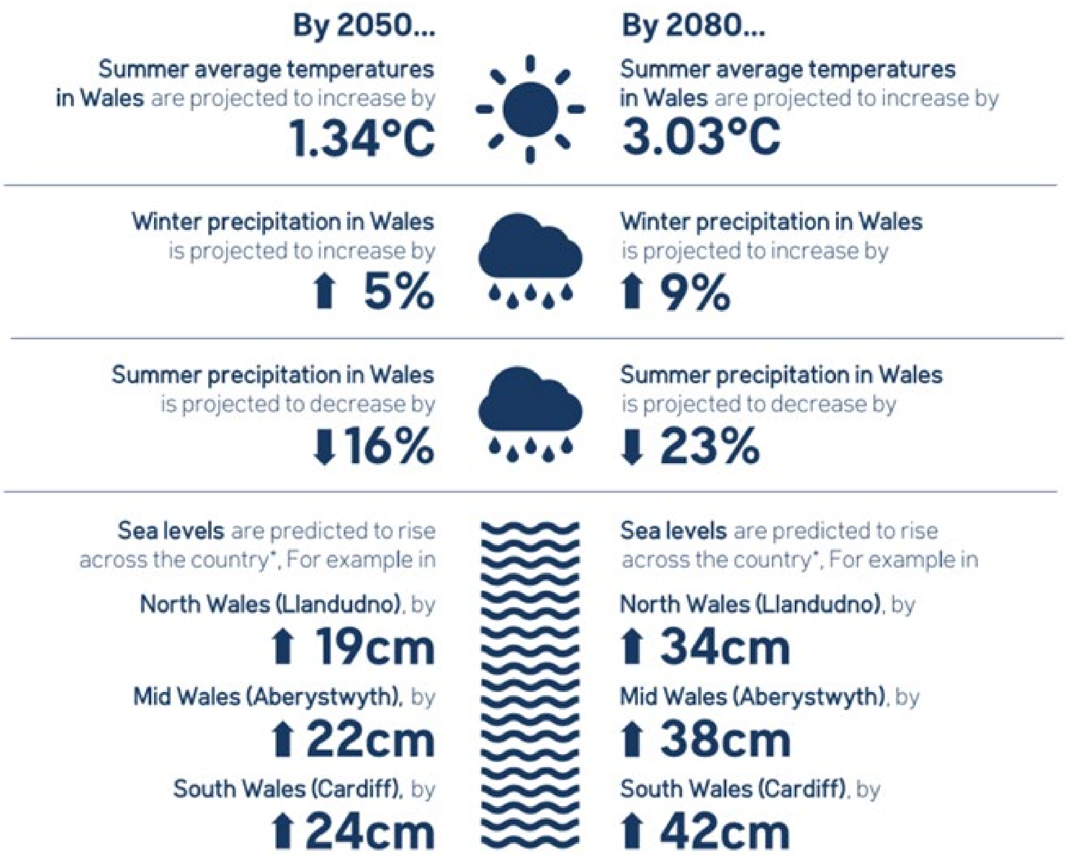
The global climate is continuing to warm, with the mean global temperature for 2020 recorded as one of the three warmest years on record. The last five- and ten-year averages are also the warmest on record.

By the 2050s in Wales, summer average temperatures are projected to rise by 1.34 degrees, with summer rainfall expected to decrease by around 16%. Winter rainfall is projected to rise by 5% and sea levels are projected to rise by 24cm in South Wales (Cardiff). By the 2080s, summer average temperatures are projected to be more than double that projected for the 2050s, along with a significantly higher rise in sea levels in South Wales (Cardiff).

The consequences are wide ranging, including greater risk and frequency of flooding and more frequent heatwaves, declines in ecosystem resilience, species decline and increased prevalence of pests and disease impacting on food security and access to healthy food - both nationally and globally. Crucially, these risks are not distributed equally and some of the most vulnerable and disadvantaged across Wales face the most severe impacts.

The infographic shown in Figure 56, from the Welsh Government's Future Trends Report 2021, summarises climate change prediction by 2050 and 2080.

**Figure 56: Climate Change Predictions by 2050 and 2080**



## 8.2 GREENHOUSE GAS EMISSIONS

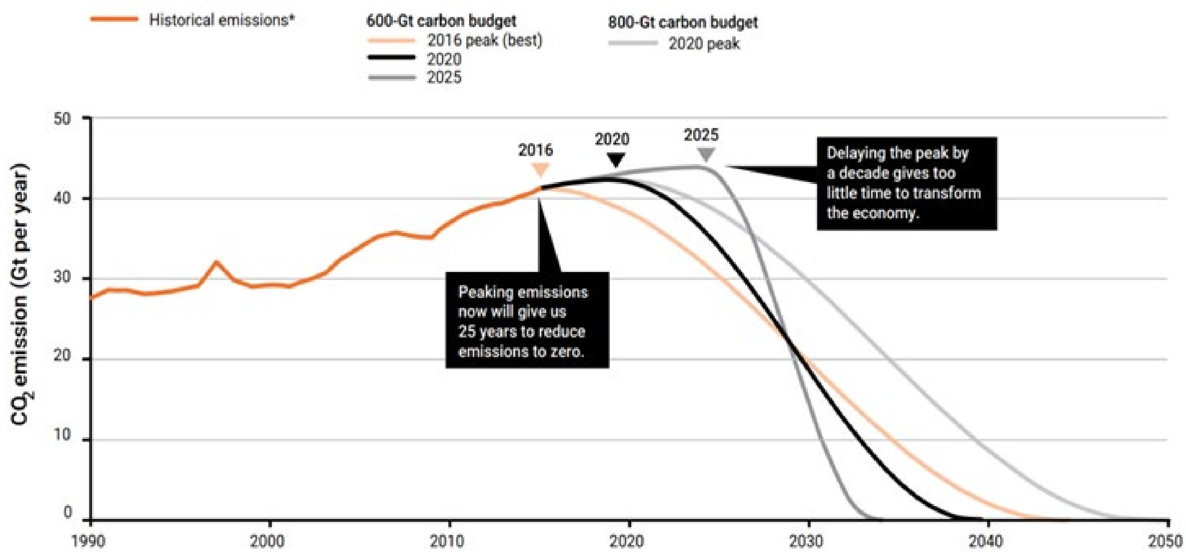
### Global and Wales-wide Emissions

Global greenhouse gas emissions have grown every year since 2009, at a rate of 1.5% annually. To limit the global temperature rise to 1.5 C[20], it is estimated that global emissions would need to decline by 7.6% every year from 2020 to 2030. Accelerated decarbonisation, advances in low-carbon technologies, and international decarbonisation pledges are expected to lead to a levelling-off of global emissions. In Wales, domestic greenhouse gas emissions have fallen by almost a third since 1990, predominantly due to the phasing out of coal-fired power generation.

However, it is projected that electricity demand in Wales will likely double by 2050 due to new demands within buildings, and from the transport and industry sectors, as they move to renewable electricity sources of supply. Increased renewable energy generation will be necessary to keep up with this demand whilst minimising emissions. Stark emissions inequalities also exist between the wealthiest and poorest people; the richest 10% of the UK population are responsible for a quarter of UK total emissions, producing over four times more emissions than the poorest 50%.

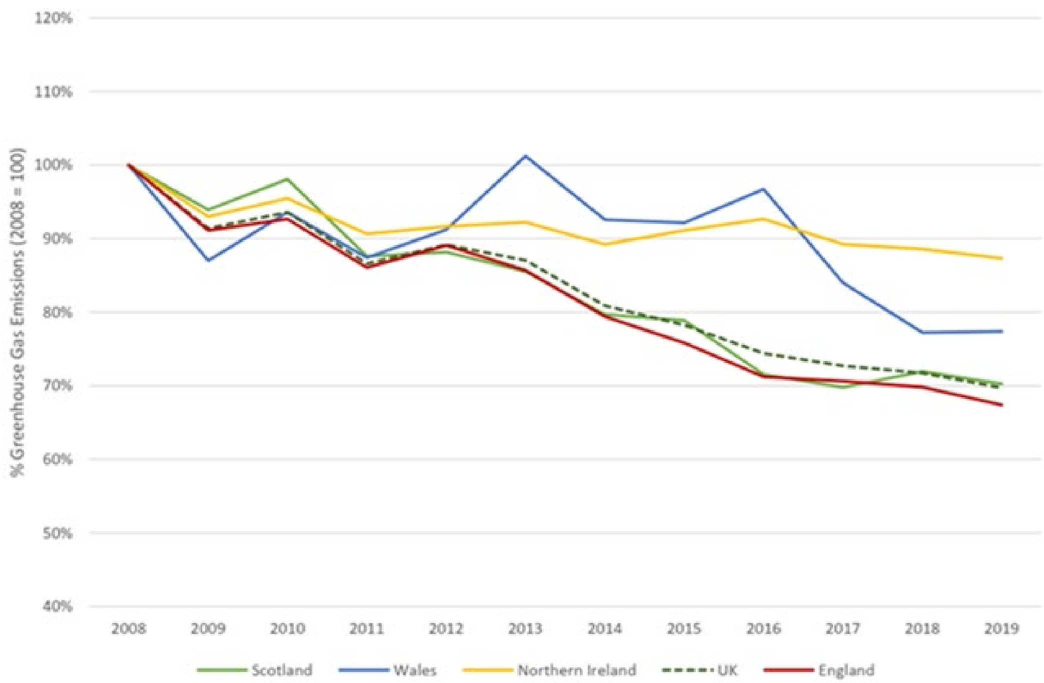
Figures 57 and 58, from the Welsh Government's Future Trends Report 2021, show emission estimates and actual UK emission levels.

**Figure 57: Global Emission Estimates Under Various Carbon Budget Scenarios**




[20] *Under the 2015 Paris Agreement, nations agreed to hold global warming to well below 2 C, and preferably limit it to 1.5 C, compared to pre-industrial levels.*

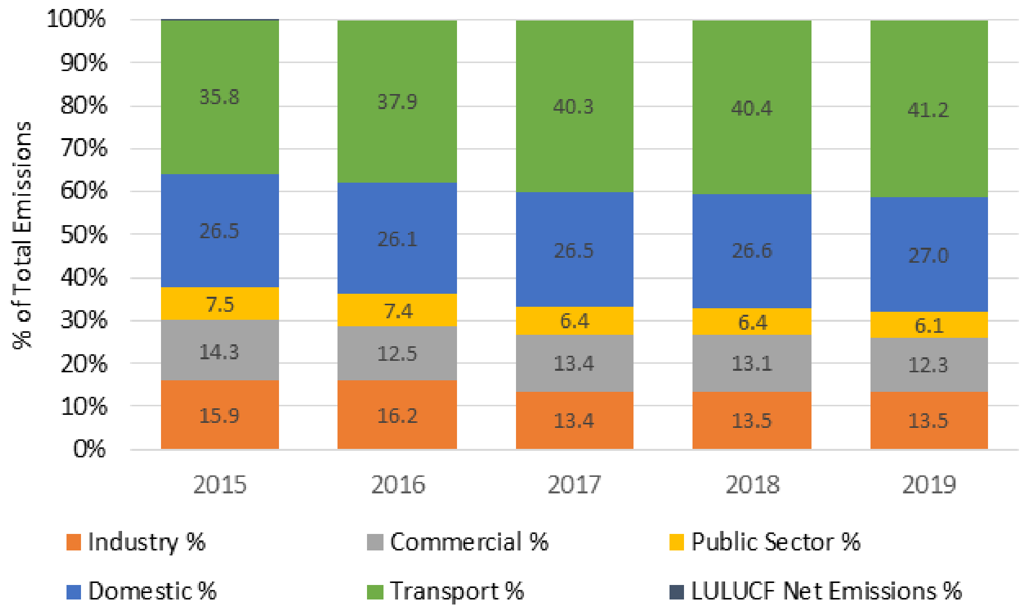
**Figure 58: Greenhouse Gas Emissions in Wales, Northern Ireland, Scotland, and England, 2008-2019**




## Cardiff-wide Emissions

BEIS (Business, Energy & Industrial Strategy) data shows that Cardiff has the second highest figure for CO2 emissions per capita out of the UK's 'Core Cities'. Domestic and transport emissions contribute the most to CO2 emissions in Cardiff and are projected to increase. Demand for domestic electricity and gas is strongly correlated with population growth and Cardiff's population is projected to continue to rise over the next 25 years.

**Figure 59: Cardiff CO2 Emissions by Main Emission Type (% of Total Emissions), 2015-2019**



The Powering Future Cities Report (2016), predicts that, of the UK's major cities, Cardiff is to have the most significant increase in domestic electricity demand between 2015 and 2035, at 44%. Cardiff also has the largest projected increase in domestic gas demand, at 28%.

In terms of transport emissions in Cardiff, 51.2% of respondents to the latest Transport Survey travelled to work using sustainable modes of transport, exceeding the Councils 50/50 modal split target. There has also been a significant shift in cycling as a mode of travel, from 10% in 2016/17 to 15% in 2019/20.

However, this is in the context of current trajectories showing car traffic in Wales is increasing. In addition, over the last decade, travel by van and rail have seen significant increases, whilst travel by bus has decreased and, although cycling demand has more than doubled, it still accounts for a very small share of overall travel. Going forward, a reduction in overall car emissions is expected based on continued uptake of electric vehicles.

## 8.3 AIR POLLUTION

Air pollution is one of the world's largest health and environmental problems, contributing to 9% of deaths globally. While levels of harmful nitrogen dioxide emissions continue to fall across the UK, South Wales has some of the highest levels of air pollution. Public Health Wales estimates that up to 1,400 deaths each year in Wales can be attributed to air pollution.

This risk is greatest for people living in urban and roadside locations and within the most deprived areas, where health and air quality tend to be poorest and where deprivation and poor health influences can inhibit an individual's ability to cope with the impacts of exposure to air pollution.

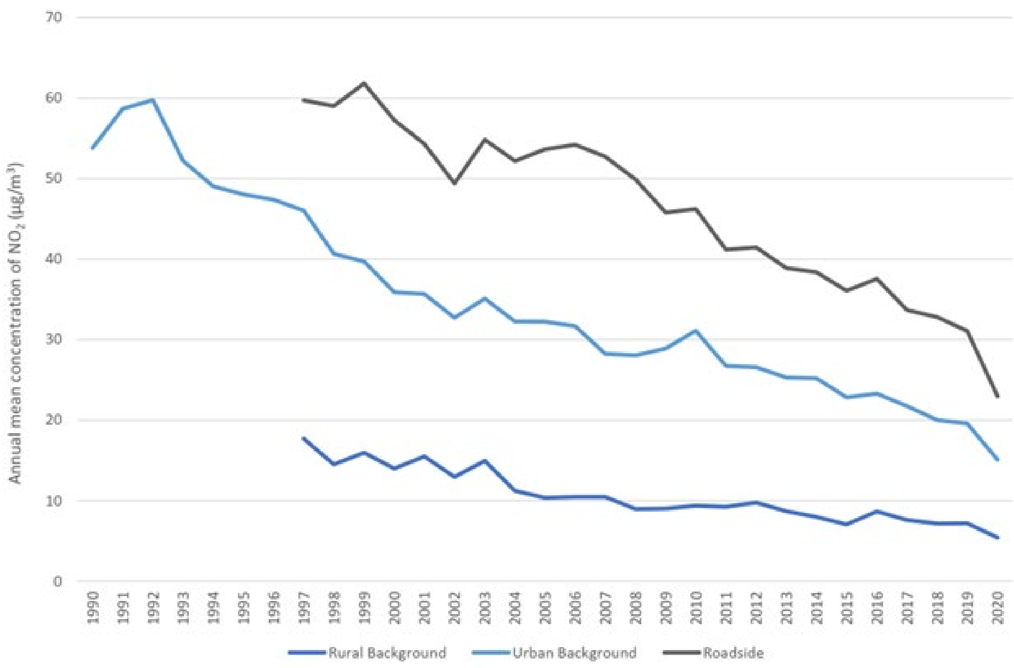
Projections from the Air Quality Expert Group (2019) suggest that while exhaust emissions are likely to continue to fall, following a move toward electric and ultra-low emission vehicles, non-exhaust emissions are likely to grow in line with increasing traffic levels. These minute particles are released into the air from the wearing down of tires, vehicle brakes and road surfaces.

Following the first lockdown in March 2020, there was a marked reduction in air pollution in central Cardiff, of 40% compared with the average for the time of year (for example, 14.4 μg/m3 compared with 23.9 μg/m3 average at Frederick Street). Improvements in air quality across the city continued to be seen following subsequent lockdowns, with reductions appearing larger in less deprived areas. This is likely to be due to a higher proportion of working adults being able to work from home in these areas.

It is currently unclear what medium and long-term travel patterns will look like post-pandemic. Current surveys of businesses in the city and more broadly across the UK suggest a 'hybrid' work pattern will emerge which would see people commuting to work on fewer days each week. This has the potential to improve air quality.

Figure 60, from the Welsh Government Future Trends Report 2021, shows the annual mean concentrations of NO2 in the UK, 1990-2020 (DEFRA, 2021).

**Figure 60: Annual Mean Concentration of NO2 in the UK, 1990 to 2020**




## 8.4 FLOOD RISK

Many properties in Cardiff are currently at risk of flooding. Of the 33 areas in Wales identified at most risk from flooding, 5 are within Cardiff: St. Mellons, Roath, Canton, Riverside and Grangetown (Communities at Risk Register, Wales). Over 22,000 properties within Cardiff automatically receive a flood warning.

Climate change associated impacts will increase the number of properties, infrastructure, and key services at risk of flooding from all sources. Places not previously at risk could become vulnerable and many currently at risk could be of greater risk. It is expected that severe events, such as the 2020 storms, will become more common with increased severity and frequency of flooding. Climate change impacts will also increase the risk to flood defense assets and the costs to maintain them to acceptable standards. Some of Cardiff's defenses are likely to require significant improvements.

It will not be possible to prevent all flooding; there is therefore a need to use a range of adaptive approaches. However, the rate of adaptation action needs to quicken to keep pace with the increasing impacts of climate change. Appendix IV – Cardiff Flood Risk contains additional information from Natural Resources Wales on flooding in Cardiff.

# APPENDIX I – HEALTH SERVICE CONSULTATION

## Empower the Person

I want:
- To know how to minimise my risk of developing disease
- To be supported to make any lifestyle changes that enable me to live a healthy life
- To know about screening programs which can help detect early disease and how to access them.
- Rapid access to services which can diagnose my disease at an early stage
- My condition explained clearly, in the detail that I want
- To understand the available treatment options and be supported to choose one which is best for me, accounting for my personal, cultural, and physical needs.
- Treatment which gives me the best chance of cure
- To be told about all services that may assist me
- Services that accommodate my needs as an individual, respecting the roles I play in my personal and family life.
- Easy access to high quality advice. I want to be able to talk to people who know me and understand my disease and its treatment.
- To decide how and where my care is delivered at the end of my life; and
- To be treated with kindness, respect and always have my dignity maintained

## Home First

I need:
- To understand my condition and its treatments so that I can be involved in the planning of my care, play a role in monitoring my condition and recognise times where I need to access health care services.
- Rapid access to knowledgeable healthcare professionals who can advise me what to do when my health deteriorates.
- Care which is delivered close to where I live and work, so that I can continue to lead as normal a life as possible, whilst still working closely with clinical teams to ensure the best possible treatments.
- My care to be coordinated so that every appointment has a clear purpose, and none are wasted.

## Outcomes That Matter to People

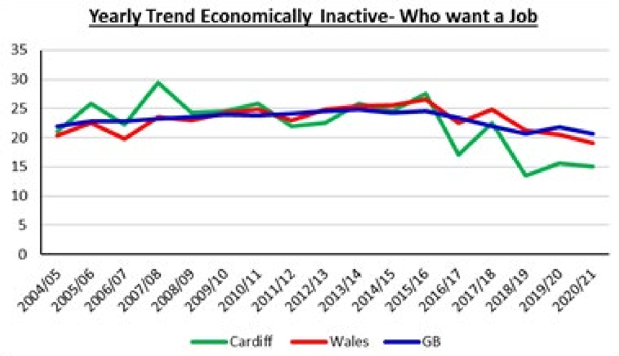
I want:
- To live a long and healthy life
- To be quickly diagnosed when I develop any disease
- To have treatments which give me the best chance of cure or achieve the best possible outcome for me.
- Treatments to be tailored to my needs
- To have my symptoms and side effects managed effectively and compassionately
- To be treated with kindness and respect and my dignity maintained at all points in my care.
- To maintain my independence and have the best quality of life possible
- Health professionals to value my time and ensure effective, efficient delivery of care
- To die comfortably in a place of my choosing

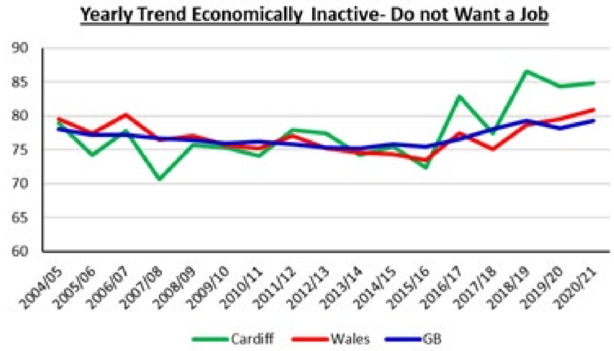
## Avoid Harm, Waste and Variation

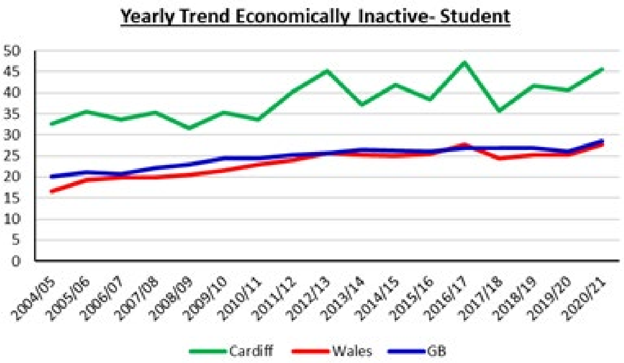
I want:

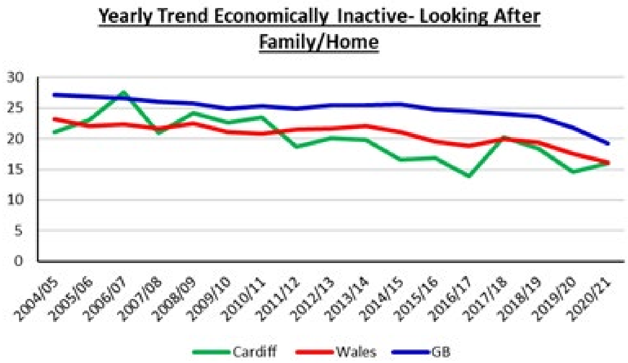
- To always be offered the best, most effective treatments, regardless of where I live and which health professional I see.
- All decisions regarding my care to be made by experienced clinicians who have an understanding of my condition.
- To receive joined up care from a range of health professionals, who communicate effectively with each other and work as a team.
- To always receive the medication which is right for my condition and safest for me, understanding any potential risks and side effects they may have.
- A single health record that enables all my health care providers to share information and avoid repetition.
- To work in partnership with my health team to avoid futile treatments and, where necessary, develop a clear end of life plan.

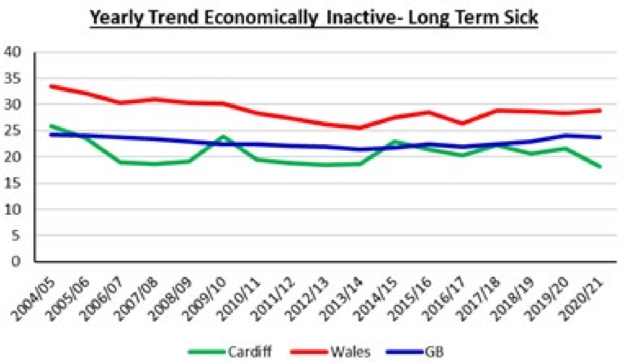
# APPENDIX II – ECONOMIC ACTIVITY

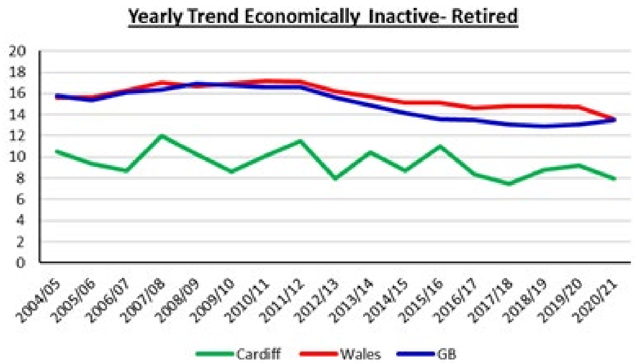


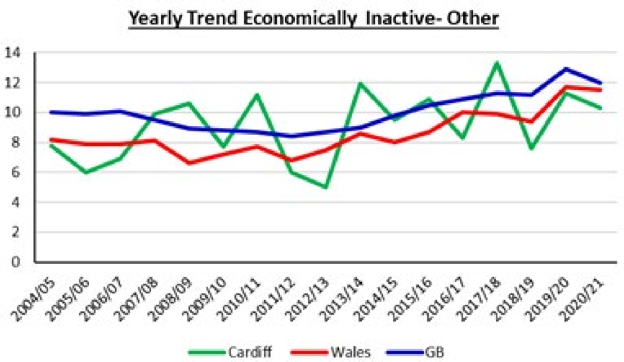



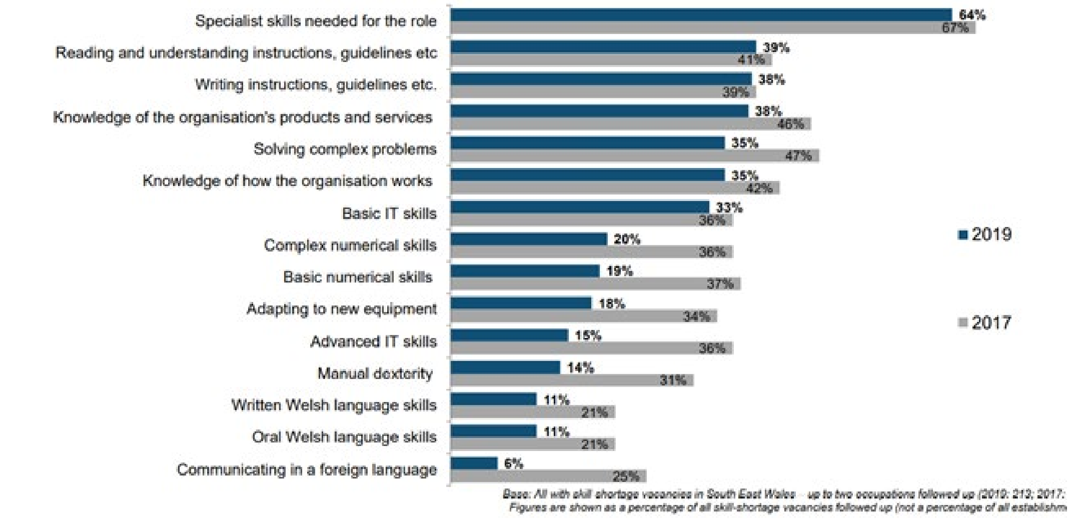



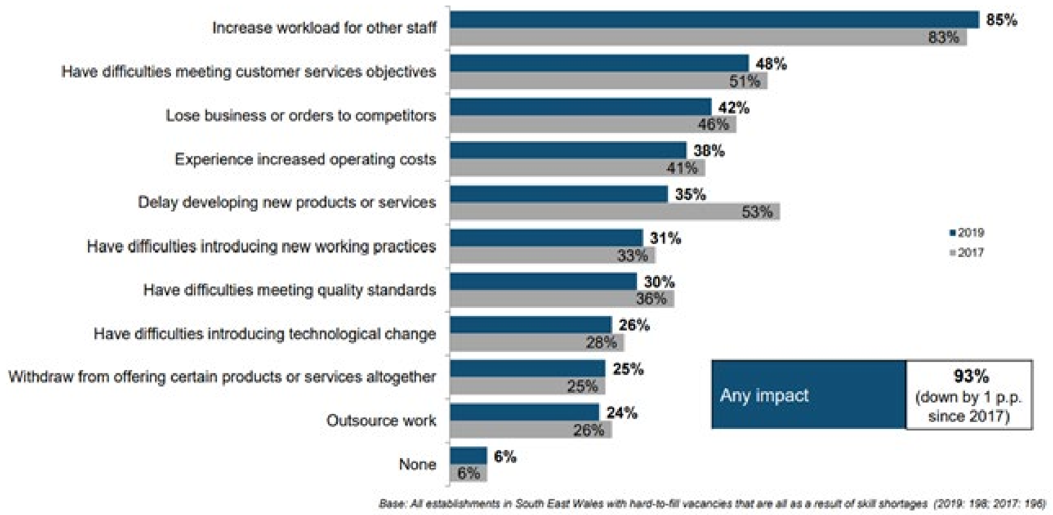



## APPENDIX III – EMPLOYER SKILLS

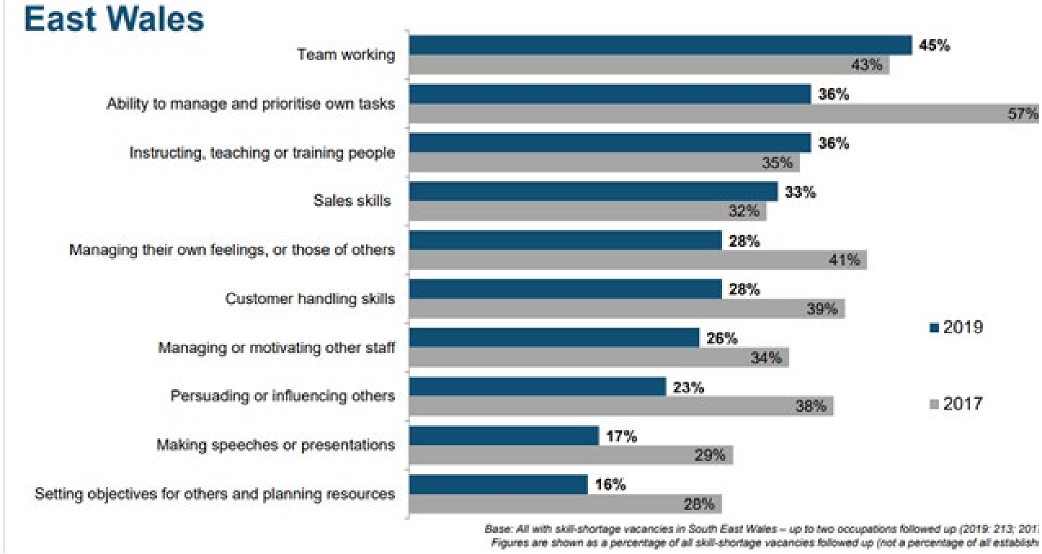
### Technical and practical skills lacking among applicants: South East Wales



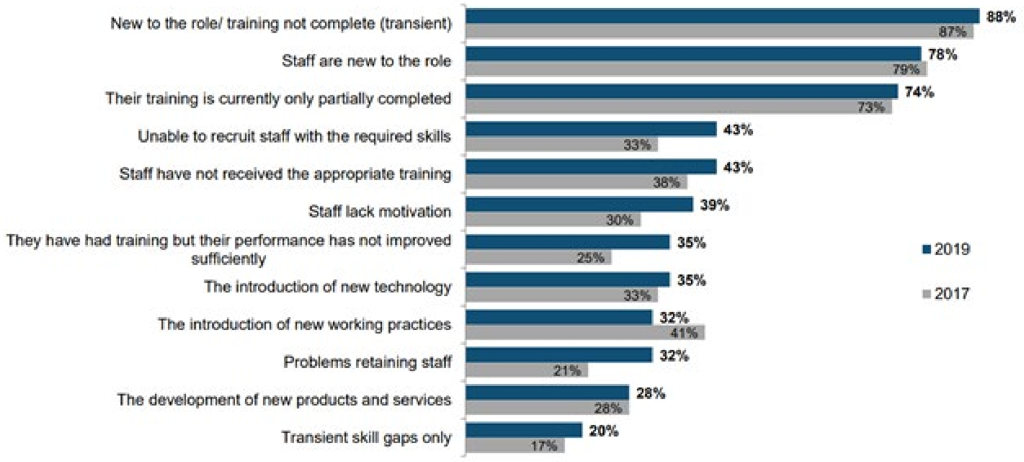

### Impact of skill-shortage vacancies: South East Wales




### People and personal skills lacking among applicants: South East Wales

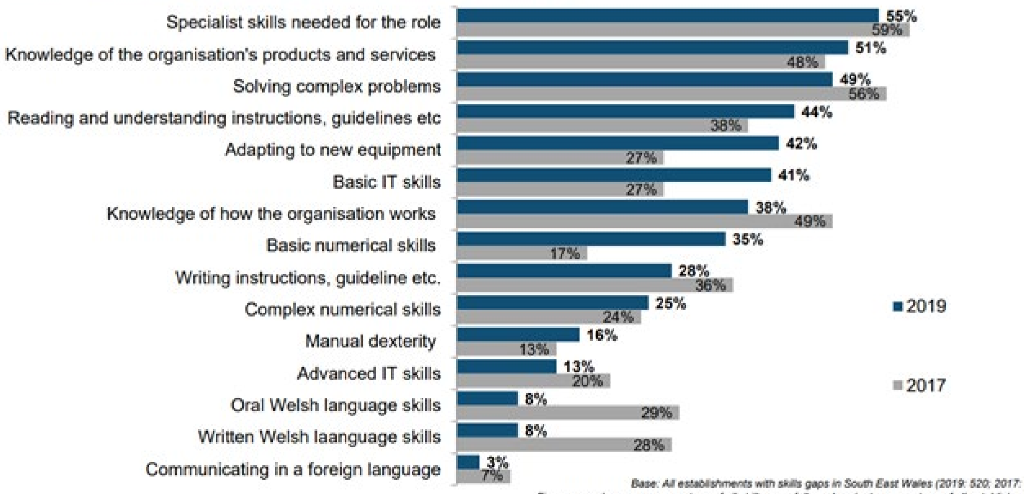


## Main causes of skills gaps: South East Wales



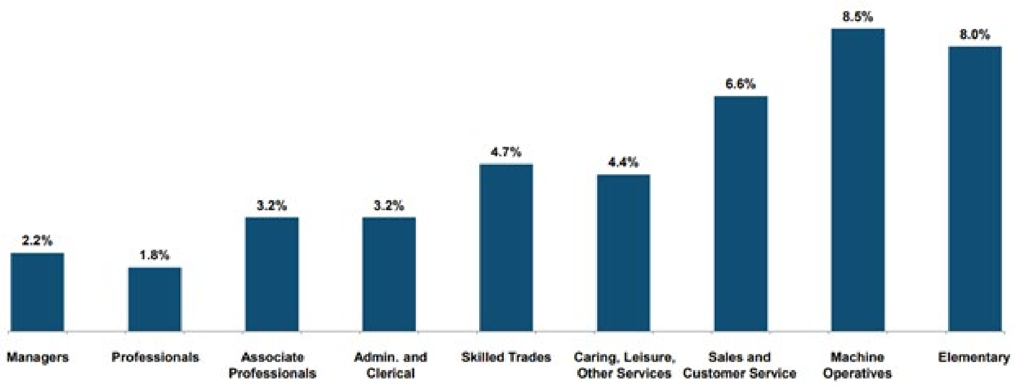

*Base: All establishments in South East Wales with skills gaps - up to 2 occupations followed up (2019: 520; 2017: 488)*
*Figures are shown as a percentage of all skills gaps followed up (not a percentage of all establishments)*

## Technical and practical skills that need improving among staff with skills gaps: South East Wales




*Base: All establishments with skills gaps in South East Wales (2019: 520; 2017:*
*Figures are shown as a percentage of all skills gaps followed up (not a percentage of all establishm*

## Density of skills gaps by occupation: South East Wales

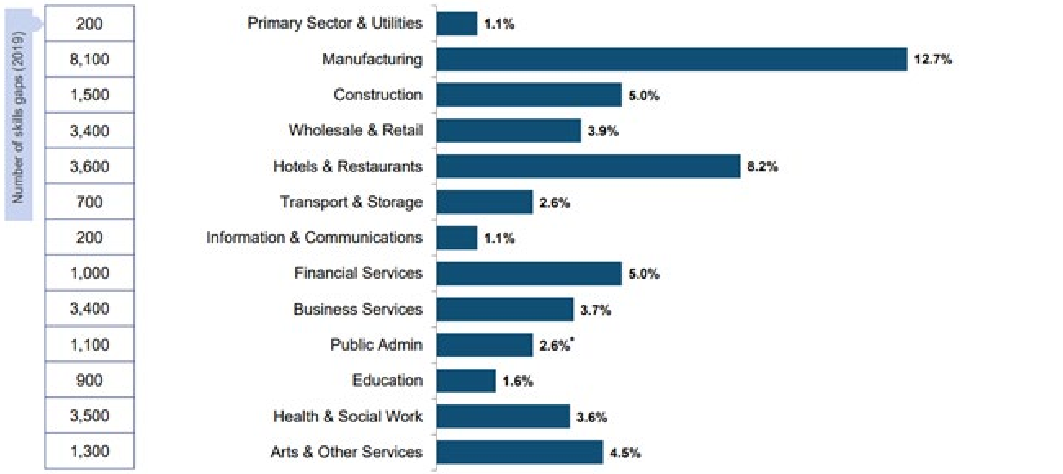



| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2,200 | 1,400 | 1,200 | 2,300 | 2,600 | 3,300 | 4,500 | 5,300 | 6,100 |

Number of skills gaps (2019)

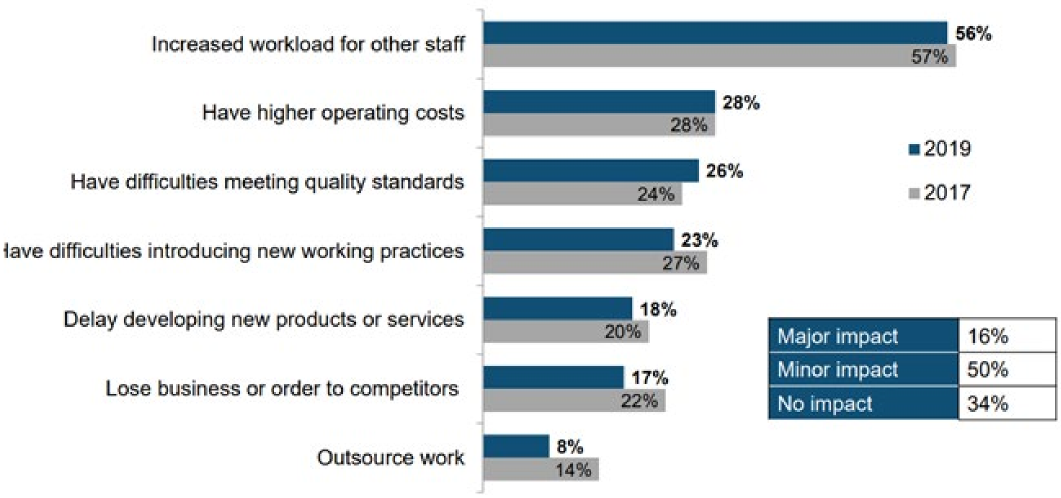
*Base: All establishments in South East Wales with staff in the given occupations (2019 base sizes range from 450 for Machine Operative to 2,631 for Managers)*

## Density of skills gaps by sector: South East Wales



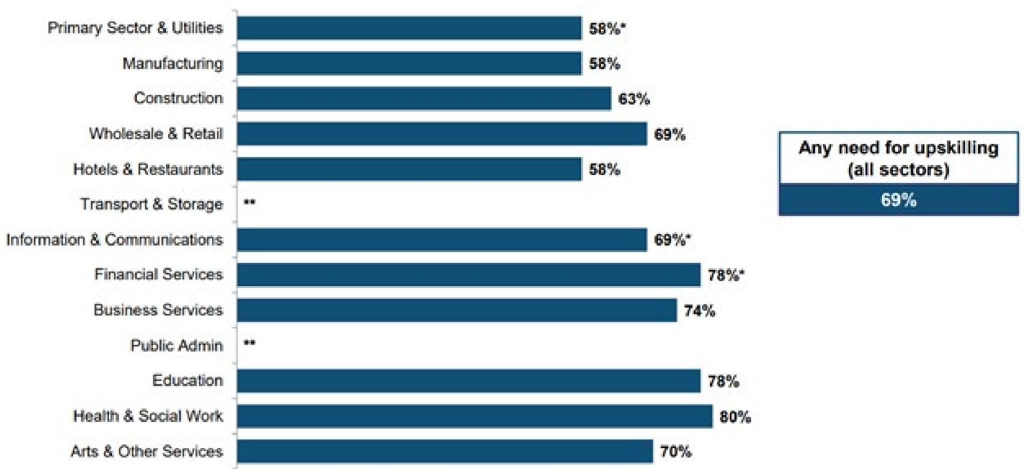

*Base: All establishments in South East Wales (2019 base sizes range from 45 Public Admin. to 574 in Wholesale and Retail)*
*Where base sizes are between 30-49, an asterisk has been included next to the data label.*
*When base sizes are relatively small the volumetric (and density) measures are particularly volatile to being influenced by a few establishments with a large number of vacancies; caution should be taken when interpreting these results*

## Impact of skills gaps: South East Wales




*Base: All establishments in South East Wales with skills gaps (2019: 520; 2017: 488)*

## Proportion with any need for upskilling in the next 12 months: South East Wales

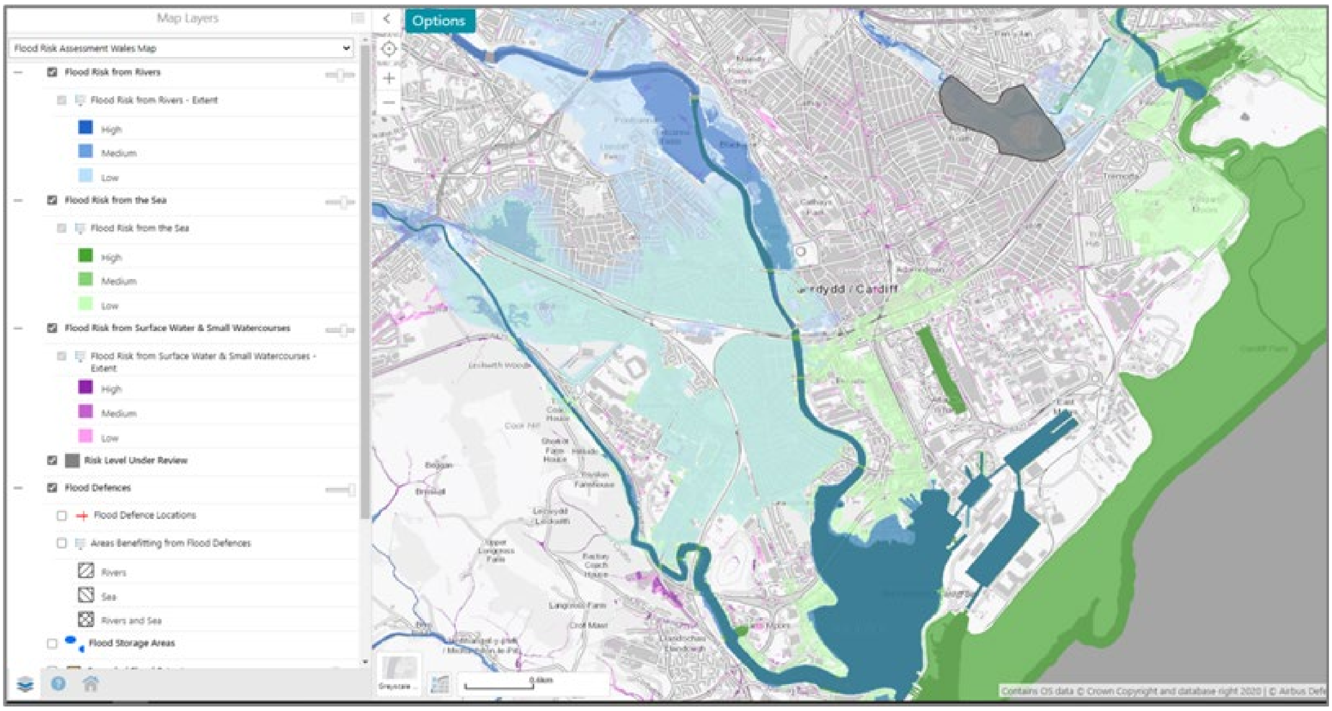



*Base: All establishments in South East Wales (Modules B and D) (Base sizes range from 25 in Public Admin. to 274 in Wholesale & Retail)*
*Where base sizes are under 30 within a sector, data has been removed (denoted by a double asterisk); where base sizes are between 30-49, an asterisk has been included next to the data label.*

## People and personal skills that need improving among staff with skills gaps: South East Wales


*Base: All establishments with skills gaps in South East Wales (2019: 520; 2017: 488)*
*Figures are shown as a percentage of all skills gaps followed up (not a percentage of all establishments)*

# APPENDIX IV – CARDIFF FLOOD RISK




| Properties Registered to Natural Resources Wales Flood Warning Service in Cardiff (November 2021) | |
|---|---|
| **Fully Registered**<br><br>(Signed themselves up to the Flood Warning Service) | 7,762 |
| **Extended Direct Warnings**<br><br>(Automatically enrolled to the Flood Warning Service via opt out) | 14,329 |
| **Total Who Will Receive a Flood Warning** | 22,091 |

| | **Present Day Risk (Defended)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Local Authority** | Tidal | | | Fluvial | | | Surface Water | | |
| **Cardiff** | low | med | high | low | med | high | low | med | high |
| **Residential** | 12062 | 77 | 0 | 15648 | 864 | 298 | 6310 | 663 | 368 |
| **Non residential** | 1584 | 94 | 2 | 2041 | 96 | 43 | 710 | 126 | 60 |