# NISRA STATISTICAL BULLETIN

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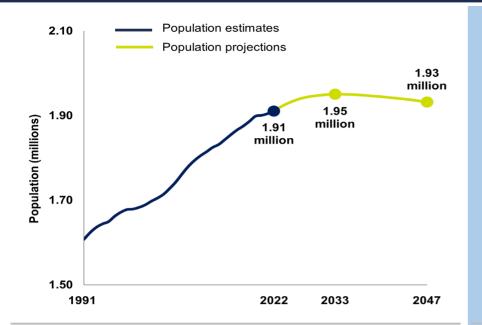
Time period: mid-2022 to mid-2047

2022-based Population Projections for Northern Ireland



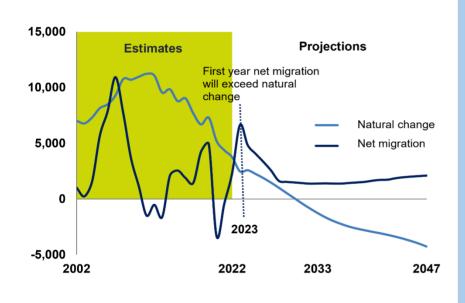
This statistical report provides population projections for Northern Ireland between mid-2022 and mid-2047, by age and sex.

# 2022-based Population Projections for Northern Ireland - Summary



# The population of Northern Ireland is projected to reach 1.93 million by mid-2047

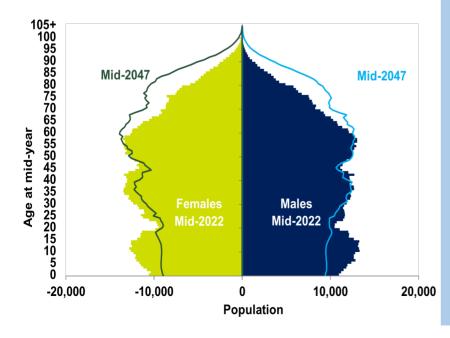
The population of Northern Ireland is projected to increase by 39,800 people in the first 10 years to mid-2032. The population is projected to peak at 1.95 million in mid-2033. It is then projected to fall to 1.93 million by mid-2047.



# Natural change projected to become negative by 2031

Migration continues to be the driver of population growth exceeding natural change from the beginning of the projection.

Deaths will outnumber births by 2031 creating a negative natural change (births minus deaths).



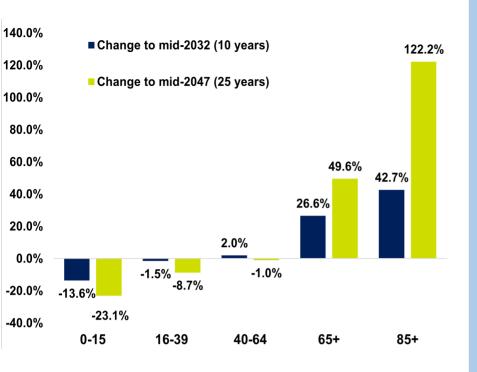
# The ageing population is projected to continue

The population of Northern Ireland is projected to become older. The population pyramid shows that by mid-2047 the older age population (65 and over) is projected to increase. The median age is projected to increase from 40.0 to 46.7 years between 2022 and 2047.



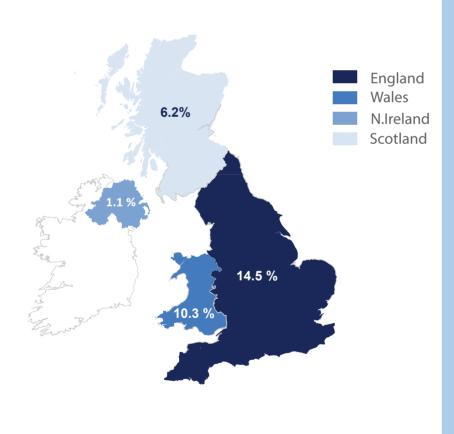


# **2022-based Population Projections for Northern Ireland** - Summary



# Largest population growth projected for the 65+ and 85+ age groups

The largest population growth is projected amongst the 65+ and 85+ age groups. Over the next 25 years the population aged 65+ and 85+ are projected to grow by 49.6 per cent and 122.2 per cent respectively. The population of children (age 0-15) is projected to fall by 23.1 per cent by mid-2047.



# Northern Ireland projected the smallest population growth across the UK

Northern Ireland's projected population growth (1.1 per cent) over the next 25 years is the lowest across the UK. England is projected to have the largest population growth (14.5 per cent) between mid-2022 and mid-2047.



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Note: Throughout the report figures have been presented in a rounded form to ease readability. For example population figures have been presented to the nearest 100 and percentage changes have been presented to 1 decimal place. However, all calculations have been undertaken on the basis of unrounded numbers which will, in some instances, give rise to apparent discrepancies.

#### 1 Introduction

National population projections, by age and sex, are produced for the UK, and each of the UK constituent countries, by the Office for National Statistics (ONS) on behalf of the National Statistician and the Registrars General of Scotland and Northern Ireland. Principal Projections are produced based on long-term assumptions about future fertility, mortality and migration levels, with variant projections being produced from various alternative assumptions – usually in the form of high/low variants and their combinations.

While variant projections are available (see <u>Section 10</u>), this bulletin focusses on the key findings from the 2022-based **Principal Population Projections**.

#### 2 What are population projections used for?

National population projections provide an estimate of the future size and age structure of the population of Northern Ireland. Population projections are widely used in policy development in areas such as housing, healthcare and education. One such use is in projecting the growth of the population aged 65 and over in future years and how this will affect decisions in i) private and communal property planning, and ii) suitable levels of elderly health care. Population projections are also used as the base for other Accredited Official Statistics releases, such as population projections for areas within Northern Ireland and household projections.

# 3 Key information on population projections

#### 3.1 Overview

It is important to note that population projections are <u>not</u> forecasts and do not attempt to predict the impact that future government policies, changing economic circumstances or other factors might have on demographic behaviour. Due to the inherent uncertainty of demographic behaviour, any set of projections will inevitably differ from actual future outcomes to a greater or lesser extent.

#### 3.2 Accuracy of projections

The national population projections use the latest official population estimates as their base year and are inevitably dependent on the accuracy of these estimates. Northern Ireland population estimates are produced using the internationally recognised cohort component method – starting with the population data from the last decennial census and updating each year with the available data on births, deaths and migration.

When considering these projections, it should be noted that their degree of reliability is closely associated with their proximity to the base year (mid-2022). It is acknowledged that projections become increasingly uncertain the further they are carried forward and it is noted that long-term assumptions should be treated with caution.

For this reason, we have limited our analysis to a **25 year projection period**. We would encourage users to read the <u>National Population Projections Accuracy Report</u> to fully understand the limitations of long-term projections.

#### 3.3 Consequences of projections

Population projections, like some other types of projections, may indicate that existing trends and policies are likely to lead to outcomes which are judged undesirable. If new policies are then introduced, they may result in the original projections not being realised. However, this means the projections will have fulfilled one of their prime functions, to show the consequences of present demographic trends with sufficient notice for any necessary action to be taken.

#### 3.4 Setting the principal projection assumptions

An executive summary outlining <u>how the assumptions are set</u> has been published, we would encourage users to review this document for a detailed account of how decisions were made when setting the fertility, mortality and migration assumptions for the 2022-based population projections.

Each component of the population projections (fertility, mortality and migration) is considered separately when setting the assumptions for each set of projections. The assumptions are based largely on extrapolation of past trends. Inevitably there is some element of subjective judgement, however, choices of main assumptions are informed by the views of an Expert Advisory Panel. Individual papers outlining the rationale for the <u>fertility</u>, <u>mortality</u> and <u>migration</u> assumptions can be found on the ONS website.

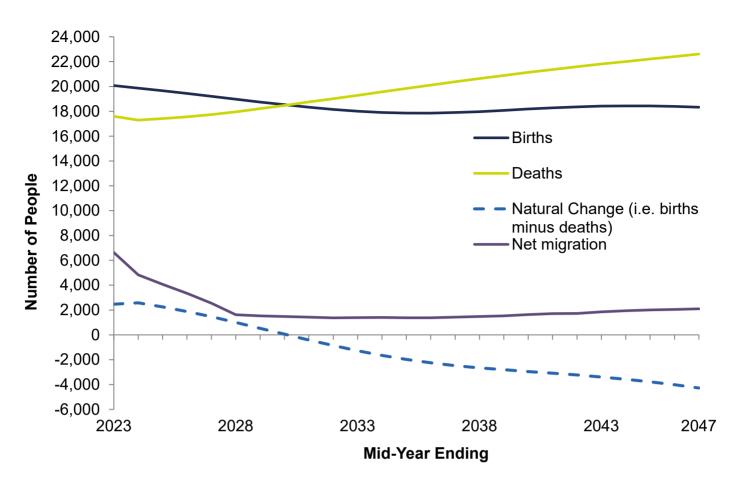
The assumptions summarised below relate to those applied to the **principal projection**.

Population projections are, by definition, based on long-term assumptions about future fertility, mortality and migration levels, in summary the main assumptions are:

- Fertility In the long-term, the hypothetical woman will have 1.65 children in her lifetime.
- Mortality In the long-term, improvements in mortality rates are projected to be around 1.1 per cent per annum.
- <u>Migration</u> In the long-term, beginning mid-2026, net international migration will be observed at +3,000 inflows.

These long-term assumptions are applied in order to calculate the projected number of births, deaths, and net migration occurring each year in the projection period. However, there is a transition period for fertility, mortality and migration to gradually move from current levels to the long-term assumptions.

Figure 1: Projected number of births, deaths and total net migration, year ending mid-2022 to year ending mid-2047



#### **Download Chart** (XLS Format 126KB)

Figure 1 shows that net migration exceeds natural change (the difference between births and deaths) for the duration of the projection. As such, overall population growth is projected to be mainly due to net migration with the projected number of deaths exceeding the projected number of births from 2031 onwards.

In terms of overall net migration, in the 25 years to mid-2047 there is projected to be an average annual net migration gain of +2,200 people. Although similar to the net migration assumption above, overall net migration also accounts for migration between Northern Ireland and the rest of the UK<sup>1</sup>. There is projected to be an average annual net loss of -1,300 people to the rest of the UK, which when combined with the average annual net gain of +3,500 people due to net international migration gives an overall average annual net migration gain of +2,200 people.

We would encourage users to refer to the <u>Quality and Methodology Information report</u> for more detailed information on how the population projections are produced, their accuracy and the limitations of projections.

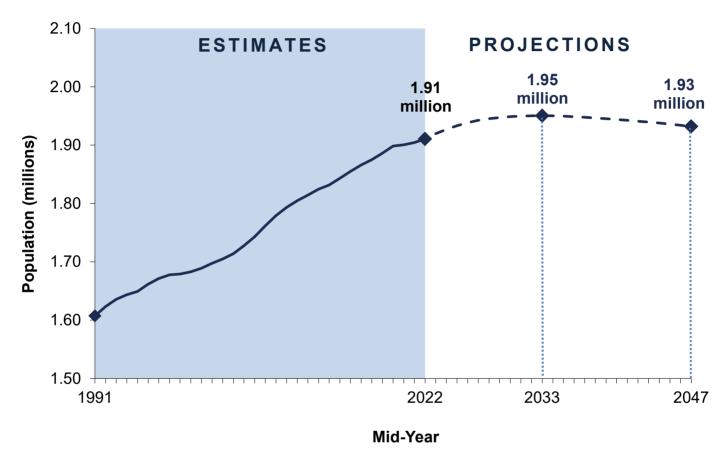
<sup>1</sup> Migration projections relating to flows to/from the rest of the UK are calculated by applying rates to the overall projected populations each year.

# 4 The population of Northern Ireland is projected to increase

The population of Northern Ireland is projected to peak at **1.95 million** in mid-2033

In mid-2022, the population in Northern Ireland was estimated to be 1.91 million people. Over the next 11 years from mid-2022 to mid-2033, the population is projected to increase by 39,700 to 1.95 million. In the following 14 years to mid-2047 the population is projected to decrease by 18,300 to 1.93 million (see Figure 2).

Figure 2: Population of Northern Ireland, estimated and projected, mid-1991 to mid-2047 (non-zero y-axis)



<sup>\*</sup>Figures for mid-1991 to mid-2022 relate to mid-year estimates.

**Download Chart** (XLS Format 44KB)

# 5 Why is the population of Northern Ireland projected to change?

# 5.1 The population of Northern Ireland is projected to continue increasing until mid-2033, and then to fall

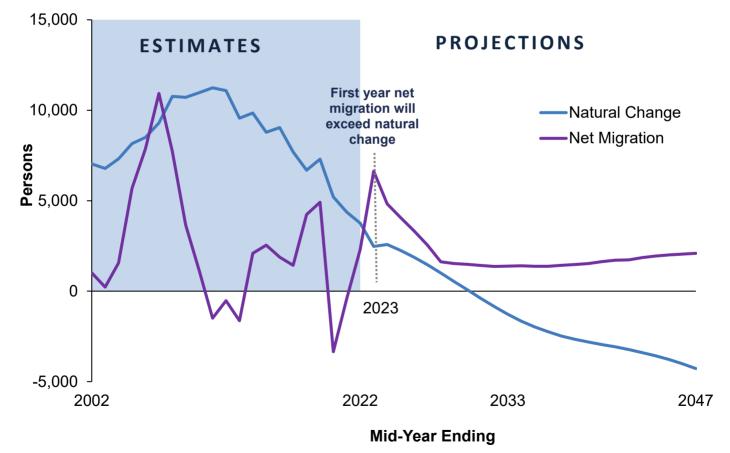
The population of Northern Ireland is projected to increase due to positive net migration. Figure 3 shows that in recent years net migration has been the driver of population growth in Northern Ireland, with natural change having a smaller impact in the year ending mid-2023 (+6,600 people and +2,500 people, respectively).

Population is projected to increase until mid-2033, and then to fall

Natural change is projected to decrease steadily over the projection period to -4,300 by the year ending mid-2047, a decrease of 6,800 (272.7 per cent) from the year ending mid-2023. Similarly, net migration is projected to decrease from +6,600 inflows in the year ending mid-2023 to +2,100 inflows in

mid-2047, a decrease of 4,500 (68.4 per cent). The simultaneous decrease in both natural change and net migration means that population growth, although positive, will be to a lesser extent over the next 25 years to 2047 (21,400, 1.1 per cent) than the previous 25 years from 1997 (239,300, 14.3 per cent).

Figure 3: Natural change and net migration, year ending mid-2002 to year ending mid-2047



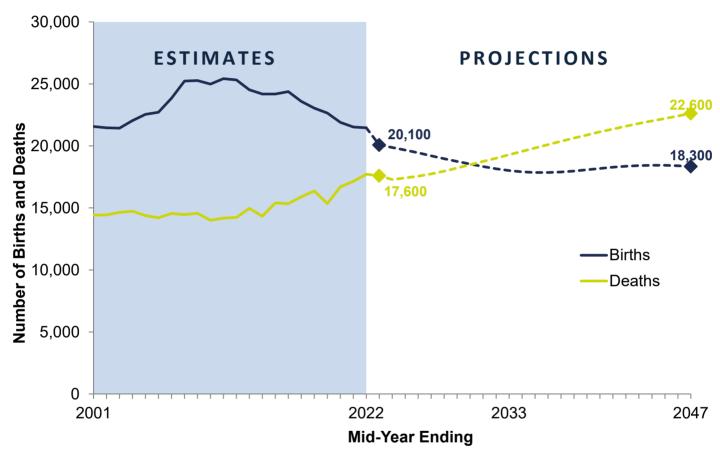
<sup>\*</sup>Figures for mid-2002 to mid-2022 relate to mid-year estimates.

Download Chart (XLS Format 134KB)

#### 5.2 Why is natural change projected to decrease?

Natural change is projected to decrease due to a rise in deaths and a fall in births throughout the projection period. The number of births is projected to decrease to a low of 17,900 births in the year ending mid-2035 (a decrease of 11.0 per cent from mid-2022). After this fall, the number of births is projected to increase slightly up to mid-2044, then fall again reaching 18,300 by mid-2047. Over the projection period the annual number of births is projected to decrease by 1,700 (8.7 per cent) between the year ending mid-2023 and the year ending mid-2047. In contrast, the number of deaths is projected to increase by 28.5 per cent during the same period, from 17,600 to 22,600 (see Figure 4). The number of deaths is projected to first exceed the number of births in the year ending mid-2031 and continues to be higher for the rest of the projection up to the year ending mid-2047.

Figure 4: Estimated and projected births and deaths, year ending mid-2001 to year ending mid-2047



<sup>\*</sup>Figures for year ending mid-2001 to year ending mid-2022 relate to mid-year estimates.

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#### 5.3 Projected UK and International Migration

Projected migration figures comprise of two components, namely

- (i) migration between Northern Ireland and countries outside the UK (referred to as 'international migration') and
- (ii) migration between Northern Ireland and the rest of the UK (referred to as 'within the UK migration').

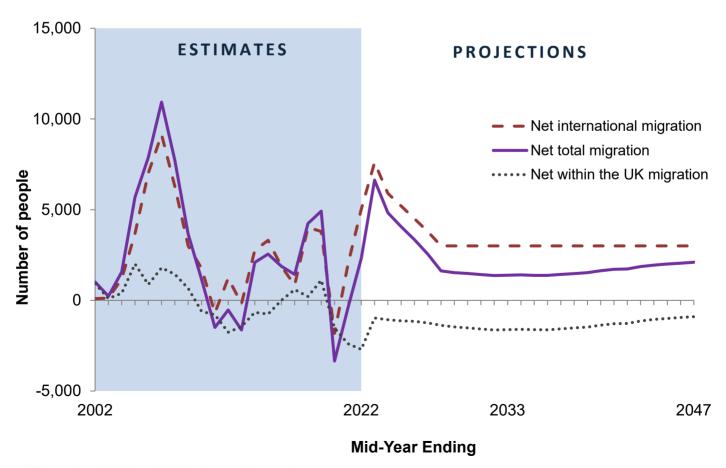
Figure 5 illustrates recent and future trends in both net international migration and migration between Northern Ireland and the rest of the UK. Over the last five years Northern Ireland has experienced an average net international inflow of 2,600 people per year. In comparison, over the same period Northern Ireland has lost an average of 1,100 people to the rest of the UK.

Net migration is projected to remain **positive** between mid-2022 and mid-2047

As a result of these past trends, the projections assume that Northern Ireland will experience a <u>net inflow</u> of 3,000 international migrants each year, in the long term. The within the UK migration component, however varies throughout the projection and results in a net outflow to the rest of the UK. Despite a net outflow to the

UK, Northern Ireland is projected to experience a <u>positive net migration</u> between the year ending mid-2022 and the year ending mid-2047 due to higher levels of net international migration. In total it is projected that Northern Ireland will gain 53,800 people between the year ending mid-2022 and the year ending mid-2047, or an average of 2,200 people per annum due to positive net migration.

Figure 5: Estimated and Projected migration, year ending mid-2002 to year ending mid-2047



<sup>\*</sup>Figures for mid-2002 to mid-2022 relate to mid-year estimates.

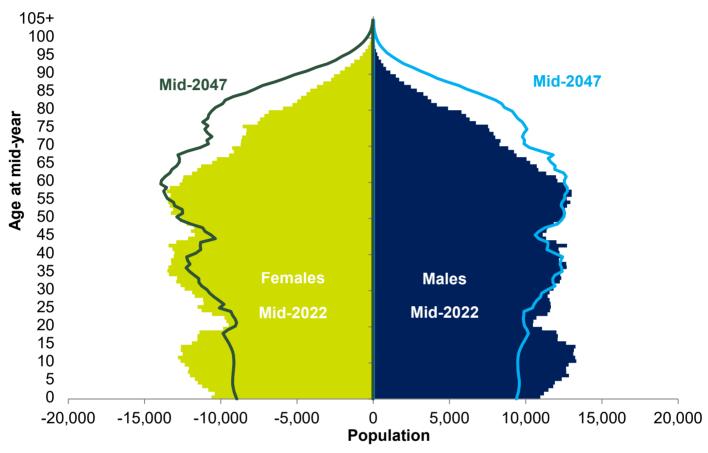
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## 6 How is the age structure of Northern Ireland projected to change?

#### 6.1 The population of Northern Ireland is projected to get older

As well as a projected growth in the overall numbers of people in Northern Ireland over the 25 year projection period, the age structure of the population is also projected to change. Figure 6, a population pyramid, is an illustrative way of showing that the age profile of both the male and female population is projected to get older.





<sup>\*</sup>Figures for mid-2022 relate to mid-year estimates.

#### Download Chart (XLS format – 60KB)

By mid-2047, it is evident that the population around the older ages (65 and over) is projected to increase significantly, resulting in the shape of the population pyramid changing to a more rectangular outline.

Furthermore, an ageing population is also evident through the projected rise in the median age<sup>2</sup>, from 40.0 years in mid-2022 to 46.7 years by mid-2047. For males, the median age is projected to rise from 39.0 year in mid-2022 to 45.0 years by mid-2047. Similarly, the median age for females is projected to rise from 40.9 years in mid-2022 to 48.3 years by mid-2047.

<sup>&</sup>lt;sup>2</sup> Median age is the age at which half of the population is older and half the population is younger.

#### 6.2 How are population age groups projected to change?

The projected ageing of the population can also be shown by breaking down the population into specific age groups, as shown in Figure 7. The number of children (aged 0-15) in Northern Ireland is projected to decrease over the next 25 years, from 389,400 in mid-2022 to 299,500 in mid-2047 (23.1 per cent). Similarly, the number of people aged 16-64 is also projected to decrease by mid-2047, from 1,185,700 to 1,130,700 (4.6 per cent).

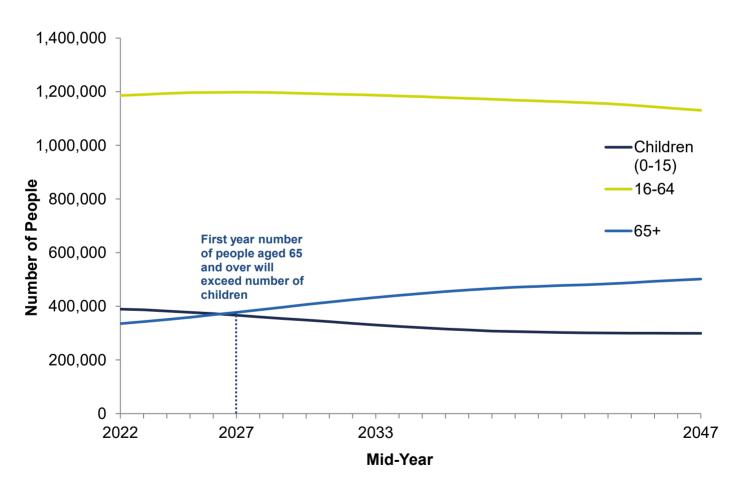
By **mid-2027** the number of people aged 65 and over is projected to overtake the number of children

In contrast, Figure 7 shows that the number of people aged 65 and over in Northern Ireland is projected to see considerable growth over the next 25 years. In mid-2022, the number of people aged 65 and over in Northern Ireland was estimated to be 335,400 and is projected to increase to 501,700 (49.6 per cent

increase) by mid-2047.

The population aged 85 and over, referred to as the 'oldest old', is also projected to have considerable growth. In mid-2022, there was an estimated 41,100 people aged 85 and over and by mid-2047 this population is projected to increase to 91,300, a growth of 122.2 per cent over the next 25 years.

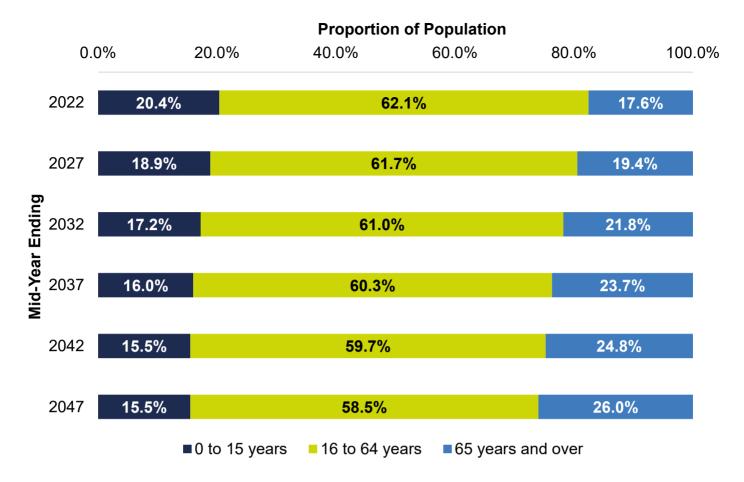
Figure 7: Projected population by age, mid-2022 to mid-2047



<sup>\*</sup>Figures for mid-2022 relate to mid-year estimates.

**Download Chart** (XLS Format 77KB)

Figure 8: Estimated and projected proportion of population by age, mid-2022 and mid-2047



<sup>\*</sup>Figures for mid-2022 relate to mid-year estimates.

**Download Chart (XLS Format 38KB)** 

Figure 8 shows how the proportion of the population in each age group is projected to change over the next 25 years. The proportion of children is projected to decrease from just over 1 in 5 (20.4 per cent) in mid-2022 to 15.5 per cent by mid-2047. Conversely, it is projected that the population aged 65 and over will increase from 17.6 per cent in mid-2022 to just over 1 in 4 of the population (26.0 per cent) by mid-2047. It is also worth noting that the proportion of the population aged 16 to 64 is also projected to decrease between mid-2022 and mid-2047, from 62.1 per cent to 58.5 per cent.

#### 6.3 Working Age<sup>3</sup> Population

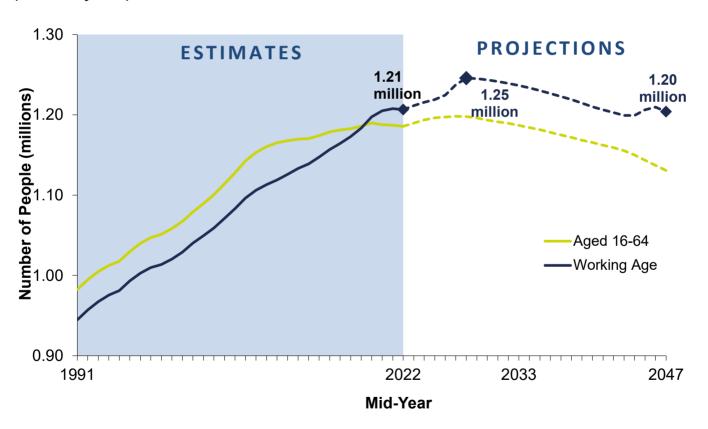
The 'working age' population is projected to decrease by 0.2 per cent between mid-2022 and mid-2047

It is important to consider the projected change in the 16 to 64 age group, who make up the majority of the working age population, with the projected change in the actual 'working age' population.

Since 6 April 2010, the state pensionable age for women has been gradually increasing from 60 to bring it in line with the state pensionable age of 65 for men<sup>4</sup>, with women's state pension age reaching 65 in November 2018, and the pension age of both men and women reaching 66 by October 2020. Pension age will then rise to 67 by 2028, and to 68 by 2046, for both men and women. These figures take account of these planned changes<sup>5</sup>.

Taking this into account, the number of people of working age in Northern Ireland is projected to rise by 3.2 per cent from 1,206,500 in mid-2022 to a peak of 1,245,700 people in mid-2028. Between mid-2028 and mid-2047, the working age population is then projected to decrease by 3.4 per cent to 1,203,900 (see Figure 9). Over the 25 year period, the working age population is projected to decrease by 2,700 people (0.2 per cent).

Figure 9: Estimated and projected population aged 16 to 64 and working age, mid-1991 to mid-2047 (non-zero y-axis)



<sup>\*</sup>Figures for mid-1991 to mid-2022 relate to mid-year estimates.

**Download Chart** (XLS Format 45KB)

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<sup>&</sup>lt;sup>3</sup> Working age population takes into account the changes in pensionable age resulting from the <u>Pensions Act 2011</u> and the <u>Pensions Act 2014</u>.

<sup>&</sup>lt;sup>4</sup> Further information on State Pension Age and a current timetable can be found on the NI Direct website.

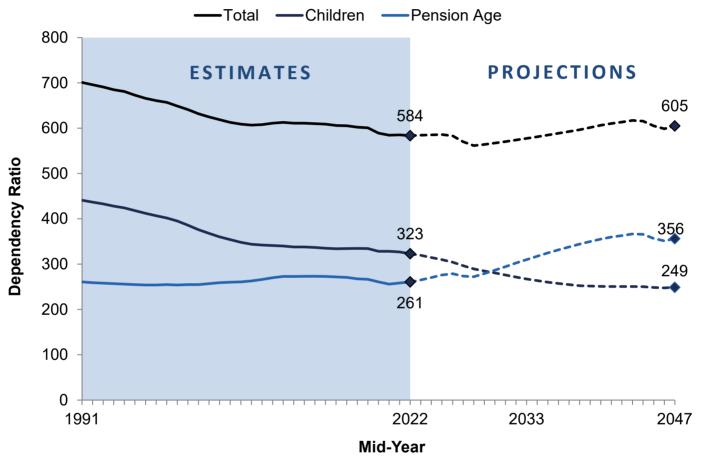
<sup>&</sup>lt;sup>5</sup> In addition the State Pension age is under further <u>review</u> and is likely to change further in the future; with the possibility of pension age rising to 68 by 2039. This proposed change is not reflected in these figures.

## 7 How does a changing age structure affect Northern Ireland?

#### 7.1 Projected change in dependency ratios

A dependency ratio gives insight into the number of people of non-working age compared to the number of those of working age<sup>6</sup>. A simple interpretation is the number of older people or children who are 'dependent' on the working age population, the assumption being that older people and children are not economically active. A high ratio means that those of working age, and therefore the overall economy, face a greater burden in supporting the greater number of people of non-working age (typically the elderly and/or young).

Figure 10: Estimated and projected dependency ratios for children and pension age, mid-1991 to mid-2047



<sup>\*</sup>Figures for mid-1991 to mid-2022 relate to mid-year estimates.

**Download Chart (XLS Format 54KB)** 

Figure 10 shows the number of dependents per 1,000 people of working age. The total dependency ratio is projected to increase from 584 per 1,000 in mid-2022 to 605 per 1,000 in mid-2047. The increase in the dependency ratio is due to the increase in the number of people of pensionable age per 1,000 working age population.

<sup>&</sup>lt;sup>6</sup> 'Working age' and 'pensionable age' take account of the changes resulting from the <u>Pensions Act 2011</u> and the <u>Pensions Act 2014</u>.

The dependency ratio for children is projected to decline from 323 per 1,000 in mid-2022 to 249 per 1,000 working age in mid-2047. Alternatively, the dependency ratio for people of pensionable age is projected to increase from 261 per 1,000 in mid-2022 to 356 per 1,000 working age in mid-2047.

It is important to note that dependency ratio figures should be used with care. For example, not all people of working age will be economically active or in full time employment (e.g. students). Furthermore, not all people who are eligible for retirement will leave their employment, or become dependent on others if they do retire. Despite these limitations, dependency ratios remain a useful tool for analysing the population's relative age structure.

## 8 How is life expectancy projected to change?

Table 1 shows life expectancy for males and females at selected years over the projection period. Life expectancy for females is projected to increase from 82.3 years in 2022 to 85.4 years in 2047. Males are projected to experience a larger increase in life expectancy, from 78.4 years in 2022 to 81.9 years in 2047.

Table 1: Expectation of life at birth, 2022 to 2047 (selected years)

Year	Males	Females
2022*	78.4	82.3
2027	79.7	83.3
2032	80.3	83.9
2037	80.9	84.4
2042	81.4	84.9
2047	81.9	85.4

<sup>\*</sup>Figures for 2022 are estimates taken from National Life Tables.

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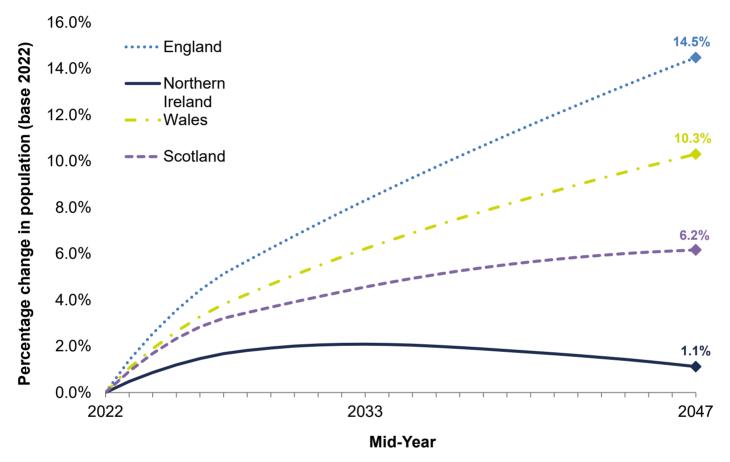
## 9 Comparison of population projections within the UK

The Northern Ireland population projections are produced as part of the <u>UK population projections</u>. These include figures for each of the four UK countries (England, Wales, Scotland and Northern Ireland) and, as such, provide consistent comparable results for across the UK. Long-term assumptions are set for each country separately based on regional demographic trends.

#### 9.1 Projected population change across the UK

The UK population is projected to increase from an estimated 67.6 million in mid-2022 to 76.6 million by mid-2047. Over the 25 year period this equates to an increase of 8.9 million people (13.2 per cent).

Figure 11: Percentage population change for UK countries, mid-2022 to mid-2047



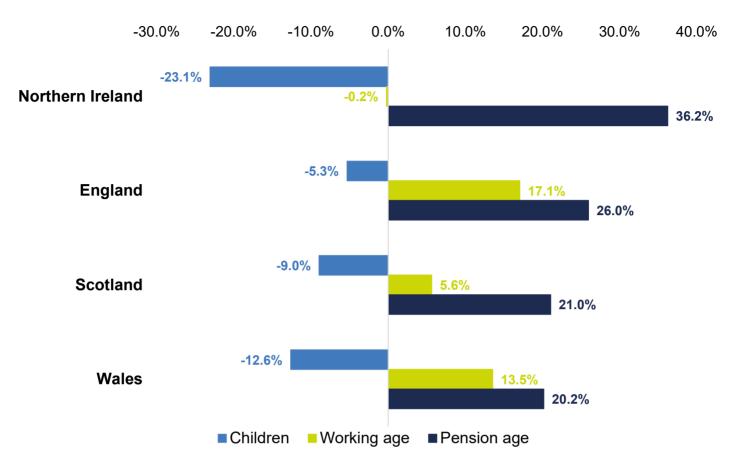
<sup>\*</sup>Figures for mid-2022 relate to mid-year estimates.

**Download Chart** (XLS Format 48KB)

Figure 11 shows the projected population change for each of the UK nations between mid-2022 and mid-2047. The population of England is projected to have the largest increase over the period by 14.5 per cent (8.3 million people). Wales is projected to have the second largest growth in terms of percentage, 10.3 per cent (322,800 people) over the period. Scotland is projected to have the third largest growth in terms of percentage, 6.2 per cent (335,700 people), by mid-2047. Northern Ireland is projected to have the smallest population growth by mid-2047, 1.1 per cent (21,400 people).

#### 9.2 Projected population change by age group across the UK

Figure 12: Percentage population change by age group across the UK, mid-2022 to mid-2047



**Download Chart (XLS Format 40KB)** 

Northern Ireland is projected to have the largest decrease in the population of children and largest increase in the pension age population across the UK

Figure 12 shows the breakdown of the projected change in population across the UK by age group. Between mid-2022 and mid-2047, the largest increase in population across all countries is projected to be for people of pensionable age. Northern Ireland's pension age population is projected to have the largest

increase over the next 25 years (36.2 per cent). The pension age population in Wales is projected to have the smallest growth by mid-2047, although still by a considerable proportion (20.2 per cent).

All four UK countries are projected to have a decrease in the population of children over the next 25 years. Northern Ireland is projected to have the largest decrease in the population of children (23.1 per cent). England is projected to have the smallest decrease in the population of children (5.3 per cent) by mid-2047.

The working age population is projected to increase for Scotland, England and Wales between mid-2022 and mid-2047. The largest increase is projected in England (17.1 per cent), followed by Wales (13.5 per cent), and Scotland (5.6 per cent). For Northern Ireland, the working age population is projected to decrease over the next 25 years, by 0.2 per cent.

#### 9.3 Why is the population projected to change across the UK?

Table 2: Projected components of population change across the UK, mid-2022 to mid-2047

Country	Estimated population mid-2022	Total Births	Total Deaths	Natural Change	Net Migration	Projected population mid-2047	Population change %
Northern Ireland	1,910,500	463,500	495,900	-32,400	53,800	1,931,900	1.1%
England	57,112,500	14,914,900	15,171,400	-256,500	8,524,400	65,380,400	14.5%
Scotland	5,447,000	1,196,700	1,714,300	-517,600	853,400	5,782,700	6.2%
Wales	3,132,700	701,500	982,500	-281,000	603,800	3,455,500	10.3%

**Download Table** (XLS Format 35KB)

Table 2 shows the components of population change for each of the UK countries over the next 25 years. For all countries, the projected population growth is due to net migration with all countries experiencing negative natural change (more deaths than births) over this period.

#### 10 Variant Projections

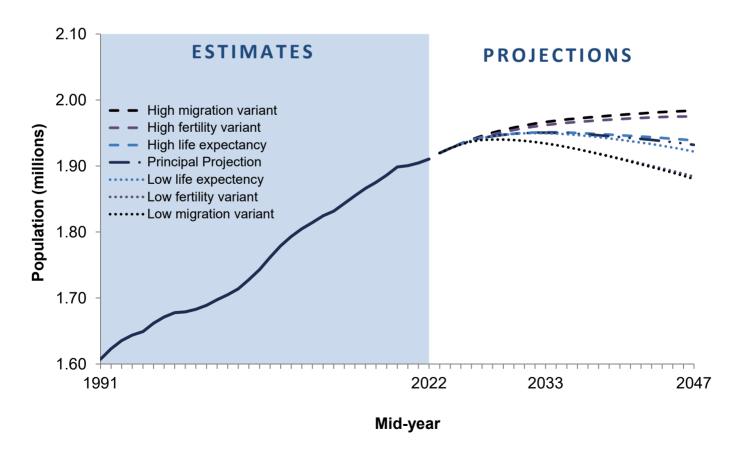
Projections will inevitably differ from actual future outcomes and become increasingly uncertain the further they are carried forward in time. In addition to the principal projection, variant projections are produced based on alternative, but generally plausible, assumptions of future fertility, mortality and net migration. These variant projections are intended to provide an indication of uncertainty and sensitivity to alternative assumptions. They do not represent upper or lower limits of future demographic behaviour, but illustrate plausible alternative scenarios if future fertility, mortality and migration differ from the assumptions made for the principal projection.

Variant projections for the UK and constituent countries are produced by ONS. Full details and figures can be found on the <u>ONS website</u>, with variants specific to Northern Ireland also available on the <u>NISRA website</u>.

#### 10.1 Total projected population under different variant assumptions

Figure 13 below shows the projected trajectory of a selection of variant projections for illustrative purposes. This selection of variants shows the variability of population projections. For example, the high migration variant projects an increase in the population to 1.98 million by mid-2047 which is 51,900 more people than the principal projection (1.93 million). Conversely, the low migration variant projects a decrease in the population by mid-2047 to 1.88 million which is 51,700 less than the principal projection.

Figure 13: Selected Northern Ireland Variant Projections, mid-1991 to mid-2047 (non zero y-axis)



<sup>\*</sup>Figures for mid-1991 to mid-2022 relate to mid-year estimates.

**Download Chart (XLS Format 43KB)** 

#### 10.2 Components of population change under different variant assumptions

Table 3 shows the components of population change under the principal projection and a selection of variant projections for illustrative purposes. The variability of the components of population change allows the impact of the differing projection assumptions to be illustrated.

For example, the high fertility variant has a greater projected natural change (births minus deaths). This is a result of a higher projected number of births (506,000 compared to 463,500) compared to the principal projection. As a result, population change over the projection period is estimated to be greater than the principal projection (1.1 per cent) for the high fertility variant (3.4 per cent).

Table 3: Components of population change, 2022 to 2047 (selected variants)

Variant	Estimated population mid-2022	Total Births	Total Deaths	Natural Change	Net UK Migration	Net RoW <sup>7</sup> Migration	Projected population mid-2047	Percentage change %
Principal								
Projection	1,910,500	463,500	495,900	-32,400	-33,200	87,000	1,931,900	1.1%
High life								
expectancy	1,910,500	463,500	489,300	-25,800	-33,100	87,000	1,938,500	1.5%
Low life								
expectancy	1,910,500	463,400	506,000	-42,500	-33,200	87,000	1,921,800	0.6%
High fertility								
variant	1,910,500	506,000	496,000	10,000	-32,500	87,000	1,975,000	3.4%
Low fertility								
variant	1,910,500	415,900	495,700	-79,900	-33,700	87,000	1,883,900	-1.4%
High								
migration								
variant	1,910,500	473,300	496,900	-23,600	-33,200	130,000	1,983,800	3.8%
Low								
migration								
variant	1,910,500	453,600	494,800	-41,200	-33,100	44,000	1,880,300	-1.6%

**Download Table (XLS Format 35KB)** 

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<sup>7</sup> Rest of World

#### 11 Background information

#### 11.1 Methodology

Estimates of the usually resident population of the UK and its constituent countries at mid-2022 are used as the starting (base) population for projections. The usually resident population is defined by the standard <u>United Nations definition</u> for population estimates, and includes people who reside in an area for a period of at least 12 months. Members of the armed forces throughout the UK are included within the usual resident definition. Northern Ireland population projections are based on the <u>mid-2022</u> estimates.

Projections are produced for successive years, starting with the base year, and running from one midyear to the next using the cohort component method. In short, the cohort component method involves ageing the population on by one year, with births added and deaths removed. An adjustment is then made to the population to account for net migration. A detailed overview of the method of projection is outlined within the background and methodology report.

#### 11.2 Data Quality

Population projections for the UK and the four constituent UK countries are produced by ONS, and figures for each UK country are sent to their respective statistical organisations for quality assurance. This process includes such exercises as analysing the future fertility, mortality and migration figures (and associated assumptions) to make sure that they are plausible, and calculating and analysing sex ratios.

The following sections take each element of the projections in turn and provide information relating to the quality of the underlying data.

#### 11.3 Base Population – Population Estimates for Northern Ireland (2022)

Mid-year population estimates are created using a variety of administrative data sources. A brief outline of these sources, and how quality is assured for each one, is detailed in the <u>population</u> <u>estimates data quality document</u>. Population estimates have been designated as Accredited Official Statistics which means that our statistics meet the highest standards of trustworthiness, quality and public value. The last full assessment of population estimates for Northern Ireland by the Statistics Authority was in July 2015, with the continued designation of these statistics as Accredited Official Statistics confirmed in August 2016.

#### 11.4 Assumptions – Births and Deaths

Information supplied at birth / death registration is generally believed to be correct since wilfully supplying false information may render the informant liable to prosecution for perjury. Birth and death figures by sex (and also by single year of age for deaths) are obtained from registrations with the General Register Office (GRO). All such events which occurred in the year between 1 July and 30 June are included in the mid-year population estimates.

During registrations, information provided is first checked by the informant before being finalised on the GRO's electronic system. Appropriate validation checks are embedded within the system to help the Registrar with this process. Statistics are extracted directly from the system and are subjected to further checks by the Vital Statistics team in NISRA's Demography and Methodology Branch, and again by the Population and Migration team when the relevant data are supplied to them.

Quality Assessment Reports are available online and contain further details on the quality of <u>birth</u> and <u>death</u> statistics.

#### 11.5 Assumptions - Migration

Migration is the most difficult component of population change to measure, as unlike births and deaths, there is no complete system for registering migration. Migration is estimated using transfers observed in medical cards, detailing the list of patients registered with a family doctor:

- inflows (people who come to live in Northern Ireland for a period of at least one year) are estimated by counting the number of people who registered or re-registered with a family doctor
- outflows (people who leave Northern Ireland for a period of at least one year) are estimated by counting the number of people who de-registered with a family doctor.

Medical card data<sup>8</sup> are collated by the Business Services Organisation (BSO) and validation checks are undertaken by the statisticians within that organisation. When the data are then sent to NISRA further checks are carried out, including data cleansing and comparisons with previous years' data. When the medical card data are processed to calculate migration estimates, figures for migration to / from Great Britain are agreed between the different UK administrations to provide as much accuracy and comparison between UK administrations as is possible for users.

<sup>&</sup>lt;sup>8</sup> In previous reports, medical card data was referred as "health card" data.

#### 11.6 Limitations

Population projections are based on assumptions derived from recent observed trends in fertility. mortality and migration. Therefore, these projections are not forecasts and do not attempt to predict the impact that future government policies, changing economic circumstances or other factors might have on demographic behaviour (e.g. the UK leaving the EU). While future policy changes are not taken into account, projections do reflect the impact of past policy and economic changes.

The future population of an area is strongly influenced by the initial base population. The reliability of projections decreases over time due to the cumulative process of population change, as well as the inherent uncertainty of demographic behaviour.

Figures for the number of children are more difficult to project than for the number of adults, due to assumptions around fertility levels and parental migration. In contrast, the number of older adults are relatively more straightforward to project as they are not affected by fertility assumptions, and are less likely to be affected by migration assumptions (the numbers of inflows and outflows decrease with age).

Since 2020, international migration statistics for England, Wales and Scotland no longer primarily rely on International Passenger Survey (IPS) data. Instead, they use an admin-based approach, see Methods to produce provisional long-term international migration estimates. This means there is a methodological inconsistency for the international migration statistics of Northern Ireland and the rest of the UK. Northern Ireland migration statistics have been previously assessed by the UK Statistics Authority, who found them to be fit for purpose<sup>9</sup>.

<sup>9</sup> UKSA Assessment Report – Population Estimates and Projections for Northern Ireland

#### 12 Links to related statistics

Population projections for Northern Ireland (2022-based) are available from the NISRA website.

Analysis within the statistical bulletin is limited to a **25 year projection period**. The <u>associated data tables</u> which can be found on the NISRA website provide population projections up to 2072 (50 years). Users on request can be provided with projections 100 years into the future, however we would encourage users to read the <u>National Population Projections Accuracy Report</u> to fully understand the limitations of long-term projections.

A <u>summary infographic</u> highlighting the important figures and trends in the data has also been released.

Population projections for <u>sub-national areas</u> (2018-based) are available from the NISRA website. The 2022-based population projections for sub-national areas will be published at a later date.

<u>Population estimates for the UK</u> and its constituent countries are available from the Office for National Statistics website.

<u>Mid-year population estimates for Northern Ireland</u> for mid-2022 were published in August 2023. The estimates refer to the size of the usually resident population at 30 June and include more detailed population estimates for Local Government Districts, Parliamentary Constituencies and associated administrative and statistical geographies. <u>Population Factsheets for Local Government Districts</u> are now published as a separate summary document.

Estimates of the population aged 85 and over were released as part of <u>Mid-year population estimates</u> <u>for Northern Ireland</u> for mid-2023 release in September 2024.

Population estimates for small areas in Northern Ireland for mid-2022 were released in July 2024.

#### 13 Accredited Official Statistics

<u>Accredited official statistics</u><sup>10</sup> are called National Statistics in the Statistics and Registration Service Act 2007. Accredited Official Statistics status means that our statistics meet the highest standards of trustworthiness, quality and public value, and it is our responsibility to maintain compliance with these standards

Population Projections for Northern Ireland last underwent a full assessment by the Statistics Authority against the <u>Code of Practice</u> in July 2015. The assessment report can be found on the <u>NISRA website</u>. Following the Statistics Authority assessment the continued designation of these statistics as Accredited Official Statistics was confirmed in <u>August 2016</u>.

Accredited Official Statistics status was confirmed subject to NISRA implementing six specific requirements. An action plan outlining how and when NISRA addressed each of these requirements can be found on the NISRA website.

An action plan checklist with supporting documentation can also be found on the NISRA website.

In 2019, UK National Population Projections were subject to a <u>compliance check</u> by the UK Statistics Authority. As a result of this compliance check, it was confirmed that National Population Projections should continue to be designated as Accredited Official Statistics.

Since the assessment by the UK Statistics Authority, we have continued to comply with the Code of Practice for Statistics, and have made the following improvements.

- Improved clarity and insight by reviewing the commentary to remove unnecessarily detailed narrative and bring forward the key messages. In addition, key point headlines have been included throughout the bulletin so users are alerted to main points of interest.
- We have designed a key points summary infographic to disseminate key messages from the projections to improve clarity and insight for users.
- The associated data tables for population projections are disseminated in a more innovative way by including a flat file and tabular format which users can interact with.
- We have improved the accessibility of population projections by publishing data in 3\* open data format on <u>NISRA Data Portal</u>. We have also included a new 'Links to related statistics' section within the bulletin so users can explore the whole population statistics package, including older person estimates, population projections, small area population estimates and a range of other supplementary material.
- To add value to the bulletin we have included a 'Key information on population projections' section up front to provide users with an overview of the projections, details on their accuracy and information on how the projection assumptions have been set.



<sup>&</sup>lt;sup>11</sup> The Office for Statistics Regulation (OSR) is the independent regulatory arm of the UK Statistics Authority and provides independent regulation of all official statistics produced in the UK.

# **Enquiries and suggestions**

- 1. The revisions policy for Northern Ireland population and migration statistics can be found on the ONS website.
- 2. We welcome feedback from users on the content, format and relevance of this release. Users can send feedback directly to <a href="mailto:census@nisra.gov.uk">census@nisra.gov.uk</a>.
- 3. Follow NISRA on X and Facebook.
- 4. All media inquiries should be directed to the DoF Press Office:

Telephone: 028 9081 6724

5. Further statistical information can be obtained from NISRA Customer Services:

Telephone: 028 9025 5156

E-mail: census@nisra.gov.uk

Responsible Statistician: Shauna Dunlop