

# Assessment of compliance with the Code of Practice for Official Statistics

## Population Estimates and Projections for Wales

*(produced by the Welsh Government)*

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The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:

1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

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# **Assessment of compliance with the Code of Practice for Official Statistics**

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## NATIONAL STATISTICS STATUS

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.



All official statistics should comply with all aspects of the *Code of Practice for Official Statistics*. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is a producer's responsibility to maintain compliance with the standards expected of National Statistics, and to improve its statistics on a continuous basis. If a producer becomes concerned about whether its statistics are still meeting the appropriate standards, it should discuss its concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

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## Foreword

Few would disagree that population statistics are as central to a national statistical system's infrastructure as roads are to a country's transport system or the national grid is to its power supply, and so need to meet the highest standards of trustworthiness, quality and value. They provide a detailed picture of the size and composition of the country's population, the drivers for change, and – reflecting well-documented assumptions – the way in which it might change in the years ahead. And in general they do so consistently and coherently from the level of the UK down to very small building blocks. Like all infrastructure, population statistics benefit from regular review and improvement.

This suite of assessment reports – covering population estimates and projections produced about all four administrations of the UK – finds much to celebrate. The good examples of joint working between the four bodies producing population statistics across the UK provide an opportunity and the platform to ensure the continuing coherence and comparability of these statistics. This joint working can ensure that any divergence – in definitions, methods or production arrangements – is justifiable and minimised. Engagement with users exploits a range of methods including groups of expert users, mailing lists and online forums, reflecting the different user needs.

During the Assessments, we found evidence that the resources devoted to population statistics across most of the UK are under significant pressure, exemplified by reductions in the frequency and level of detail of some statistics. And ONS's capacity to provide timely methodological and research leadership across the UK may be at risk, with potentially far-reaching adverse consequences.

Resource constraints limit producers' ability to actively harness the wider expertise that exists within the UK and internationally and reduces their ability to address the recommendation from the recent European peer review<sup>1</sup> of the UK's statistics to 'harmonise UK statistics in order to ensure coherence and comparability in the production of official statistics within the UK, over time and among producers of statistics' in relation to population estimates and projections. And the engaged and knowledgeable users that interact with producers have diverse interests that need to be taken into account in developing methods and outputs – placing further demand on resources – and there are more users where dialogue is less well established.

We conducted this series of Assessments reflecting existing methods used to produce population statistics. But we recognise that changes are already happening and will intensify over the next decade. The continuing growth in the use of administrative data and the work being done to reduce dependency upon costly decennial traditional censuses, has the potential to radically alter the landscape for population statistics. It will provide new sources with potential to inform the production and assurance of population estimates and projections. And proposed improvements to the legal base for data sharing would enable more value to be derived from data already held by government – this is in itself a powerful stimulus for improved data sharing legislation.

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<sup>1</sup> <http://ec.europa.eu/eurostat/documents/64157/4372828/2015-UK-report/d44f7d3f-64c1-4450-8a37-bfad8542607>

Taking forward actions to meet the specific Requirements in this report will enhance the trustworthiness, quality and value of these statistics, and will earn them the continued right to be labelled as National Statistics. But – because of their position in the UK statistics infrastructure – producers need to be far-sighted to counter the challenges of reducing resources and make the most of the opportunities of administrative date and census replacement to add further value to these statistics. Until then, it is vital that resources are maintained and that the statistics can continue to flourish while the longer term changes take full effect.

**Ed Humpherson**

**Director General for Regulation, UK Statistics Authority**

# 1 Summary of findings

## Introduction

- 1.1 This is one of a series of reports<sup>2</sup> prepared under the provisions of the *Statistics and Registration Service Act 2007*<sup>3</sup>. The Act gives the Statistics Authority power to re-assess whether the *Code of Practice for Official Statistics*<sup>4</sup> continues to be complied with in relation to official statistics already designated as National Statistics. The report covers the following population estimates and projections (population) statistics produced by the Welsh Government for Wales and reported in:
- Mid-year Estimates of the Population (*Mid-year Estimates*)<sup>5</sup>
  - Principal and Variant Local Authority Population Projections for Wales (*Local Authority Projections*)<sup>6</sup>
  - Population Projections for National Parks (*National Park Projections*)<sup>7</sup>
- 1.2 This report forms part of a broader assessment of sets of population statistics across the UK that are produced by the Office for National Statistics (ONS); the Welsh Government; National Records of Scotland (NRS) and the Northern Ireland Statistics and Research Agency (NISRA). Assessment reports 309, 311 and 312 examine the population statistics produced by ONS, NRS and NISRA respectively.
- 1.3 The previous assessment of these sets of statistics was included in Assessment report 101<sup>8</sup>. They are among the UK's most prominent National Statistics and are being re-assessed because they are an important input to national and local planning activity and to a large number of economic and social statistics.
- 1.4 This report was prepared by the Authority's Assessment team, and approved by the Regulation Committee on behalf of the Board of the Statistics Authority, based on the advice of the Director General for Regulation.

## Decision concerning designation as National Statistics

- 1.5 The Authority judges that the statistics covered by this report are readily accessible, produced according to sound methods and managed impartially and objectively in the public interest, subject to any points for action in this report. The Authority confirms that the statistics published in *Mid-year*

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<sup>2</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

<sup>3</sup> [http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga\\_20070018\\_en.pdf](http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf)

<sup>4</sup> <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

<sup>5</sup> <http://gov.wales/statistics-and-research/mid-year-estimates-population/?lang=en>

<sup>6</sup> <http://gov.wales/docs/statistics/2013/130723-local-authority-population-projections-2011-based-en.pdf>;

<http://gov.wales/docs/statistics/2013/131220-local-authority-population-projections-2011-based-variant-projections-revised-en.pdf>

<sup>7</sup> <http://gov.wales/statistics-and-research/population-projections-national-parks/?lang=en>

<sup>8</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-101---statistics-on-population--demography-and-households-in-wales.pdf>

*Estimates, Local Authority Projections* and *National Park Projections* are designated as National Statistics, subject to the Welsh Government implementing the Requirements listed in paragraph 1.9 and reporting them to the Authority by January 2016. The exception is for Requirements 5 and 8 in the case of *Mid-year Population Estimates 2015* and *Local Authority Projections*, where the deadline is the next publication of those reports. However, the Welsh Government should provide sufficient evidence to the Authority ahead of the next publication of each report listed, to demonstrate that the forthcoming publication will fully comply with the *Code of Practice*. The Welsh Government has informed the Assessment team that it has started to implement the Requirements listed in paragraph 1.9. The Authority welcomes this.

## Summary of strengths and weaknesses

- 1.6 The Welsh Government's population estimates and projections are an important source for a range of users. The Welsh Government's positive engagement with local authority users in particular and its active involvement of them in the planning and quality assurance of *Local Authority Projections* is an example of good practice in user engagement. The Welsh Government's StatsWales<sup>9</sup> website, which facilitates access to historical estimates and projections series, allows users to produce bespoke tables, and download estimates and projections data in a variety of formats, is another important strength of the Welsh Government's work in this area.
- 1.7 Despite these encouraging features, the Welsh Government has ceased and postponed some of its population estimates and projections outputs in the last few years. The Welsh Government told us that this was done to reduce the duplication of outputs already published by other statistical producers and to focus on other statistical priorities. It has also reduced the number of permanent posts allocated to the continual development of its estimates and projections but has not produced a clear plan for their future. The reduction in the permanent resources allocated to this area and the lack of a clear statistical plan represent current weaknesses in the Welsh Government's estimates and projections capacity, and pose a risk to their future development. If this continues, the advances that the Welsh Government has made with its population statistics could be undone, and it will struggle to produce population estimates and projections that continue to meet users' needs.

## Detailed recommendations

- 1.8 The Assessment team identified some areas where it felt that the Welsh Government should improve the production and presentation of population statistics for Wales. Those which are essential for the Welsh Government to address in order to strengthen its compliance with the *Code* and to enable designation as National Statistics are listed – as Requirements – in paragraph 1.9, alongside a short summary of the key findings that led to each Requirement being made. Other recommended changes, which the Assessment team considers would improve the statistics and the service

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<sup>9</sup> <https://statswales.wales.gov.uk/Catalogue/Population-and-Migration/Population>

provided to users but which are not formally required for their designation as National Statistics, are listed – as Suggestions – in paragraph 1.10.

## Requirements for designation as National Statistics

1.9 This paragraph includes those improvements that the Welsh Government is required to make in respect of its statistics on *Mid-year Estimates*, *Local Authority Projections* and *National Park Projections* in order to fully comply with the *Code of Practice for Official Statistics*, and to enable designation as National Statistics.

Finding	Requirement	
<p>The Welsh Government has not published information about its engagement with users outside of government, or users' views on the quality, format, timing and quality of its statistical outputs. The Welsh Government should:</p>	<p><b>1</b></p>	<p>a) Ensure regular user engagement activities include a wide-array of relevant users of population estimates and projections, including non-government users in academia, charities and the private sector</p> <p>b) Publish users views on their needs in terms of the quality, format and timing of population estimates and projections</p> <p>c) Ensure that users are thoroughly consulted before changes are made that affect the estimates or projections, including changes to methods, scheduling, and before cessations of statistical products are enacted</p> <p>(para 3.4).</p>
<p>The Welsh Government has not produced a transparent statistical plan for the future of its population estimates and projections. The Welsh Government should:</p>	<p><b>2</b></p>	<p>Update and extend its published statistical plans for future population estimates and projections to ensure that they:</p> <p>a) take account of users needs, particularly in relation to the timely publication of related statistical outputs</p> <p>b) are transparent about priority setting and the reasons that choices are made</p> <p>c) take account of dependencies on ONS and reflect the obligation to serve the public good</p> <p>(para 3.7).</p>
<p>The Welsh Government has reduced the resources allocated to the development of its population</p>	<p><b>3</b></p>	<p>a) Ensure that the resources that it has allocated to the production of its estimates and projections are sufficient to meet the standards of the Code and the uses of the statistics</p>

<p>estimates and projections and there is a risk that it will be unable to fully meet the needs of users. The Welsh Government should:</p>		<p>b) Publish a summary for users of the decisions that it has made in terms of its priority setting and allocation of resources for its population estimates and projections (para 3.11).</p>
<p>The Authority's new regulatory standard states that producers of official statistics should make sure that they are informed about, and have satisfied themselves of, the quality of the source data used in the production of official statistics, back to the primary source. The Welsh Government should:</p>	<p><b>4</b></p>	<p>Publish information in an appropriate level of detail to inform users about the data assurance and audit arrangements for all of the administrative data sources used in the production of its population estimates and projections publications, taking into consideration the Authority's <i>Administrative Data Quality Assurance Toolkit</i> (para 3.16).</p>
<p>The Welsh Government's Quality and Methods documentation needs reviewing and updating. The Welsh Government should:</p>	<p><b>5</b></p>	<p>Review and update its quality and methods documentation ensuring that:</p> <ul style="list-style-type: none"> <li>a) it includes specific details about the methods and data sources used to produce <i>National Park Projections</i> and <i>Local Authority Projections</i></li> <li>b) the differences between the methods used, and the totals derived from, <i>Local Authority Projections</i> and the ONS National Population Projections are clearly explained</li> <li>c) historical comparisons of Local Authority Projections with mid-year estimates are included</li> <li>d) the documentation is clearly signposted and linkable from the statistical reports, supporting documentation and the estimates and projections web pages</li> </ul> <p>(para 3.22).</p>
<p>The Welsh Government's <i>Local Authority Projections</i> and <i>National Park</i></p>	<p><b>6</b></p>	<p>Coordinate with ONS and its users for the next round of <i>Local Authority Projections</i> and <i>National Park Projections</i> with a view to producing them with a common base year to each other, and with that used for the ONS</p>

<p><i>Projections</i> are out of sync with each other and with the ONS National Population Projection. The Welsh Government should:</p>		<p>National Population Projections (para 3.24).</p>
<p>Further inconsistencies in have occurred since the four UK countries originally produced methods comparison documentation for users. The Welsh Government should:</p>	<p><b>7</b></p>	<ul style="list-style-type: none"> <li>a) Ensure comparison documents on the population estimates and projections produced in all countries in the UK are regularly reviewed and updated</li> <li>b) Carry out, and publish, a review of the methodological and comparability differences and, based on knowledge of the uses of the statistics and expert input, evaluate whether the differences are justifiable</li> </ul> <p>As part of meeting this Requirement the Welsh Government should work together with ONS, NRS and NISRA.</p> <p>(para 3.26).</p>
<p>The accessibility of the Welsh Government's existing population estimates and projections outputs needs improving. The Welsh Government should:</p>	<p><b>8</b></p>	<ul style="list-style-type: none"> <li>a) Improve the standard of commentary – to include additional contextual information and explanation for changes – and presentation to maximise accessibility for a wider range of users</li> <li>b) Review and improve, where relevant, the layout and signposting between relevant publications, supporting documentation and datasets</li> <li>c) Repair the broken links throughout and between the population estimates and projections publications and supporting documentation</li> </ul> <p>As part of meeting this requirement the Welsh Government should consider the points detailed in annex 1 and annex 2.</p> <p>(para 3.31).</p>
<p>Welsh Government has not announced some of its National Statistics reports 12 months ahead. The</p>	<p><b>9</b></p>	<p>Ensure that it publishes statistical reports according to a timetable that takes account of users needs and that it publishes this timetable for 12 months ahead (para 3.34).</p>

Welsh Government should:		
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### Suggestions for extracting maximum value from the statistics

1.10 This paragraph includes some suggestions for improvement to the Welsh Government's *Mid-year Estimates*, *Local Authority Projections* and *National Park Projections*, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

We suggest that the Welsh Government:

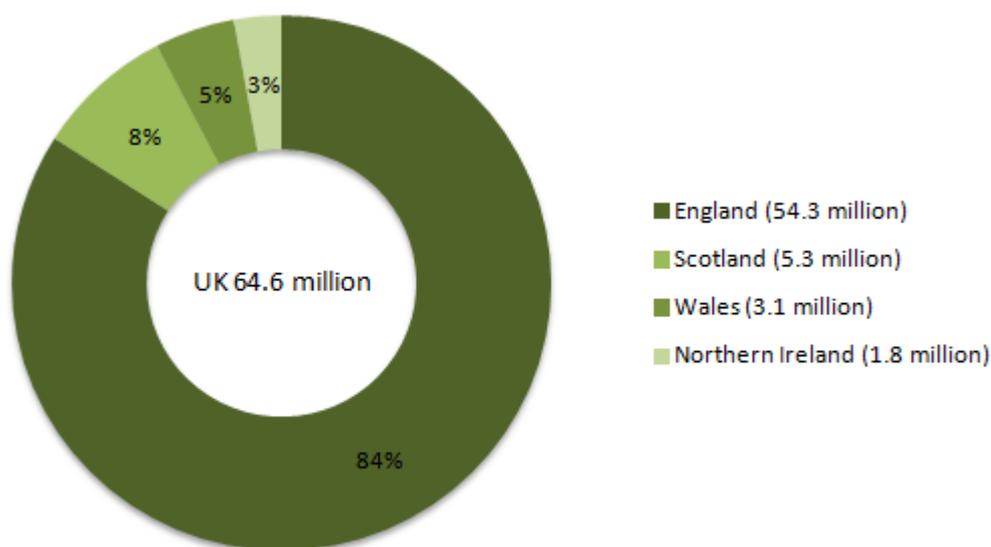
1	Work with statistical producers in ONS, NRS and NISRA to clarify the assurance arrangements for administrative data (para 3.16).
2	Develop a process map to illustrate the supply of data used to produce the various population statistics that are included in this Assessment (para 3.16).
3	Work with its users, ONS, NRS and NISRA with a view to ensuring that the sub-national projections produced both leading up to, and following, the 2021 Census share a common base year (para 3.24).
4	Publish guidance about the statistics that are available from ONS and from StatsWales, to help ensure that users are able to access the estimates and projections that are the most appropriate for their needs (para 3.33).
5	Investigate the potential for producing data visualisations for <i>Mid-Year estimates</i> , <i>Local Authority Projections</i> and <i>National Park Projections</i> , drawing on ONS's expertise as appropriate, to help maximise accessibility for a broader range of users (para 3.33).

## 2 Subject of the assessment

### Population Statistics across the UK

2.1 Population statistics are an essential part of the UK's statistics infrastructure. They describe the size and structure of the population of the UK, illuminate how and why the population is changing, and project how it might change in the future. The statistics play a vital part in planning and inform decision making from national to local level and are a building block in the development of a large number of economic and social statistics. Figure 1 shows the estimated size of UK population – 64.6 million, which was an increase of 0.77 per cent on the 2013 estimate – and its constituent parts at 30 June 2014.

**Figure 1: Mid-year population estimates for the UK mid-2014**



Source: Office for National Statistics, National Records of Scotland, Northern Ireland Statistics and Research Agency, as presented in *Mid-year population estimates 2014*<sup>10</sup>

Note: Numbers do not add exactly due to rounding

2.2 In the UK, population size is estimated annually at 30 June. Annual estimates take into account births, deaths and changes to population through internal and international migration since the previous year. They are made using the detailed estimates of population that are produced from the population census<sup>11</sup> as a baseline; this baseline is updated every ten years.

2.3 Population projections are currently produced every second year in the UK. They are based on mid-year estimates and a set of assumptions about future changes to births, deaths and migration. The population projections are trend-based. They are not policy-based forecasts of what the government expects to

<sup>10</sup> [http://www.ons.gov.uk/ons/dcp171778\\_406922.pdf](http://www.ons.gov.uk/ons/dcp171778_406922.pdf)

<sup>11</sup> In the UK there are three population censuses: England and Wales census, Scotland census, and Northern Ireland census. In this report 'census' will refer to the population census for England and Wales unless otherwise specified.

happen. Instead they show the consequences of present demographic trends. They are less reliable in periods of rapid change. Variant projections illustrate how the size of the population would change if the assumptions that were made about fertility, mortality and migration changed.

- 2.4 Four organisations – ONS, the Welsh Government, NRS and NISRA – produce population estimates and projections that cover all or part of the UK. ONS produces population estimates for England and Wales and for the UK as a whole, and NRS and NISRA produce their own population estimates for Scotland and Northern Ireland respectively. ONS also produces national population projections for the UK and each of the constituent countries – England, Wales, Scotland and Northern Ireland – and sub-national projections for England. The Welsh Government, NRS and NISRA produce their own sub-national projections for Wales, Scotland and Northern Ireland respectively.
- 2.5 The four producers publish statistics in separate publications that cover the UK as a whole; the constituent countries and administrations; sub-national geographies such as local authorities; and selected population sub-groups. The main differences in the publications are:
- in the specific lower geographies for which estimates and projections are published
  - in the publication by estimates of marital status: ONS is the only producer who publishes national population estimates – for England and Wales combined – by marital status; currently NRS is consulting users about the demand for marital status estimates for Scotland
  - in the detail of the estimates of the elderly: ONS publishes national estimates of the number of people aged 90 or over for England and Wales combined, as do NRS for Scotland; NISRA publishes estimates for Northern Ireland for people aged 85 or over
- 2.6 Further detail of the primary and processed data sources that the Welsh Government uses to produce the population estimates and projections and the data flows are described in paragraph 2.13 to 2.15 and shown in Figure 2.

### **Population Statistics in scope of this assessment**

- 2.7 The Welsh Government produces population estimates and projections for Wales within its Knowledge and Analytical Services (KAS) area, which is responsible for the majority of the Welsh Government's statistics, social and economic research, cartography and knowledge and information management. The Welsh Government currently publishes three statistical reports on population estimates and projections for Wales using data that are provided by ONS:
- *Mid-year Estimates of the Population (Mid-year Estimates)* is published annually. It highlights the main trends in the population for Wales and any significant shifts in the population share for individual local authorities. The Welsh Government does not produce the mid-year estimates itself. It compiles the publication from the mid-year estimates produced by ONS

- *Principal and Variant Local Authority Population Projections for Wales (Local Authority Projections)* are produced every two years. They provide projected population totals for a 25-year period and summary analyses for the 22 Welsh local authorities. While the projections are based on ONS source data, they are produced independently by Welsh Government statisticians
- Population Projections for National Parks (*National Park Projections*) was last produced in 2011 using source data that are provided by ONS and a similar methodology to that used for *Local Authority Projections*. It presents projected population totals over a 25-year period for the Brecon Beacons, Snowdonia and Pembrokeshire Coast national park areas

2.8 The Welsh Government previously published *National Population Projections for Wales*<sup>12</sup>, which presented projected estimates of the Wales population over a 25-year period. The report was produced using data from the ONS National Population Projections<sup>13</sup> and was published on the same day as the ONS report. During the course of this assessment Welsh Government statisticians informed us that they would not be publishing the report in future. They said that this was in line with the Welsh Government's 2013/14 consultation on the future of its statistical outputs<sup>14</sup> in which it proposed to cease the publication of statistical information already published elsewhere, but to ensure users remain aware of publication dates and how to access the statistics.

## Users and uses of Population Statistics

2.9 *Mid-year Estimates* provides Welsh users with easy access to the mid-year estimates for Wales produced by ONS. The mid-year estimates are used by local authorities in Wales to plan and monitor local services and was used to determine local government finance settlements in Wales until 2010/11. It is also used as a denominator in the production of other Welsh statistics (for example birth and death rates) and to weight for non-response to social surveys. The mid-year estimate for Wales itself is used in conjunction with the Barnett formula to determine the funding allocated to Wales by HM Treasury.

2.10 *Local Authority Projections* and *National Park Projections* are used for the Welsh Government's policy purposes, such as for the Welsh Government Planning Bill<sup>15</sup>, and by local authorities for planning services and to inform their local development plans (LDPs). The Welsh Government has used local authority projections instead of mid-year estimates since 2011/12 to determine local government settlements in Wales. The Welsh Government told us that it produces the sub-national projections to ensure that consistent and comparable projections are available across all Welsh local authorities. The Welsh Government also facilitates local government analysts to produce their own variant projections using different birth, death and migration assumptions.

<sup>12</sup> <http://gov.wales/statistics-and-research/national-population-projections/?lang=en>

<sup>13</sup> <http://www.ons.gov.uk/ons/rel/npp/national-population-projections/2012-based-projections/index.html>

<sup>14</sup> <http://gov.wales/consultations/statistics/proposals-concerning-publication-official-statistics/?status=closed&lang=en>

<sup>15</sup> <http://gov.wales/topics/planning/legislation/planningbill-old/?lang=en>

## History and Governance

2.11 The Welsh Government commissioned ONS to produce 1998-based (30 June 1998) and then 2003-based (30 June 2003) local authority projections for Wales, using the methods used to produce local authority projections for England. The Welsh Government published the 1998-based projections for local authority groupings. However, the method did not produce consistent and meaningful results for local authorities or reflect local trends. The Welsh Government produced its first (2006-based) *Local Authority Projections* using its own method in June 2008. It then published the first (2007-based) *Mid-Year Estimates* in August 2008 and the first (2006-based) *National Park Projections* in September 2009. Table 1 shows the years that the Welsh Government has published its three current population estimates and projections reports.

**Table 1: Welsh Government estimates and projections by publication year**

	<i>Mid-Year Estimates</i>	<i>Local Authority Projections</i>	<i>National Park Projections</i>
2008	2007-based	2006-based	-
2009	2008-based	-	2006-based
2010	2009-based	2008-based	-
2011	2010-based	-	2008-based
2012	2011-based	-	-
2013	2012-based	2011-based	-
2014	2013-based	-	-
2015	2014-based (announced)	-	2013-based (expected)

Source: produced by Assessment team

2.12 Welsh Government statisticians are part of the UK Population Theme Group<sup>16</sup> (UKPTG) and the UK Population Theme Advisory Board<sup>17</sup> (UKPTAB). These groups are chaired by ONS and attended by representatives from ONS, the Welsh Government, NRS and NISRA, along with other relevant users such as academics, to produce a strategic and co-ordinated approach to statistical planning across the UK, including improving the quality of statistics and analysis. Welsh Government statisticians also coordinate and report to the Welsh Statistical Liaison Committee<sup>18</sup> (WSLC). WSLC comprises Welsh local authorities and other public sector organisations, including representatives of users outside central government, such as police authorities and the Welsh Language Commission. Welsh Government statisticians are also on the Census Transformation Board<sup>19</sup>.

<sup>16</sup> <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/population-and-migration/population-statistics-meetings-and-user-groups/population-theme-group/index.html>

<sup>17</sup> <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/population-and-migration/national-statistics-centre-for-demography-advisory-board/index.html>

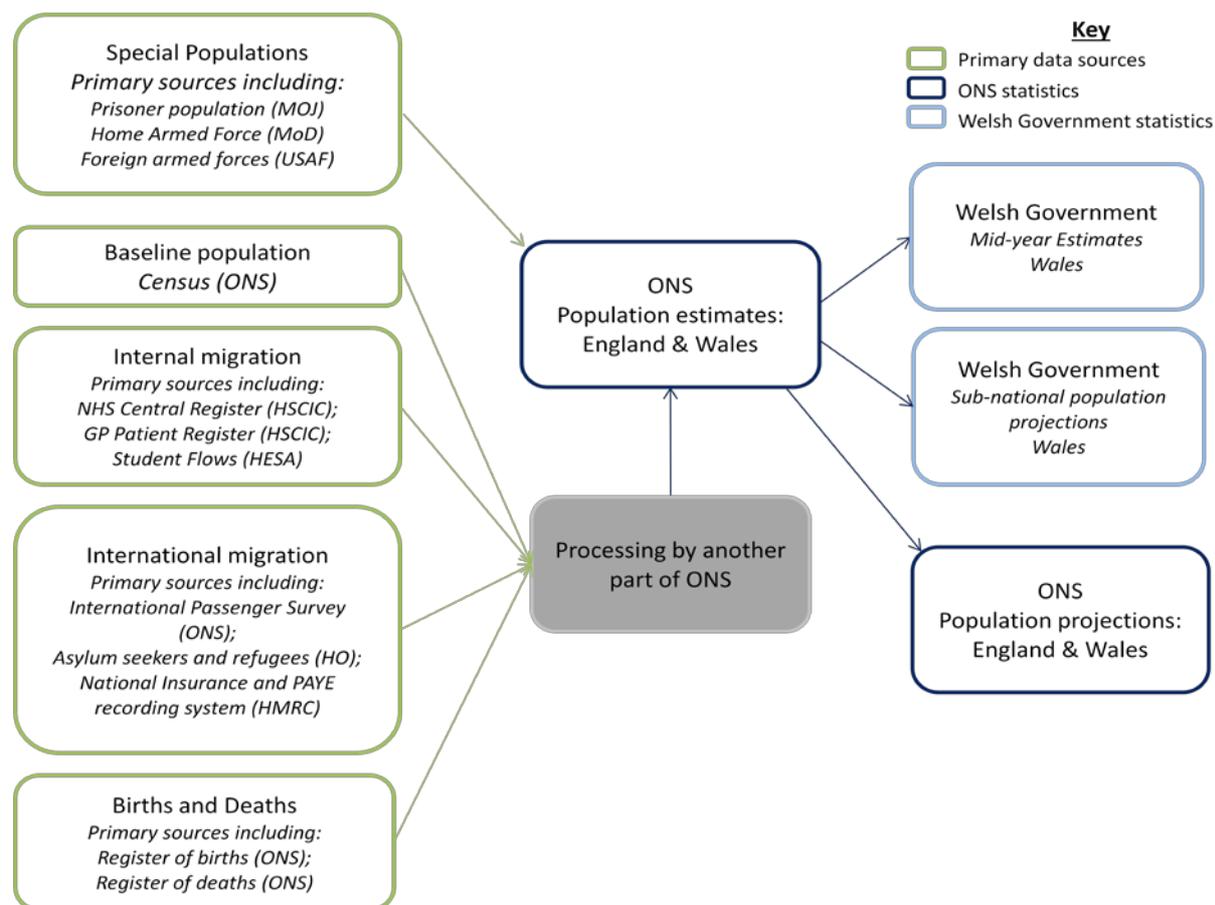
<sup>18</sup> <http://gov.wales/statistics-and-research/about/user-engagement/statistical-groups-committees/welsh-statistical-liaison-committee/?lang=en>

<sup>19</sup> <http://www.ons.gov.uk/ons/about-ons/who-ons-are/programmes-and-projects/beyond-2011/index.html>

## Data Sources and flows

2.13 The production of the outputs covered by this assessment relies on existing ONS publications and on data that ONS provides. Figure 2 shows a simplified diagram of the data sources, processing and data flows for the production of these population estimates and projections.

**Figure 2: Main data suppliers, sources and flows: Population estimates and projections for England and Wales**



Note: This diagram is a simplified summary of the flow of data from primary source through to national level population estimates and projections. It refers to sources by their more common, rather than technical, names.

Source: produced by Assessment team

2.14 The statistics on population estimates for Wales draw on data – for births, deaths and migration – that are processed by ONS, as well as directly from primary data sources. The primary source data – including those processed by ONS – are drawn from administrative systems, the census and the International Passenger Survey. ONS produces its own population estimates and projections for England and Wales and supplies data from the mid-year estimates – including additional areal analyses – to the Welsh Government.

2.15 Welsh Government statisticians use these data to produce *Mid-year Estimates*, *Local Authority Projections* and *National Park Projections*. While *Mid-year estimates* is essentially a re-publication of the mid-year estimates produced by

ONS, Welsh Government statisticians independently produce *Local Authority Projections* and *National Park Projections* using their own projections methods. The Welsh Government told us that it has agreements in place with ONS for the provision of local authority and national park population data. It also has a data sharing agreement with ONS that allows Welsh local authority statisticians to access the base data in order to produce alternative projections based on different local assumptions.

## Open Data

2.16 The Welsh Government publishes *Mid-year Estimates*, *Local Authority Projections* and *National Park Projections* in pdf format with supplementary tables published in Excel, CSV and SDMX formats which are available from the StatsWales website<sup>20</sup>. This equates to a level of three stars under the Five Star Scheme adopted by the UK Government<sup>21</sup>, but not the Welsh Government, as part of the Open Standards Principles proposed in the *Open Data White Paper: Unleashing the Potential*<sup>22</sup>. Five stars represents the highest star rating within the Scheme.

## Costs

2.17 The Welsh Government estimates that the cost of producing the population statistics for Wales based on full economic costing and excluding the cost of data collection, is approximately £43,000.

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<sup>20</sup> <https://statswales.wales.gov.uk/Catalogue/Population-and-Migration/Population>

<sup>21</sup> <https://www.gov.uk/government/publications/open-standards-principles/open-standards-principles>

<sup>22</sup> [http://data.gov.uk/sites/default/files/Open\\_data\\_White\\_Paper.pdf](http://data.gov.uk/sites/default/files/Open_data_White_Paper.pdf)

### 3 Assessment findings

#### User Engagement

Suggestion from previous Assessment report 101 (March 2011):

- Suggestion 1: Publish additional information about how the needs and experiences of users have been taken into account.

- 3.1 The Welsh Government has published a User Engagement Plan<sup>23</sup> and its 2014/15 KAS evidence plan<sup>24</sup> states that it responds to general enquiries from businesses, academia, researchers, students, and the general public. A dedicated webpage outlines the service that users of Welsh Government statistics can expect to receive<sup>25</sup>. The statistics team told us that it engages with various user groups, including the Wales Sub-national Population Projections Working Group<sup>26</sup> (WASP). WASP meets annually and comprises local authority and users in the Welsh Government who advise on the development of the *Local Authority Projections* methods and discuss the format and timing of reports, and dissemination plans. Papers and minutes documenting these meetings are available on the Welsh Government's website. The statistics team communicates changes to users through WASP meetings, which have also provided opportunities for local authorities to become involved in the development of the statistics. The Welsh Government's engagement with local authority users became more established from 2010 when a decision was made to use *Local Authority Projections* in local government funding allocations instead of the mid-year estimates for Wales. Since then, the Welsh Government has actively engaged these users in the planning and quality assurance of *Local Authority Projections*.
- 3.2 The 2014/15 KAS evidence plan states that the Welsh Government will liaise with WASP and a new Projections Stakeholder Group to review a range of methodological and presentational issues relating to future sub-national population projections. WASP is a subgroup of WSLC. WSLC comprises Welsh public sector organisations, including representatives of users outside central government such as police authorities and the Welsh Language Commission. It provides an opportunity for these users to keep abreast of, and influence developments in, government statistical work. The Welsh Government told us that a regular demographic update presented to the WSLC meetings and is published along with the meeting minutes on its website. The Welsh Government told us that it engaged a lot with these users before developing 2011-based *Local Authority Projections* and though they had started to discuss ideas, formal user engagement plans were currently on hold due to ongoing uncertainties around proposed changes to local authority boundaries. The

<sup>23</sup> <http://gov.wales/statistics-and-research/about/user-engagement/plans-practices/current-practices/?lang=en>

<sup>24</sup> <http://gov.wales/consultations/statistics/proposals-concerning-publication-official-statistics/?status=closed&lang=en>

<sup>25</sup> [www.wales.gov.uk/statistics-and-research/about/statement-of-compliance/customer-service-and-complaints/?lang=en](http://www.wales.gov.uk/statistics-and-research/about/statement-of-compliance/customer-service-and-complaints/?lang=en)

<sup>26</sup> <http://gov.wales/statistics-and-research/about/user-engagement/statistical-groups-committees/wales-sub-national-projections-working-group/?lang=en>

changes were likely to lead to a smaller number of larger local authorities, but they would not be decided until after the National Assembly for Wales elections in 2016. The Welsh Government told us that consultation with users would take place when there was greater clarity on the future local authority landscape.

3.3 During the course of this Assessment the Welsh Government told us that it was going to cease publishing *National Population Projections for Wales*<sup>27</sup> due to the information already being available from ONS's *National Population Projections*<sup>28</sup>. The Welsh Government told us that the cessation was in line with the approach set out in its 2013/14 consultation on the future of its statistical outputs<sup>29</sup>, to reduce the publication of information already published elsewhere. The Welsh Government included details about the cessation in the latest WSLC Demographic update (June 2015)<sup>30</sup>. However, the National Population Projections for Wales were not explicitly included in the 2013/14 consultation and the Welsh Government did not explicitly consult users of National Population Projections for Wales ahead of issuing a cessation notification.

3.4 The Welsh Government's 2013/14 consultation on its future official statistics was open to all organisations and users. However, the summary of responses to the consultation<sup>31</sup> indicates that majority of responses were from government users (23 of the 27 responses) and only two were from the private sector. The Welsh Government previously ran a Statistics for Wales web-based customer satisfaction survey, which was open to all web users. This is now closed and Welsh Government has published little information about its engagement with users outside of government, or about these users' views on the quality, format, timing and quality of its statistical outputs. In the previous assessment of these statistics, the Authority suggested that the Welsh Government publish additional information about how the needs and experiences of users of the population estimates and projections have been taken into account. However, the Assessment team found no evidence of this information either in general terms or in relation to both the delayed production of *National Park Projections* and the cessation of *National Population Projections*. As part of the designation as National Statistics, the Welsh Government should:

- a) ensure regular user engagement activities include a wide array of relevant users of population estimates and projections, including non-government users in academia, charities and the private sector
- b) publish users views on their needs in terms of the quality, format and timing of population estimates and projections

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<sup>27</sup> <http://gov.wales/statistics-and-research/about/user-engagement/statistical-groups-committees/welsh-statistical-liaison-committee/11-june-2015/?lang=en>

<sup>28</sup> <http://www.ons.gov.uk/ons/rel/npp/national-population-projections/2012-based-projections/stb-2012-based-npp-principal-and-key-variants.html>

<sup>29</sup> <http://gov.wales/consultations/statistics/proposals-concerning-publication-official-statistics/?status=closed&lang=en>

<sup>30</sup> <http://gov.wales/statistics-and-research/about/user-engagement/statistical-groups-committees/welsh-statistical-liaison-committee/11-june-2015/?lang=en>

<sup>31</sup> <http://gov.wales/docs/statistics/consultation/140430-consultation-proposals-publication-official-statistics-summary-responses-en.pdf>

- c) ensure that users are thoroughly consulted before changes are made that affect the estimates or projections, including changes to methods, scheduling, and before cessations of statistical products are enacted<sup>32</sup> (Requirement 1).

## Statistical Planning and Resourcing

Suggestion from previous Assessment report 101 (March 2011):

- Suggestion 4: Publish plans for the future production schedule of population and household estimates and projections

- 3.5 The Welsh Government's 2014/15 KAS evidence plan<sup>33</sup> sets out its latest analytical priorities. The plan states that it is a top priority for the Welsh Government to look into producing an update for *National Park Projections*. The projections have not been published since the 2008-based edition in 2011, ahead of their original designation as National Statistics in 2013. This is despite indications in the most recent publication that a 2011-based update was likely to be published in late 2013. Some users who contacted the Authority in response to the previous assessment were disappointed that *National Park Projections* was not timely enough. They also had concerns that the lag between the *National Park Projections* and previous *Local Authority Projections* would affect their ability to make comparisons between them.
- 3.6 The Welsh Government informed the previous Assessment team that the lag was caused by a delay in obtaining the source data from ONS and that it would endeavour to work with ONS for future projection rounds in order to receive more timely data. During the course of this assessment the Welsh Government told us that it planned to publish the next (2013-based) *National Park Projections* in summer 2015 using the 2011-based *Local Authority Projections* methods. Users contacting us in relation to this assessment said that the delay of several years in the production of *National Park Projections* had hindered their ability to plan effectively. The Welsh Government told us that the projections initially had been delayed by the supply of data for residual areas by ONS and the projections were now being produced as soon as possible following the supply of these data.
- 3.7 In relation to the next *Local Authority Projections* the Welsh Government told us that they were unlikely to be produced until 2017, subject to potential local authority reorganisation in Wales. In the previous assessment, the Authority suggested that the Welsh Government publish plans for the future production schedule of population estimates and projections. However, the Welsh Government currently does not publish details about its plans for future population estimates and projections beyond considering publishing *National Park Projections* in 2014/15. No future Welsh Government population projections outputs – including the forthcoming *National Park Projections* – appear on the Welsh Government's publication schedule. This means that no

<sup>32</sup> In relation to Principle 1, Practice 5 and Protocol 1, Practice 7 of the *Code of Practice*.

<sup>33</sup> <http://gov.wales/statistics-and-research/about/user-engagement/plans-practices/knowledge-analytical-services-evidence-plan/?lang=en>

transparent statistical plan exists for the future of the Welsh Government's population projections. As part of the designation as National Statistics, the Welsh Government should update and extend its published statistical plans for future population estimates and projections to ensure that they:

- a) take account of users needs, particularly in relation to the timely publication of related statistical outputs
- b) are transparent about priority setting and the reasons that choices are made
- c) take account of dependencies on ONS and reflect the obligation to serve the public good<sup>34</sup>

(Requirement 2).

3.8 Before producing the 2014/15 KAS evidence plan, the Welsh Government ran a consultation on the future of its official statistics outputs in 2013/14. The consultation document set out the rationale for the consultation in terms of the need to increase the volume of data available for analysis within the context of reduced financial resources. It proposed that the Welsh Government should:

- build a collaborative community with partner organisations and remove duplication in the publication of official statistics
- allow more time for value added interpretation and analysis, and where appropriate publish datasets through StatsWales and reduce the number of routine monthly and quarterly statistical outputs
- seek to publish the datasets in a more timely fashion and with appropriate user support
- move the data in many compendia publications from hard copy/pdf to StatsWales ensuring that the data are available to users in a manner that is open source and downloadable
- reduce the frequency or cease either the data collections or publications for outputs that add less value, or have little use outside a very specialist or internal audience
- publish ad-hoc requests for statistical information, while aligning standards of service with Freedom of Information commitments

Detail about the range of outputs affected was provided in an accompanying annex<sup>35</sup>. This included the cessation of the *Wales's Population: A Demographic Overview*<sup>36</sup> report, which was included in the range of outputs covered by Assessment Report 101.

3.9 During the course of the assessment, the Welsh Government told us that it was currently facing resourcing pressures due to staff moving to posts outside KAS and delays in recruitment. These factors were directly affecting its decisions on the frequency of future population estimates and projections publications, due to the need to prioritise competing statistical projects. Welsh Government statisticians told us that up to 2011 there were two dedicated posts for

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<sup>34</sup> In relation to Principle 1, Practice 3 of the *Code of Practice*.

<sup>35</sup> <http://gov.wales/docs/statistics/consultation/131209-proposals-concerning-publication-official-statistics-annex-en.xlsx>

<sup>36</sup> <http://gov.wales/statistics-and-research/wales-population/?tab=previous&lang=en>

population estimates and projections, but that this had now reduced to one. Following a review after the 2011-based local authority projections were published in 2013, estimates and projections were now being treated as a project rather than an ongoing programme of work. The Welsh Government told us that in the short-term, a previous member of staff who had now moved to a new post was going to produce the National Park Projections due for publication in the summer 2015. This would be the last output in the current project cycle, with a new project round beginning in 2016 in preparation for the next sub-national projections. The Welsh Government told us that it had reviewed the resources allocated to its population estimates and projections over the last two years, and that the resources currently allocated were based on the work plan for the current year.

- 3.10 The Assessment team considers that the current resource pressures identified by the Welsh Government, the loss of expertise within the statistics team, and the lack of a clear statistical plan represent current weaknesses in the Welsh Government's population estimates and projections capacity, and pose a risk to their future development. The 2014/15 KAS evidence plan states that the Welsh Government intends to explore using a longer time-trend on which to base the migration assumptions used in its sub-national population projections, and to review various other methodological and presentational issues, but Welsh Government statisticians told us that they would not be carrying out any further development work until 2016 at the earliest. Welsh Government statisticians have also not attended the cross-departmental UKPTAB or UKPTG meetings since October 2013. The Welsh Government's non-attendance at these meetings risks undermining the quality and standards of analysis in its estimates and projections as well as its strategic coordination with those produced by ONS, NRS and NISRA. Welsh Government statisticians have also not considered the impact of changes made to ONS's Small Area Population Estimates<sup>37</sup> (SAPE) methods, even though these methods are used to produce the source data used in the Welsh Government's *National Park Projections*, due for publication in August 2015.
- 3.11 With reduced resources and the lack of a dedicated population estimates and projections team, we consider that there is a risk that the Welsh Government will be unable to continue to produce population estimates and projections that fully meet users' needs. As part of the designation as National Statistics, the Welsh Government should:
- a) ensure that the resources that it has allocated to the production of its estimates and projections are sufficient to meet the standards of the Code and the uses of the statistics
  - b) publish a summary for users of the decisions that it has made in terms of its priority setting and allocation of resources for its population estimates and projections<sup>38</sup>
- (Requirement 3).

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<sup>37</sup> <http://www.ons.gov.uk/ons/rel/sape/small-area-population-estimates/mid-2013/index.html>

<sup>38</sup> In relation to Principle 7, Practice 1 and Principle 1, Practice 3 of the Code of *Practice*.

## Quality and Methods

Requirements and Suggestions from previous Assessment report 101 (March 2011):

- Requirement 1: Work with ONS, the General Register Office for Scotland and the Northern Ireland Statistics and Research Agency to identify and document the impact the differences in projection methods may have for users
- Requirement 2: Provide users with additional information about the quality of population projections, taking account of outturn data
- Requirement 3: Provide clear links to the methodological information provided in the 2008 *Local Authority Population Projections for Wales: Summary Report*
- Suggestion 2: Provide a link to the National Park methodology paper in future National Park projections publications

### *Quality Assurance of Administrative Data*

- 3.12 In January 2015, the Authority published a regulatory standard<sup>39</sup> that confirms the quality assurance arrangements that are required for statistics compiled using administrative data to comply with the *Code of Practice*. *The Administrative Data Quality Assurance Toolkit*<sup>40</sup> is the mechanism that the Authority is using to determine compliance in relation to four areas of practice:
- operational context and administrative data collection
  - communication with data supply partners
  - QA principles, standards and checks by data suppliers
  - producers' QA investigations & documentation
- 3.13 The judgment by statistical producers about the suitability of the administrative data for use in producing official statistics should be pragmatic and proportionate. It should be made in the light of an evaluation of the likelihood of quality issues arising in the data that may affect the quality of the statistics. It should also reflect the nature of the public interest served by the statistics. Statistical producers should determine the types of assurance and documentation required to inform users about the quality assurance arrangements for administrative data.
- 3.14 The Welsh Government has produced a Statistical Quality Management Strategy<sup>41</sup> which is overseen by a Statistical Quality Committee. Quality assurance is completed according to the guidance which includes an overview of the types of quality checking processes that should be undertaken in the production of Welsh Government statistics. The Welsh Government told us that these procedures are reflected in the desk instructions for producing the sub-national projections which include detailed guidance on checking, validating and analysing the data. As part of the process of publishing *Local Authority Projections* the Welsh Government invites local authority researchers to attend

<sup>39</sup> <http://www.statisticsauthority.gov.uk/assessment/monitoring/administrative-data-and-official-statistics/index.html>

<sup>40</sup> <http://www.statisticsauthority.gov.uk/assessment/monitoring/administrative-data-and-official-statistics/quality-assurance-toolkit.pdf>

<sup>41</sup> <http://gov.wales/docs/statistics/2015/150602-statistical-quality-management-strategy-en.pdf>

a meeting to quality assure preliminary population and household projections and the component data for their area under pre-release conditions<sup>42</sup>. The statistics team told us that these events are very well attended and appreciated by the local authorities. The Welsh Government told us that local authorities have produced alternative scenarios for their own LDPs in line with the Welsh Government Planning Department guidance, but to date there had been no disagreement with local authorities relating to the published projections or the methods used to produce them.

- 3.15 The Welsh Government's peer review practices involve other members of the department reviewing publications and processes to provide suggestions for improvement. It told us that it anticipates using peer review sessions to consider whether its approaches to the audit of administrative data are sufficiently robust in relation to the Authority's *Administrative Data Quality Assurance Toolkit*. To date the Welsh Government has held initial workshops to discuss and review the maturity of its processes. The Welsh Government told us that no local data sources were used in the production of the sub-national projections and that the quality of the birth, death, and migration administrative data used was dependent on ONS data quality assurance procedures.
- 3.16 The Authority's new regulatory standard states that producers of official statistics should make sure that they are informed about, and have satisfied themselves of, the quality of the source data used in the production of official statistics, back to the primary source. This means that the Welsh Government will in future need to demonstrate the steps that it has taken, and the level of assurance that it has, about the quality of the ONS source data that it uses to produce its estimates and projections. As part of the designation as National Statistics, the Welsh Government should publish information in an appropriate level of detail to inform users about the data assurance and audit arrangements for all the administrative data sources used in the production of its population estimates and projections publications, taking into consideration the Authority's *Administrative Data Quality Assurance Toolkit*<sup>43</sup> (Requirement 4). In meeting this requirement, we suggest that the Welsh Government works with statistical producers in ONS, NRS and NISRA to clarify these arrangements. We further suggest that the Welsh Government develop a process map to illustrate the supply of data used to produce the various population statistics that are included in this Assessment.

### *Quality and Methodology Documentation*

- 3.17 The projections methodology used by the Welsh Government differs from that used by other producers of sub-national projections in the UK. The Welsh Government's method is based on a bottom-up approach introduced in 2007/08 using PopGroup<sup>44</sup> software developed by Manchester University. The statistics team uses local fertility, mortality and migration trends as the basis for assumptions rather than national trends as they consider these to produce more meaningful results for local authorities. This is in contrast to the

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<sup>42</sup> <http://gov.wales/statistics-and-research/about/statement-of-compliance/release-practices-protocol/?lang=en>

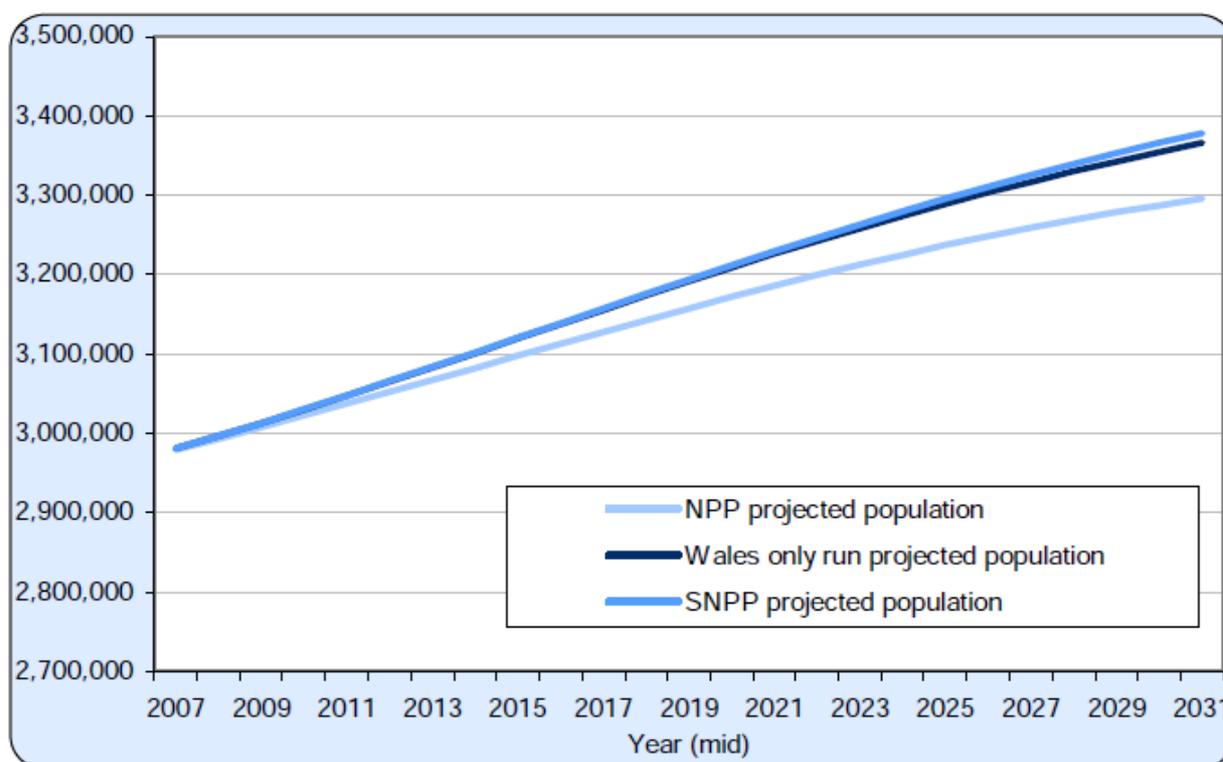
<sup>43</sup> In relation to Principle 4, Practice 2 and Principle 8, Practice 1 of the *Code of Practice*

<sup>44</sup> <http://www.cmist.manchester.ac.uk/research/projects/past-projects/popgroup/>

approaches taken by ONS, NRS and NISRA which constrain the sum of the local authority totals for England, Scotland and Northern Ireland to the national projection totals produced separately by ONS. The Welsh Government's method results in the sum of the individual projected local authority totals in *Local Authority Projections* exceeding the ONS National Population Projection total for Wales.

3.18 The Welsh Government published further information about the reasoning behind its chosen approach, and the differences between it and the ONS approach in the *Local Authority Projections (2006-based) Summary Report*<sup>45</sup>, published in 2008. The report includes a chapter comparing the summed local authority projection totals with the ONS National Population Projections total and includes explanations for the differences<sup>46</sup>. It reports that the sum of the local authority projection totals exceeds that of the National Population Projection total resulting in a total population over 80,000 larger than by the 25th projected year (Figure 3). The report concludes that *Local Authority Projections* should be the preferred source when looking at the projected population of one or more Welsh local authorities or when comparing population projections for different local authorities, but that the ONS National Population Projections should be used instead when looking at the projected population of Wales as a whole or when comparing the projected population of Wales with the other UK countries. The Welsh Government has not produced an updated edition of the analysis since this was first published in 2008.

**Figure 3: Comparison of projected population totals, mid-2006 to mid-2031**



Source: Local Authority Projections (2006-based) Summary report<sup>47</sup>

<sup>45</sup> <http://gov.wales/docs/statistics/2009/090925popprojsu06en.pdf>

<sup>46</sup> See page 29

<sup>47</sup> <http://gov.wales/statistics-and-research/local-authority-population-projections/?tab=previous&lang=en>

- 3.19 While the *Local Authority Projections* (2011-based) Technical report<sup>48</sup> includes a detailed account of the statistical methods, it does not include an explanation of the main differences between *Local Authority Projections* and the ONS National Population Projections. The Authority previously required the Welsh Government to provide clear links to the information that it included in *Local Authority Projections* (2006-based) Summary Report, but these links no longer work. The Welsh Government also has not published methods documentation for *National Park Projections*. It told us that it also uses the *Local Authority Projections* method to produce *National Park Projections*, but this is not mentioned in any of the current or historical methods information. The Authority previously suggested that the Welsh Government provide a link to a paper presented to the January 2010 WASP meeting which details the methods used in the *National Park Projections* and the differences from the local authority projections methodology, in future *National Park Projections* publications. However, the Welsh Government has not published *National Park Projections* since the previous assessment. Given further changes to the small area population estimates methodology used by ONS to produce the source data, there is now an even more pressing need for the Welsh Government to publish up-to-date methods documentation for *National Park Projections*.
- 3.20 Each of the Welsh Government's population estimates and projections statistical reports includes summary quality information, links to additional quality information on the ONS web pages and a comparison with the previous editions' results which provides an indication of the relative limitations of the latest estimate or projection in relation to the last. The Welsh Government also publishes guidance on the limitations of population projections in an FAQ document<sup>49</sup>. Although this is a useful document it lacks sufficient detail about potential errors associated with the data sources used and a large number of the links are broken.
- 3.21 The Authority previously required the Welsh Government to inform users about the quality of its population projections, taking account of outturn data. Following the previous assessment, the Welsh Government included details about its intention to carry out this work in its Population and Households statistics quality report<sup>50</sup>. This contains summary quality information to cover all of the Welsh Government's population estimates and projections outputs in relation to European Statistical System (ESS) quality dimensions. It states that the inherent nature of projections means that at the time of publication it is impossible to publish measures of accuracy, but that work is under way to retrospectively assess the local authority population projection results in order to assess the accuracy of projections for Wales against later population estimates. The report also states that the estimates are subject to the coverage and error associated with these sources but it does not explain anything about the nature or extent of error associated with each source. The Welsh Government provided a draft outline of a statistical article providing a comparison of the 2008-based *Local Authority Projections* with later mid-year

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<sup>48</sup> <http://gov.wales/docs/statistics/2014/140717-local-authority-population-projections-2011-based-technical-report-en.doc>

<sup>49</sup> <http://wales.gov.uk/docs/statistics/2009/090929popproj08faq.pdf>

<sup>50</sup> <http://gov.wales/statistics-and-research/mid-year-estimates-population/population-household-statistics-quality-report/?lang=en>

estimates in order to meet the requirement, although to date the Welsh Government has not published any work to compare the projections with historical editions to determine the level of accuracy between them.

- 3.22 As part of the designation as National Statistics, the Welsh Government should review and update its quality and methods documentation ensuring that:
- a) it includes specific details about the methods and data sources used to produce *National Park Projections* and *Local Authority Projections*
  - b) the differences between the methods used, and the totals derived from, *Local Authority Projections* and the ONS National Population Projections are clearly explained
  - c) historical comparisons of *Local Authority Projections* with mid-year estimates are included
  - d) the documentation is clearly signposted and linkable from the statistical reports, supporting documentation and the estimates and projections web pages<sup>51</sup>
- (Requirement 5).

### *Comparability and Coherence*

- 3.23 The Welsh Government's FAQ note advises that users should use the ONS national projections to obtain figures for the total Welsh projections or for making national comparisons, and use *Local Authority Projections* to obtain projections for individual Welsh local authorities or when making comparisons between Welsh local authorities. The Welsh Government told us that the 2011-based *Local Authority Projections* were the first in the UK to take account of the results of the 2011 Census. ONS, NISRA and NRS did not produce National Population Projections based on the 2011 Census until 2012. Prior to this point the Welsh Government's local authority and national park projections used the same base year as the ONS National Population Projection. The choice of an earlier base year by the Welsh Government, while timely, reduces the comparability between ONS's National Projections and the Welsh Government's local authority projections. Users of population projections for Wales do not, therefore, have access to national and sub-national projections based on a common year with which to carry out their analyses. The Welsh Government produced its FAQ guidance when both projections shared common base years. It has not updated its guidance to inform users how the two projections either should or should not be used together since used different base years.
- 3.24 The *National Park Projections* due for publication in summer 2015 will be 2013-based and, therefore, out of sync with the latest (2011-based) *Local Authority Projections*. One user responding in relation to the current assessment expressed particular concern about this difference due to wanting to use the two sub-national projections in combination with each other. The *National Park Projections* will also be out of sync with the current ONS (2012-based) National Population Projections and the forthcoming ONS (2014-based) National

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<sup>51</sup> In relation to Principle 4, Practice 1 and Principle 8, Practice 1 of the *Code of Practice*.

Population Projections, which are due for publication in autumn 2015. As part of the designation as National Statistics, the Welsh Government should coordinate with ONS and its users for the next round of *Local Authority Projections* and *National Park Projections* with a view to producing them with a common base year to each other, and with that used in the ONS National Population Projections<sup>52</sup> (Requirement 6). We further suggest that the Welsh Government work with its users, ONS, NRS and NISRA with a view to ensuring that the sub-national projections produced both leading up to, and following, the 2021 Census share a common base year.

3.25 Following the previous assessment the four UK countries produced a joint document<sup>53</sup> which summarises the differences between the sub-national projections produced in each country. Further inconsistencies relating to the different base-years used for *Local Authority Projections* and *National Park Projections* will further reduce comparability, and the current guidance does not inform users as to whether the projections either should or should not be used together in these circumstances. Welsh Government statisticians also informed the Assessment team that they wanted to improve the methodology of *Local Authority Projections* and *National Park Projections* by reviewing the methodology used in other parts of the UK, considering longer term migration assumptions, and reviewing the software used. ONS has also made changes to the SAPE methods used to produce the source data for the Welsh Government's *National Park Projections*.

3.26 As part of the designation as National Statistics, the Welsh Government should:

- ensure comparison documents on the population estimates and projections produced in all countries in the UK are regularly reviewed and updated
- carry out, and publish, a review of the methodological and comparability differences and, based on knowledge of the uses of the statistics and expert input, evaluate whether the differences are justifiable<sup>54</sup>

As part of meeting this Requirement the Welsh Government should work together with ONS, NRS and NISRA (Requirement 7).

## Publications, Dissemination and Accessibility

Requirements from previous Assessment report 101 (March 2011):

- Requirement 4: Include commentary that provides information about the wider context and the importance of the statistics and known and potential uses
- Requirement 5: Ensure access to releases on the Welsh Assembly Government's website is clear and straightforward
- Requirement 6: Ensure all publications are available through the National Statistics Publication Hub.
- Suggestion 3: Provide guidance about the statistics that are available from ONS and from StatsWales so that the user is informed about the most appropriate source for their needs

<sup>52</sup> In relation to Principle 4, Practice 1 of the *Code of Practice*

<sup>53</sup> <http://www.ons.gov.uk/ons/guide-method/compendiums/compendium-of-uk-statistics/population-and-migration/data-catalogue/index.html>

<sup>54</sup> In relation to Principle 4, Practice 6 and Principle 8, Practice 1 of the *Code of Practice*

- 3.27 The Welsh Government has ceased the production of two population estimates and projections outputs that were included in the scope of the previous Assessment. The compendium publication *Wales' Population: A Demographic overview*<sup>55</sup> provided a useful thematic summary of the components of population change in Wales. It presented clear analytical commentary and a range of visually accessible representations of its demographic statistics which enhanced interpretability for users. The Welsh Government ceased publication after consulting users<sup>56</sup> about its statistical outputs, in 2013. The second publication, *National Population Projections for Wales*<sup>57</sup> presented a clear and succinct overview of the principal ONS National Population Projection for Wales and was published on the same day as the ONS release. The Welsh Government decided to cease this publication in line with its consultation proposal to reduce the publication of statistics already available elsewhere.
- 3.28 The previous Assessment required the Welsh Government to improve its publications by including information about the wider context and the importance of the statistics and known and potential uses. Consistent with this, the Authority has identified further improvements during the course of the current Assessment that the Welsh Government should make to *Mid-Year Estimates*, *Local Authority Projections* and *National Park Projections* to ensure that they are readily accessible to all users. These include improving the standard of commentary to provide potential explanations for the changes described in *Mid-Year Estimates* and providing further information about how the estimates relate to other statistics, data and research; using charts and maps to enhance accessibility and presentation of *Local Authority Projections*; and providing commentary in *National Park Projections* to enhance the interpretability of the population pyramids included to a wider range of users. Further details are included in annex 1.
- 3.29 The Welsh Government has published a *Population Data Sources*<sup>58</sup> document. The document helpfully sets out the main population estimates and projections data sources in Wales and includes accessible summary information about definitions, frequency, availability, revisions and data limitations. However, the document is not linked from the estimates and projections publications, or from the population estimates and projections theme pages. As such, users of the Welsh Government's population estimates and projections are unlikely to either locate or use it. The Assessment team also noted, in the Population and Household Statistics Quality Report, reference to a 'Guidance Leaflet' that used to be linked to from the report, though the link is now broken. The Guidance Leaflet is no longer available from any of the Welsh Government's population estimates and projections theme pages.
- 3.30 In relation to the 2011-based Principal and Variant Local Authority Projections, the two statistical reports and the accompanying technical report are situated in different areas of the Local Authority Projections web page. While the Variant report is in the current releases section, the Principal report is in the 'Past Releases' section, and the technical report is separately located in a 'Background

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<sup>55</sup> <http://gov.wales/statistics-and-research/wales-population/?tab=previous&lang=en>

<sup>56</sup> <http://gov.wales/consultations/statistics/proposals-concerning-publication-official-statistics/?status=closed&lang=en>

<sup>57</sup> <http://gov.wales/statistics-and-research/national-population-projections/?lang=en>

<sup>58</sup> <http://gov.wales/docs/statistics/2013/130821-population-migration-data-sources-en.pdf>

Information' section via a 'More in this Section' drop-down menu. This layout makes it difficult for an uninformed user to locate the principal and technical reports. The Authority previously required the Welsh Government to ensure that access to releases from its website was clear and straightforward. In response the Welsh Government restructured the pages for certain population outputs and repaired links that were broken. Despite this, almost all of the links to previous publications and useful supporting documents (including links from the most recent 2011-based *Local Authority Projections*, and to the 2006-based *Local Authority Projections* Summary report) are broken. This substantially limits the ability of users to understand the quality and methodological strengths and limitations of the Welsh Government's population estimates and projections. *National Park Projections* does not include links to the StatsWales website.

- 3.31 As part of the designation as National Statistics, the Welsh Government should:
- a) improve the standard of commentary – to include additional contextual information and explanation for changes – and presentation to maximise accessibility for a wider range of users
  - b) review and improve, where relevant, the layout and signposting between relevant publications, supporting documentation and datasets
  - c) repair the broken links throughout and between the population estimates and projections publications and supporting documentation<sup>59</sup>

As part of meeting this Requirement the Welsh Government should consider the points detailed in annex 1 and annex 2 (Requirement 8).

- 3.32 The Welsh Government published a useful Excel spreadsheet<sup>60</sup> to accompany the variant (2011-based) *Local Authority Projections*. This provides a simple way for users to look up detailed components of change data and produce charts for individual local authority areas. For users interested in more sophisticated analysis, the Welsh Government's StatsWales<sup>61</sup> website contains historical estimates and projections series. Users are able to obtain data for national and sub-national population estimates and projections series, produce charts and export data in Excel, CSV and SDMX formats, increasing the potential for re-use. Links to the StatsWales website are included in the Welsh Government's population estimates and projections reports and theme pages. Much the data available on the StatsWales website is also available on ONS's website<sup>62</sup>, but the Welsh Government has not produced any commentary or guidance about the similarities or differences between these two sources. In response to concerns raised by users during the previous Assessment, the Authority suggested that the Welsh Government publish guidance about the statistics that are available from the StatsWales and ONS's websites, so that users were better informed about the most appropriate data source for their needs.

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<sup>59</sup> In relation to Principle 8, Practice 2 and Principle 8, Practice 2 of the *Code of Practice*

<sup>60</sup> <http://gov.wales/docs/statistics/2013/131220-local-authority-population-projections-wales-2011-based-further-results-revised-ency.xls>

<sup>61</sup> <https://statswales.wales.gov.uk/Catalogue>

<sup>62</sup> <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Population>

- 3.33 The same concern was raised again by a user during the current Assessment, who said that they were confused about which source was the correct one to use. We suggest that the Welsh Government publish guidance about the statistics that are available from StatsWales and from ONS, to help ensure that users are able to access the population estimates and projections that are the most appropriate for their needs. As part of the evidence submitted for this Assessment, the Welsh Government commented that that it would like to produce data visualisations such as those developed by ONS for its population estimates and projections. We suggest that the Welsh Government investigate the potential for producing data visualisations for *Mid-Year estimates*, *Local Authority Projections* and *National Park Projections*, drawing on ONS's expertise as appropriate, to help maximise accessibility for a broader range of users.
- 3.34 The Welsh Government's Release Practices Protocol<sup>63</sup> states that for frequent regular releases where the production timetable can be predicted far in advance, the exact day of publication will be published, at least six months in advance. For other releases, the month will be published either when the data have been collected or six months in advance, whichever is the earlier, with the exact publication date published as soon as possible and no less than four weeks before the release date. During the course of the Assessment the Welsh Government told the Assessment team that it planned to publish the next *Mid-Year Estimates* and *National Park Projections* in June and August 2015, respectively. However, the Assessment team identified on 27 March 2015 that there were no future population estimates or projections publications listed on either the GOV.UK<sup>64</sup> or Welsh Government<sup>65</sup> release calendars. As part of the designation as National Statistics, the Welsh Government should ensure that it publishes statistical reports according to a timetable that takes account of users needs and that it publishes this timetable for 12 months ahead<sup>66</sup> (Requirement 9).

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<sup>63</sup> <http://gov.wales/statistics-and-research/about/statement-of-compliance/release-practices-protocol/?lang=en>

<sup>64</sup> <https://www.gov.uk/government/statistics>

<sup>65</sup> <http://gov.wales/statistics-and-research/?upcoming=true&lang=en>

<sup>66</sup> In relation to Principle 1, Practice 4, and Protocol 2, Practice 2 of the *Code of Practice*

## Annex 1: Compliance with Standards for Statistical Reports

- A1.1 In November 2012, the Authority issued a statement on *Standards for Statistical Reports*<sup>67</sup>. While this is not part of the *Code of Practice for Official Statistics*, the Authority regards it as advice that will promote both understanding and compliance with the *Code*. In relation to the statistical reports associated with population estimates and projections for Wales, this annex comments on compliance with the statement on standards. The comments included in this annex are based on a review of *Mid-year Estimates of the Population, 2014*<sup>68</sup>, *Principal*<sup>69</sup> and *Variant*<sup>70</sup> *Local Authority Population Projections, 2011* and *Population Projections for National Parks, 2008*<sup>71</sup>.
- A1.2 In implementing any Requirements of this report (at paragraph 1.9) which relate to the content of statistical reports, we encourage the producer body to apply the standards as fully as possible.

### **Include an impartial narrative in plain English that draws out the main messages from the statistics**

- A1.3 *Mid-year Estimates* is a clear, succinct report. The ‘Summary for Wales’ bullet points presented at the start of the report form a helpful summary for users. The report presents a useful analysis of the statistics by age and local authority and comparisons with the previous mid-year estimate, though it includes little discussion or explanation of the changes reported. For example, the ‘Population by age and sex’ and the ‘Trends by local authority’ sections present no explanation as to whether the changes are expected or make any suggestion about potential causes of the changes. A further discussion of the data within this context would be helpful – for example, about the impact of migration on age structure. The report includes little explanation of how the estimates relate to other statistics, data and research on the same and related topics.
- A1.4 The principal and variant *Local Authority Projections* publications follow a similar structure. The principal *Local Authority Projections* includes helpful information up-front about the forthcoming variant release; however, it also talks about a detailed forthcoming summary report that does not appear on the Welsh Government’s website. Both reports include a summary of key points. The key points presented in the principal report are clear, but they are split over three sub-headings and there are too many of them. The key points for the variant report are less clear and some read more like methods statements than results. For example, the second bullet states: ‘Differences between the ‘high variant’ and principal projection for local authorities are around 1,300 on average, and between the ‘low variant’ and the principal projection around 2,000 at mid-2026’. The commentary included for the principal projection is

<sup>67</sup> <http://www.statisticsauthority.gov.uk/news/standards-for-statistical-reports.html>

<sup>68</sup> <http://gov.wales/statistics-and-research/mid-year-estimates-population/?lang=en>

<sup>69</sup> <http://gov.wales/docs/statistics/2013/130723-local-authority-population-projections-2011-based-en.pdf>

<sup>70</sup> <http://gov.wales/docs/statistics/2013/131220-local-authority-population-projections-2011-based-variant-projections-revised-en.pdf>

<sup>71</sup> <http://gov.wales/docs/statistics/2011/110420sdr652011en.pdf>

clear and descriptive though includes little explanation of the findings presented. The text for the variant projection assesses the impact of the five variant projections in relation to the principal projection, offering some limited explanations for differences. Some technical terms are not clearly explained, for example 'migration assumption' on page 9 and 'special population groups' on page 16. When referring to the principal projection, the text switches between the terms, 'principal', 'main' and 'central' over the first two pages. Only very limited information about the broader policy context is included in relation to the 85 plus age group. Neither report uses charts or graphs to aid interpretation for the reader.

- A1.5 *National Park Projections* is clearly presented and includes a useful summary of key points. The introductory section includes helpful signposting to additional tables in the annex. The commentary is descriptive and some useful explanations of the drivers of change are included, for example the trends in the population aged under 16. These could go further in providing explanations, for example about why net outward migration of young people is expected. Other useful explanations are included in the natural change section, which includes explanatory factors for the projected changes. Population pyramids are included and well presented but commentary is not presented around them and no cross-referencing is made to them from the text to aid with their interpretation. Terms such as 'natural change' are also not defined and no links to third party research or other sources are included that may further aid interpretation.

### **Include information about the context and likely uses of the statistics**

- A1.6 *Mid-year Estimates and Local Authority Projections* include summary information about why the statistics are important, to whom, and what they are used for in a 'Relevance' section at the end of the reports. *National Park Projections* includes a summary of broad policy uses at the start of the publication. *Mid-year Estimates* and *Local Authority Projections* would benefit from the inclusion of summary information about the relevance of the estimates and projections in the introductory section to include an indication of the applied outcome of their use, and the policy changes that could result. All three outputs would benefit from referring to the broader social and policy context in relation to the specific findings as they are reported on.

### **Be professionally sound**

- A1.7 Text is missing from the final paragraph in the 'Population by age and sex' section of *Mid-Year Estimates*, which reads: 'And for ages of 38 and over there are more females than males (although the differences are small until around the age of 75 when...'.  
A1.8 On the *Local Authority Projections* theme page, Variant *Local Authority Projections* is situated in the current releases section, whereas Principal *Local Authority Projections* is in the 'Past Releases' section. The associated technical report is embedded in the 'Background Information' section via the 'More in this Section' drop-down menu. This layout makes it difficult to locate the principal *Local Authority Projections* and technical report from the theme page. The

principal *Local Authority Projections* makes reference a detailed forthcoming *Local Authority Projections* summary report, but this has not been published.

- A1.9 The population pyramids included within *National Park Projections* are well presented, but no commentary is included around the charts and no cross-referencing is made from the text to aid user interpretation of the charts.
- A1.10 The text presented in the *National Park Projections* introductory section states that the method used to produce the projections is 'similar' to that used for *Local Authority Projections*, but text presented later in the report states that the method is the 'same'. This is confusing, particularly as a methodology document currently only exists for *Local Authority Projections*, and this makes no reference to the *National Park Projections* methods.
- A1.11 *National Park Projections* indicates that the next edition will be published in late 2013 with *Local Authority Projections*, but this has not yet been published. The commentary for the latest variant *Local Authority Projections* released in 2013 states that the projections are produced every two years, although the front page states that the next update is provisionally scheduled for 2016.

#### **Include, or link to, appropriate metadata**

- A1.12 Almost all of the links from the statistical reports to the Welsh Government's supporting documents are broken. This substantially limits the ability of users to understand the quality and methodological strengths and limitations of the Welsh Government's population estimates and projections. *Mid-Year Estimates* and *Local Authority Projections* include links to the StatsWales website but *National Park Projections* does not. The Welsh Government includes the harmonised GSS geography names in the excel tables that are downloadable the StatsWales website, but it does not include the harmonised GSS geography codes. The Welsh Government said that it would include these codes in future.
- A1.13 *National Park Projections* includes links to the ONS source data, and information about the Welsh National Park development project. *Mid-year Estimates* includes links to the ONS methodology pages but it does not link to the relevant ONS and Welsh Government revisions policies or ONS quality reports. It includes links to other UK estimates and projection producer bodies but it does not mention that a UK publication is available for making UK comparisons. *National Park Projections* and *Local Authority Projections* do not include a link to the Welsh Government's revisions policy.

## Annex 2: Summary of assessment process and users' views

- A2.1 This assessment was conducted from July 2014 to July 2015.
- A2.2 The Assessment team – Oliver Tatum and Siobhan Tuohy-Smith – agreed the scope of and timetable for this assessment with representatives of the Welsh Government in August 2014. The Written Evidence for Assessment was provided in October 2014. The Assessment team subsequently met the Welsh Government during March and April 2015 to review compliance with the *Code of Practice*, taking account of the written evidence provided and other relevant sources of evidence.

### Summary of users contacted, and issues raised

- A2.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority's website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare Assessment reports.
- A2.4 As it was known that some of the users that we planned to approach would have an interest in the range of population estimates and projections we invited comments about all of the sets of statistics covered by Assessment reports 309 to 312 as part of a single user consultation. The Assessment team received 83 responses from its user consultation. It followed-up some of the initial responses with a small number of email, telephone and face to face discussions. The respondents were grouped as follows:

Local authorities	21
Government departments	17
Commercial	9
Government agencies/other public sector	8
NHS	7
Producer organisations (as users)	6
Academics	5
Data suppliers	10

### *Common Themes*

- A2.5 A large number of users contributing to the consultation were expert users who were often well connected to the producers and to other users through various networks. Often they used the data, rather than the statistical reports. As a consequence a large number were not routinely drawing on the published commentary that accompanies the statistics. Many had good knowledge of the methods used to produce the estimates and projections and of their strengths and limitations. Some users did call for more documentation of uncertainty, more highlighting of the methodological issues identified, and generally for clearer documentation of quality.

- A2.6 Users expressed a strong demand – spread across the four administrations – for data to be easily accessible at lower geographic levels than currently including postcode level data. Some would like to use the data to construct their own administrative areas such as those used in local planning or to match areas such as Community Commissioning Groups where boundaries are not coterminous with standard geographical classifications. There was a similar demand from users for the data to include more age options.
- A2.7 Inviting comments across all the sets of statistics allowed us to draw some comparisons between them. Some users highlighted differences in the visual presentation of the statistics, though often acknowledging the different resources available to the different producers. Users also raised inconsistency of method between producers, for example for producing variant populations and internal migration definitions, though again there was an understanding that there may be a tension between consistency and adaptability to local circumstances. Users would like to see more consistency in the availability of geographical area breakdown.

### *Welsh Government*

- A2.8 The main uses reported by users of the Welsh Government's population estimates and projections were for LDPs and in the planning of services. This included service provision by councils, Local Health Boards (LHBs) and the police. They were also used in the construction of performance measure indicators within the NHS and the Welsh Government. One user combined the Welsh Government's estimates with comparable data for England, to compare crime levels per 1,000 of the population in different police force areas.
- A2.9 One user raised a particular concern about the timeliness of *National Park Projections*, stating that the production delay had hindered their ability to plan effectively. For their purposes they needed *National Park Projections* and *Local Authority Projections* to be published at the same time on a predictable basis. Another user raised an issue about the coherence of the data sources available from the Welsh Government and ONS. They said that it was difficult for people who did not deal with statistics regularly to understand why ONS and Welsh Government have produced two sets of the same statistics.
- A2.10 Other users raised issues with access to data. One sometimes found it difficult to find the type of statistics needed as Welsh Government's website was not always user friendly. Another said that the accessibility of the outputs could be improved by including cross referencing between the outputs and by providing easy links from the commentary to the data. One user said that they needed to be able to carry out more-detailed, low-level analysis as LHBs were starting to plan based on GP clusters, and another said that they would like analysis presented by ethnic group. Another said that the detailed underlying data should be available for download. One user suggested that supporting documentation could be included within the data so the information is available directly rather than the user having to find it.
- A2.11 One supplier said that an increasing number of data security processes was adding to the time required to prepare the data that it supplied to the Welsh Government.

**Key documents/links provided**

Written Evidence for Assessment document

