

Assessment of compliance with the Code of  
Practice for Statistics

# 2021 Census in England and Wales

(produced by the Office for National Statistics)

## Office for Statistics Regulation

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## Contents

Executive Summary .....	4
Why this assessment is needed .....	4
What we found.....	4
Requirements .....	5
Judgement on National Statistics Status .....	7
Findings .....	8
Introduction.....	8
Understanding the context for Census 2021 .....	8
Enhancing confidence in the data and processes .....	10
Responding to user needs.....	14
A continuous improvement approach to Census .....	18
Annex 1: Preliminary findings from the first phase of this assessment .....	20

# Executive Summary

## Why this assessment is needed

- ES.1 The Census is one of the most important sources of data and statistics, informing decisions about almost every aspect of life within the UK. It allows users – including government, local authorities, academics, and commercial businesses – access to important information on the people and households of the UK and helps people get a better understanding of the places in which they live and work.
- ES.2 The Office for Statistics Regulation (OSR) is carrying out assessments of the UK Censuses produced by the Office for National Statistics (ONS), the National Records of Scotland (NRS) and the Northern Ireland Statistics and Research Agency (NISRA). The assessments will allow OSR to recommend whether the Census outputs should be designated as National Statistics, in accordance with the requirements of the Statistics and Registration Service Act 2007, when they are first released.
- ES.3 It is essential that the data and statistics from the Censuses are reliable and provide valuable insights, meeting the standards of trustworthiness, quality and value outlined in the [Code of Practice for Statistics](#). This assessment report focuses on the 2021 Census in England and Wales, produced by ONS, and aims to identify areas of strength, good practice and innovation in ONS's Census planning and development as well as identifying some areas where improvements need to be made.

## What we found

- ES.4 ONS has successfully delivered Census operations for England and Wales at a time of significant change and in unusual circumstances. The response to Census saw ONS exceed the return rate targets that it set for itself, both overall and for local authority areas; 97 percent of occupied households completed Census returns and all local authority areas saw over 90 percent occupied household return rates. It has worked hard to ensure the safety and wellbeing of its staff and the general public in doing so and these efforts should not be understated. The assessment team recognises the hard work and commitment of ONS to achieve this – from senior leaders, across the numerous specialist teams, and of course including those working in the field.
- ES.5 The data from Census 2021 will provide a unique snapshot of life in England and Wales, taken during the COVID-19 pandemic. Data collected during this time, on topics such as employment, travel, and household status, may well be unusual or changed from what might have been expected. ONS now has an important role in understanding the impacts on the data and seeking to address any unmet user needs as a result.
- ES.6 ONS should continue its work to ensure that Census outputs are accompanied by finalised information on quality to support users and assure them on the data sources and methods used in their preparation. This will be particularly important for 2021 Census data when it comes to areas of change – for example, on data

particularly affected by COVID-19, for new Census questions, or where concerns from users have been raised such as on data collected on sex as, in response to a High Court order, ONS made a change to its online guidance during live operations. ONS has a responsibility to support and assure users of the quality of Census data and its plans to deliver this alongside Census outputs.

- ES.7 To enable enhanced quality assurance arrangements in Census data processing, ONS now aims to release its first Census outputs slightly later than originally planned, in late spring 2022, and all other estimates within 24 months of Census. ONS is developing new tools and reporting formats with the aim of providing users with more-flexible, timely access to data and delivering greater clarity and insight to support the use of Census data and statistics. Delivering high quality Census outputs at the earliest opportunity is vital to delivering public value from the Census.
- ES.8 ONS has recently completed a large-scale consultation exercise with data users and stakeholders on its plans for Census outputs. This is one of a range of different user engagement exercises which has been undertaken throughout ONS's work on Census. ONS utilises various tools and approaches as part of its engagement to gather user views, get expert advice, update stakeholders of its plans, and explain its decision making – this includes formal consultations, user advisory groups, webinars and public events.
- ES.9 Having open and effective dialogue with users and stakeholders is vital in demonstrating that ONS is a trustworthy organisation that actively listens and responds to users' views. We consider that, for some users, elements of ONS communications and engagement could have been handled better and confidence in ONS's trustworthiness may have reduced; ONS's communications linked to the Census sex question was an example of this. ONS needs to learn lessons from its experiences – both good and bad – for future Census user engagement and more broadly across the organisation.

## Requirements

- ES.10 We have identified several ways ONS needs to implement improvements to support appropriate use of the data and meet users' needs to comply with the highest standards of the Code.
- ES.11 ONS has made little information widely available on the steps it is taking to investigate, or otherwise meet, users' needs for data affected by COVID-19. This is a significant gap in the assurances offered by ONS on its plans to address impacts on data. **In order to support society's need for information, ONS needs to clearly communicate how 2021 Census data may be impacted by COVID-19 and how it plans to address any unmet user needs. ONS should ensure this information is communicated in an accessible and timely way, being open on plans, developments and progress even where definitive answers or solutions are still being sought.**
- ES.12 Further steps need to be taken by ONS to communicate its plans and provide more-detailed information, when available, to users of UK population estimates and UK Census data in particular. **To assure users of how their data needs will be addressed, ONS needs to provide users with transparent, accessible and**

**timely information on how it will provide UK population estimates for 2021 and UK Census data. ONS should continue to work with, and align communications with, NRS and NISRA to explain any impacts on data quality and describe where user needs may or may not be met as a result.**

- ES.13 ONS made a change to its guidance for the Census sex question during live Census collection operations and while it told us that it expects this to have minimal impact on the Census data, ONS needs to publish suitable evidence to support this. **ONS should be open and transparent in publishing its plans to evaluate and mitigate any risk to data given the change in the sex question guidance during live Census collection operations. ONS should provide appropriate assurances to users of the quality of these data and any implications for use should be clearly explained, including at disaggregated levels, alongside Census outputs.**
- ES.14 To assure users of the value and quality of Census data, ONS should ensure its plans to provide information on quality – including information on data collection and processing, quality assurance activities and quality measures, methods and use of administrative data, and ONS’s judgement on appropriate use of Census data – are delivered as planned. **ONS should ensure finalised documentation on quality, information and judgements on suitable data sources, and methods and their application are complete. All supporting information should be sufficiently open and easily available to Census data users alongside its range of Census outputs.**
- ES.15 With such a wide and varied set of users of Census data, ONS needs to engage with user groups with different requirements and interests. This includes from special interest groups or topic-focussed perspective or when, for example, considering the needs of users with different levels of expertise or accessibility requirements. **In order to ensure the relevance of data and statistics to users, ONS needs to continue to develop and enhance its user engagement activities, connecting with a broad range of users and embracing challenge. ONS should continually review and seek to implement improvements in its engagement strategies and should ensure its decision making is open and transparent, explaining where users’ needs can or cannot be met.**
- ES.16 Producing timely and accurate data from the Census is vital to ensuring high public value. We recognise the improvements to ONS’s quality assurance processes – and how this reflects ONS’s commitment to quality – although this has affected the release schedule for Census outputs. **ONS needs to continue its efforts to deliver timely, accessible and flexible Census outputs – while ensuring sufficient data quality and supporting appropriate use of the data – mitigating any risks to further delay to the release of Census data and statistics. It should clearly communicate its plans and timelines for outputs at the earliest opportunity, updating and revising these as soon as more detail is available or to reflect any changes to its plans.**
- ES.17 The current ONS Census webpages contain a wide range of materials, research, plans, and reports, focussed on providing information to aid with transparency throughout its planning and development stages although it is still difficult to find materials and navigate through the ONS Census webpages. **To best support**

**Census data users, ONS needs to continue to improve its webpage navigation for current materials. ONS's plans for a separate website or webpages for Census outputs themselves will require sufficient consideration of its navigation and accessibility. ONS should keep webpages and content refreshed and current.**

## Judgement on National Statistics Status

- ES.18 We have identified seven requirements for ONS to address in order to ensure the high standards of public value, quality and trustworthiness associated with National Statistics designation are met.
- ES.19 Once ONS has demonstrated that the improvements covered by these requirements have been made or provided sufficient assurance that our expectation for the data and statistics will be met, OSR will recommend to the UK Statistics Authority that National Statistics status for these statistics be confirmed. ONS is aiming to meet the requirements of this report in the coming months so a designation decision can be made ahead of first Census outputs in late spring 2022.

# Findings

## Introduction

- 1.1 The Census is one of the most important sources of data and statistics, informing decisions about almost every aspect of life within the UK. It is of fundamental importance in allocating billions of pounds to local areas by the UK government and devolved administrations, as well as grants to voluntary sector organisations for example. The Census helps every person in the UK get a better understanding of the places in which they live and work.
- 1.2 The real value of the Census will be realised on the release of Census outputs. The Office for National Statistics (ONS) will have to deliver high quality data and statistics in a variety of forms to support the wide range of different uses required. It is essential that the data and statistics from the 2021 Census in England and Wales are reliable and provide valuable insights, meeting the rigorous standards of trustworthiness, quality and value outlined in the [Code of Practice for Statistics](#). The 2021 Census was taken during a national COVID-19 lockdown in England and Wales and, as such, captured data on individuals and households at a unique period of time. Consideration and understanding of the quality and value of Census data and how users' needs may or may not be met will be especially important in these circumstances.
- 1.3 This is the second assessment report and many of our considerations and judgements build on the preliminary findings as reported in our [earlier assessment report](#) published in October 2019. Our preliminary findings, and the last published update of progress – from September 2020, can be found in Annex 1: Preliminary findings from the first phase of this assessment. Since then, we have worked closely with ONS to understand how it has taken forward actions based on our earlier findings and progressed its plans to deliver high quality, valuable Census outputs. This report identifies areas of strength, good practice and innovation in ONS's Census planning and development as well as identifying some areas where improvements need to be made.
- 1.4 As with the earlier phase of this assessment, ONS published a [report](#) providing an update on its progress and how its plans and developments align with the standards of the Code. The approach of sharing and explaining this publicly echoes the key aspects of the Code, such as transparency and accountability, and the assessment team recognises this positive communication with stakeholders.

## Understanding the context for Census 2021

### Communicating the impacts of COVID-19

- 1.5 The 2021 Census in England and Wales was undertaken at an unprecedented time. ONS had to adapt and prepare for live Census operations during the COVID-19 pandemic. It had to take steps to ensure the safety of the public and of its field force staff, as described in a [public statement](#) issued in January 2021. ONS undertook a variety of [scenario planning and contingency activity](#) from early on in the pandemic covering operational and data risks. It also provided additional guidance to



respondents on how to complete certain Census questions, for example for students where additional support was available through a special student webpage and targeted communications on Census were taken forward.

- 1.6 Undertaking Census during COVID-19 meant that data on some topics such as employment, travel, and household status may well be unusual or changed. Census data will reflect the population of England and Wales at this rather unique point in time and data users' needs, such as those of local service planners, may no longer be met from the data collected in 2021.
- 1.7 ONS is currently undertaking Census data processing and quality assurance activities to understand and better assess the quality, strengths and limitations of the Census data collected in March 2021. ONS also told us of the work of a taskforce set up to investigate the impact of COVID-19 on data sources including Census and administrative data sources used more widely in ONS. The assessment team recognises the important work being undertaken to gather these insights.
- 1.8 We recognise that through its [outputs consultation](#), which closed on 6 October 2021, certain information has been shared on the impacts on Census data and ONS has asked questions of users about their data needs. ONS has also held some topic specific user events, for example in September 2021 ONS ran a webinar on Census 2021 Plans for international migration and origin-destination outputs. At this event, ONS shared some of its thinking about the likely impact on data, outputs, and meeting any gaps in provision on these topic areas. Sharing and getting user input throughout ONS's development of Census outputs – even where specific solutions or commitments to deliver cannot yet be made – keeps users and stakeholders informed and lets them know that their concerns are being taken forward. This event was a good example of ONS keeping users who attended the session informed of its thinking.
- 1.9 Given the interest from a range of data users to understand how their needs may or may not be met, it is regrettable this information – on topics affected by COVID-19 or on other factors such as the UK leaving the European Union – is not replicated or readily available on ONS's Census webpages.
- 1.10 ONS has made little information widely available on the steps it is taking to investigate, or otherwise meet, user needs for data affected by COVID-19. This is a significant gap in the assurances offered by ONS on its plans to address impacts on data. Furthermore, ONS has told us it is unlikely to publish more information until the completion of the outputs consultation and once it has a firmer understanding of data impacts. **In order to support society's need for information, ONS needs to clearly communicate how 2021 Census data may be impacted by COVID-19 and how it plans to address any unmet user needs. ONS should ensure this information is communicated in an accessible and timely way, being open on plans, developments and progress even where definitive answers or solutions are still being sought.**

## Census and population estimates for UK

- 1.11 In July 2020, National Records of Scotland (NRS) announced that Scotland's Census would be moved by a year to March 2022 due to the impact of COVID-19.

This difference of Census dates across the UK will have further impacts on population data, in particular for UK Census data and plans for how UK population estimates for 2021 will be provided.

- 1.12 The three Census offices – ONS, NRS and NISRA – have worked closely as each office has developed its Census plans and have made commitments to work collaboratively to understand and address the needs of UK Census users. These commitments and the steps taken against these are publicly available through progress updates on the [Conduct of the censuses across the UK](#), last updated in November 2020. This update outlines how they already work closely through a variety of networks and, led largely by ONS, have continued to engage with UK Census users through a UK Data User Working group, which has included exploring users' needs through a survey of members.
- 1.13 While ONS and the other Census offices have made positive steps when considering UK data users, little detailed information has been made public on the availability, comparability and limitations of affected Census data for England and Wales or at a UK level – or how they will provide UK population estimates for 2021. ONS has shared with us its thinking regarding its communication plans around 2021 UK population estimates and we acknowledge that ONS has made assurances that 2021 estimates will be available, for example in its [Population and migration statistics system transformation – overview](#) published in June 2021. We welcome the ONS team's intention to provide iterative updates to users as it becomes more certain of its position.
- 1.14 Further steps need to be taken by ONS to communicate plans and provide more-detailed information, when available, to users of UK population estimates and UK Census data in particular. **To assure users of how their data needs will be addressed, ONS needs to provide users with transparent, accessible and timely information on how it will provide UK population estimates for 2021 and UK Census data. ONS should continue to work with, and align communications with, NRS and NISRA to explain any impacts on data quality and describe where user needs may or may not be met as a result.**

## Enhancing confidence in the data and processes

### Handling personal data

- 1.15 Data collection by government bodies and the public acceptability or willingness of individuals to share data for significantly important collections such as Census has been of growing concern over recent years. ONS made available a variety of resources to support individuals' understanding and offer reassurance about its appropriate handling of data. ONS published clear and prominent information on the Census 2021 website for Census respondents regarding what their data will and won't be used for on '[Your data and security](#)' webpage during live Census operations.
- 1.16 ONS also commissioned [information assurance reviews](#) undertaken by a cyber security consultancy. The most recent review found 'strong controls were also in place to detect and respond to threats that may impact the Census when it is in live

operation. This 2020 assessment found that security controls in place have built upon and enhanced those in place during the 2019 rehearsal’.

- 1.17 ONS has established frameworks and protocols covering the various aspects of data governance and secure data handling when preparing data and statistics, for example ONS’s organisational [data protection policy and data strategy](#) can be found on its website. For Census statistical outputs available publicly, ONS has developed and tested disclosure control methods to be applied to protect the confidentiality of individual respondents. ONS will also make secure Census microdata available for more-expert data users, for example through its Secure Research Service which gives access only to approved researchers in a safe setting to protect data confidentiality.

### Census data collection

- 1.18 The quality of Census estimates is dependent on the data submitted by individuals and households during the main collection phase for Census, both in terms of response rates and accuracy. From March to July 2021, ONS ran Census collection operations in England and Wales. As reported in its [press release](#) on 4 May 2021, 97 percent of occupied households had completed Census returns, with all local authority areas seeing over 90 percent occupied household return rates. This exceeded the success criteria as set out in the White Paper [Help Shape Our Future: The 2021 Census of Population and Housing in England and Wales](#) – 94 percent nationally and 80 percent locally in all local authority areas. This is a positive signal of a successful collection phase.
- 1.19 ONS has completed its [Census Coverage Survey](#) (CCS) – an independent survey carried out after main Census collection to identify over and under coverage – and its [Census Quality Survey](#) (CQS) – a separate survey which asks the same questions asked in Census to assess how accurately Census questionnaires have been completed.
- 1.20 ONS told us the response to the CCS was lower than expected but, given the higher-than-expected return rates for the Census itself, it is confident that the CCS will enable it to produce accurate population estimates. In order to fully mitigate against any risk to greater variance or bias in the final population estimates arising from this, ONS is developing a new approach to be able to measure any bias using administrative data. This approach has been subject to external scrutiny by its Methodology Assurance Review Panel in October 2021.
- 1.21 On 4 October 2021, ONS published two articles on Census operations, [Designing a digital-first census](#) and [Delivering the Census 2021 digital service](#). The 2021 Census was the first digital-first Census in England and Wales. This approach hoped to achieve improved data collection in terms of both data quality – through question routing, data validation and access to online guidance – and efficiency of operations – including faster data processing and reduction in costs. These articles contained information on the digital-first approach and data on how the approach was delivered in live operations as well as technical information aimed at digital professionals across government. We would expect to see further data and information made available for users and the wider statistical community on, for example, if the application of the new approach would affect quality when

comparing data over time or for geographies where a greater proportion of paper questionnaires were used.

### Assuring data quality

- 1.22 As ONS has completed its collection phase, its focus has moved into processing and estimation of Census data. ONS's [Statistical design for Census 2021](#), published in October 2020, helpfully set out for users and stakeholders the various stages of Census delivery and how it ensures the data is of sufficient quality. This is a useful document which helps explain the scale and complexity involved in producing Census estimates and helps reinforce to users that the data at the end of the day are estimates and not purely counted Census submissions.
- 1.23 In January 2020, ONS published its [Approach and processes for assuring the quality of the 2021 Census data](#). This report detailed the quality assurance strategy employed and explains how ONS will validate Census estimates through plausibility checks, comparisons with other data sources and use of expert topic-based knowledge. The assessment team discussed with ONS its use of administrative data-based population estimates and other administrative data sources within the quality assurance process alongside the use of administrative data within Census processing. ONS is confident that it is managing the risk of circularity that can arise when using administrative data sources both to account for missing data and for quality assurance purposes.
- 1.24 ONS has continued to develop and evolve its quality assurance strategy. For example, it has enhanced its quality assurance through greater involvement of local authorities in the process. ONS has always worked closely with local authorities to discuss proposed approaches to quality assurance and utilise their expertise. For Census 2021, ONS will be providing local authority representatives with limited access to anonymised, provisional Census estimates for their area, strictly for the purposes of quality assurance prior to publication. This is a positive addition to the assurance process and reflects ONS's commitment to quality.
- 1.25 ONS also outlines, in its [Approach and processes for assuring the quality of the 2021 Census data](#), what information on quality it expects to publish alongside Census data, including confidence intervals for national and local authority population estimates and descriptions of the size and nature of errors introduced through Census data processing. It is helpful that ONS has signalled its intention to make this information available to users.
- 1.26 For some aspects of Census developments, data quality concerns have been raised by some users, for example on data collected for the Census sex question. This was heightened given that ONS made a change to its guidance during live Census collection operations. The change was made in response to a court order, issued by the High Court of England and Wales, following a challenge to the wording of the guidance.
- 1.27 ONS told us that it expects that the impact of changing the guidance will be minimal. To evidence this, provide reassurance and give confidence to users in the quality of its outputs, ONS needs to mitigate for this in the production of Census results and explain to users the impact of the change on Census data including at

disaggregated levels. For example, ONS might publish evidence on how many respondents accessed the guidance – before and after the change – and if, through data processing, it becomes aware of any issues with the data on sex collected. **ONS should be open and transparent in publishing its plans to evaluate and mitigate any risk to data given the change in the sex question guidance during live Census collection operations. ONS should provide appropriate assurances to users of the quality of these data and any implications for use should be clearly explained, including at disaggregated levels, alongside Census outputs.**

### Developing Census methods and use of administrative data

- 1.28 ONS takes a structured and diligent approach to ensure Census methods and processes are robust and rigorous. Methods development involves review at its internal Census Research Advisory Group before being taken to the [Methodology Assurance Review Panel](#) (MARP). This panel consists of external independent experts who also provide feedback to the National Statistician. The assessment team attended a MARP meeting where we witnessed the degree of challenge offered by this group and the openness of ONS to constructive review. The MARP papers and minutes of the meetings were available in the public domain during the earlier stages of Census developments, which offered a greater level of transparency and assurance of the methods development process. However, papers and minutes have not been published since January 2021; ONS should engage with the relevant panel secretariat to ensure these papers and minutes are published as soon as practicable.
- 1.29 ONS's work to develop appropriate statistical disclosure control (SDC) methods is one example of this approach. ONS has been transparent about its work to date at user events and has provided more detail through published MARP papers and minutes. ONS has continued to develop its methods based on feedback and through various data rehearsals undertaken earlier in the year. ONS's final plans on disclosure control methods and parameters were discussed at a MARP meeting in August 2021, before being approved by the UK Census Committee in October.
- 1.30 SDC is essential for protecting personal data but can be challenging to explain to users. ONS is preparing both technical and more user-friendly materials to support user understanding and we have suggested that ONS work with experts on how best to present, explain and make accessible information on quality, uncertainty and SDC methods to a range of expert and non-expert users, taking into account the range of statistical outputs and dissemination tools that will be available for users.
- 1.31 ONS uses administrative data sources for a range of purposes in Census from supporting data collections, quality assurance and for output geographies. Most notable for 2021 Census is the use of Valuation Office Agency (VOA) property attribute data to produce new outputs replacing the number of rooms question asked in previous Censuses. ONS has published various research on the use of VOA data, including [Admin-based statistics for property floor space](#) and [Admin-based statistics for property type](#) feasibility research, and in July 2020 ONS also published a [quality assurance of administrative data used in Census](#) document for VOA property attribute data. Having this information and research available to stakeholders while ONS was still finalising its plans for use of this data is good

practice, aids transparency and facilitates greater input from a wider expert audience.

- 1.32 ONS has assessed the strengths and limitations of introducing these administrative data to replace an existing Census question and judges this will be of sufficient quality to support topic analysis and other outputs on housing and over and under occupancy measures. This is just one example of where providing users with information and assurances on the strengths and limitations of the source data, including any impacts on definitional differences and any discontinuity in the data, will be extremely important.

### Data, quality and methods

- 1.33 Information on quality, strengths and limitations and being clear what users can and cannot do with the data helps support appropriate use of the statistics. This will be particularly important for 2021 Census data when it comes to areas of change, for example on data particularly impacted by COVID-19 or for new Census questions. ONS has a responsibility to support and assure users of the quality of Census data and its plans to deliver this alongside Census outputs.
- 1.34 To assure data users of the value and quality of Census data, ONS should ensure its plans to provide information on quality – including information on data collection and processing, quality assurance activities and quality measures, methods and use of administrative data, and ONS’s judgement on appropriate use of Census data – are delivered. **ONS should ensure finalised documentation on quality, information and judgements on suitable data sources, and methods and their application are complete. All supporting information should be sufficiently open and easily available to Census data users alongside its range of Census outputs.**

## Responding to user needs

### User engagement opportunities

- 1.35 ONS has continued to make use of public events and email updates as a way of keeping users informed of Census plans and developments. This composite approach has helped extend the reach of user engagement beyond expert users and stakeholders, delivering a broader message of how Census data serve the public good. For example, ONS has recently undertaken its Census output consultation which ran from July until October 2021. This has been an important exercise to better understand users’ needs and inform outputs planning. The consultation was accompanied by a series of events to support understanding of the areas of focus and the process for prioritising outputs, as well as to encourage responses to the consultation itself. ONS reported that it received over 300 responses to its consultation from a range of users including local authorities, charities, community groups and commerce.
- 1.36 Having open and effective dialogue with users and stakeholders is vital in demonstrating that ONS is a trustworthy organisation that actively listens and responds to users’ views. As with all engagement exercises run for Census, or more widely across ONS, experiences – both good and bad – can be learnt from to improve and build on engagement activities. For example, as part of this

assessment, we spoke with some stakeholders who raised concerns or issues they faced when engaging with ONS in relation to the Census sex question. As mentioned in our Phase 1 assessment report, the development of the question and related guidance on the Census sex question has proved challenging for ONS and at times has been contentious, with user and stakeholders holding strong and conflicting views.

- 1.37 While we recognise that ONS took steps to engage with a range of stakeholders and commissioned further work in response to challenges on its approach and position, we consider confidence in ONS's trustworthiness has been undermined with some of these users because elements of its communication with individuals, and publicly, could have been handled better.
- 1.38 In summer 2020, ONS held a stakeholder roundtable event to hear the different and often opposing viewpoints from stakeholders on the guidance for the Census sex question. Following that event ONS took forward work to further research and explore issues raised. While we are aware ONS provided some updates to the stakeholders as its research was taken forward, we also consider that these updates could have been fuller and more timely to better keep stakeholders updated on its progress and plans for communicating outcomes. We also consider that there was some confusion as to the level of stakeholder involvement in this research and decision making, which may have contributed to differing expectations of involvement.
- 1.39 Additionally, prior to the time when ONS made public its decision on the wording of the sex question guidance in February 2020, the assessment team was told by some users that in its more formal or public external communications, ONS's messaging seemed confused and was unclear to stakeholders. ONS needs to learn lessons from this experience when engaging with user groups and when communicating its decision making, particularly where topics or opinions are contentious.

### **Meeting user needs**

- 1.40 Uses of Census data are many and varied. Throughout Census planning and developments, engagement with a broad range of stakeholders has been required. We recognise the complex strategies which are put in place for ONS to engage and respond to different groups and the challenges that ONS faces in making decisions to best serve the public good when it comes to Census data and statistics. This was demonstrated during its recent outputs consultation where ONS reached out to a range of interest groups – such as the gypsy and traveller community, carers and disability groups – building on the engagement with these groups during the Census collection operations.
- 1.41 As a more detailed example of this, we consider ONS's work to deliver and respond to the needs of Welsh users and stakeholders and its commitment to the Welsh language in Wales. ONS has made clear in its White Paper, [Help Shape Our Future: The 2021 Census of Population and Housing in England and Wales](#), its commitment to the Welsh language in Wales – for example through ensuring relevant legislative requirements are satisfied by making appropriate arrangements for enumeration, publicity and public engagement activities in Wales – and how it

planned to engage with key Welsh stakeholders. We also recognise the involvement of Welsh Government in ONS's working groups and committees involved in all levels of Census decision making.

- 1.42 As part of Census data collection, ONS delivered a variety of services with Welsh respondents in mind such as questionnaires, campaign materials, website and social media channels being produced in Welsh and English. When it comes to ongoing stakeholder engagement, ONS has shown it has made efforts to maintain, develop and foster key stakeholder relationships, for example ONS has a dedicated Census Advisory Group for Wales.
- 1.43 We are aware however that certain stakeholder issues may not have been picked up as effectively as needed through these engagement routes. For example, we understand issues were raised with ONS about Welsh language addresses on paper and electronic questionnaires. These issues were not fully taken into consideration until they were raised in writing with ONS, at which point it was too close to Census Day to be acted upon. We were pleased to hear therefore that actions such as the terms of reference for the Census Advisory Group for Wales are being reviewed as this helps ensure both Welsh representatives and ONS reflect and make most effective use of this engagement forum.
- 1.44 We have been told there is a lot of interest currently in Census outputs in the Welsh language. We understand ONS is currently running a discovery piece on the need for Welsh language outputs and we are also very pleased to hear ONS has created a role for a Welsh language champion. One area the new champion will be leading on is to establish a policy for addressing in Welsh across the ONS. These are further positive steps taken to address the needs of this user group and ONS should be transparent and clear on how it will meet their needs. Overall it is positive to see ONS taking steps to strengthen its efforts to effectively engage with and respond to the needs of Welsh stakeholders.
- 1.45 Census user engagement and consultation is one of the largest scale exercises of its type in the collection and production of data and statistics in the UK. With such a wide and varied set of users of Census data, ONS needs to engage with user groups with different requirements and interests. This includes from the special interest groups or from a topic focussed perspective or when, for example, considering the needs of users with different levels of expertise or accessibility requirements. **In order to ensure the relevance of data and statistics to users, ONS needs to continue to develop and enhance its user engagement activities, connecting with a broad range of users and embracing challenge. ONS should continually review and seek to implement improvements in its engagement strategies and should ensure its decision making is open and transparent, being clear where users' needs may or may not be met.**

### Communicating plans for Census outputs

- 1.46 Throughout our user engagement, in both phases of the assessment, there has been strong interest from users to understand what and when Census data will be available to them. Users told us that they need clarity and transparency on the release schedule, as well as the outputs catalogue, so that they can plan their own outputs or broader work accordingly. While we understand that some of this



information will be dependent on the outcomes of its outputs consultation, we recognise the demand for this information to support those who intend to use Census data. ONS published its [proposed outputs release plans](#) in July 2021 and expects to publish full details of its outputs release schedule in February 2022.

- 1.47 For Census 2021, ONS originally stated that it aims to make Census information flexible, timely and accessible, and specifically that it would aim to disseminate national and local authority-level estimates for England and Wales within 12 months of Census and all other estimates within 24 months of Census. On 12 October 2021, ONS informed users, primarily through a [blog piece](#) in [National Statistical](#), that due to improvements to its quality assurance arrangements for Census data, first outputs will now be available in late spring 2022.
- 1.48 Producing timely and accurate data from the Census is vital to ensuring high public value. We recognise the improvements to ONS's quality assurance processes and how this reflects ONS's commitment to quality, although this has impacted on the release schedule for Census outputs. **ONS needs to continue its efforts to deliver timely, accessible and flexible Census outputs – while ensuring sufficient data quality and supporting appropriate use of the data – mitigating any risks to further delay to the release of Census data and statistics. It should clearly communicate its plans and timelines for outputs at the earliest opportunity, updating and revising these as soon as more detail is available or to reflect any changes to its plans.**

### Keeping the general public and users informed

- 1.49 Efforts to engage with Census data users do not receive the same investment and effort as the engagement activity with the public ahead of Census day, and arguably rightly so. ONS offers a range of engagement opportunities for Census users and stakeholders and, with more social media activity, may reach out to a broader audience base. ONS has told us that it is developing a package of communications around Census outputs, building on the campaign during the running of Census, which it hopes to reach a wide range of groups including the wider citizen audience. Aiming to reach this broader audience base not only helps promote and explain the value of Census data and statistics but also helps to acknowledge the importance of respondent's participation across England and Wales during 2021.
- 1.50 [ONS's Census website](#) gave the general public easily accessible information about Census, supporting their participation during the collection phase, and has been updated with links to the recent outputs consultation. Detailed information on Census research, developments and plans are hosted on [Census webpages](#) on the existing ONS website. During Phase 1 of this assessment, we found that there were weaknesses in the ease of navigation of ONS's webpages and that ONS needed to do more to improve the accessibility of key information. ONS has made some improvements to its Census webpages however it can still be difficult to find materials. For example, if looking for key information on quality and methods, it may not be obvious that that information is held under the Census Outputs tab – subheading 'Our output plans for the data from Census 2021' – rather than, say, the Census design tab – subheading 'How we run, process and quality assure Census 2021'. Some of the tools used to communicate progress and future plans through the webpages, such as the Census News webpage and Milestones webpages,

have not been consistently kept up to date although we do recognise that ONS has more recently refreshed this content.

- 1.51 Having accessible and easily findable information supports the appropriate use of data and statistics. The current ONS Census webpages contain a wide range of materials, research, plans, and reports, with the aim of providing information to aid with transparency throughout its planning and development stages. However currently it is not achieving those aims as effectively as one might expect. **To best support Census data users, ONS needs to continue to improve its webpage navigation for current materials. ONS's plans for a separate website or webpages for Census outputs themselves will require sufficient consideration of its navigation and accessibility. ONS should keep webpages and content refreshed and current.**

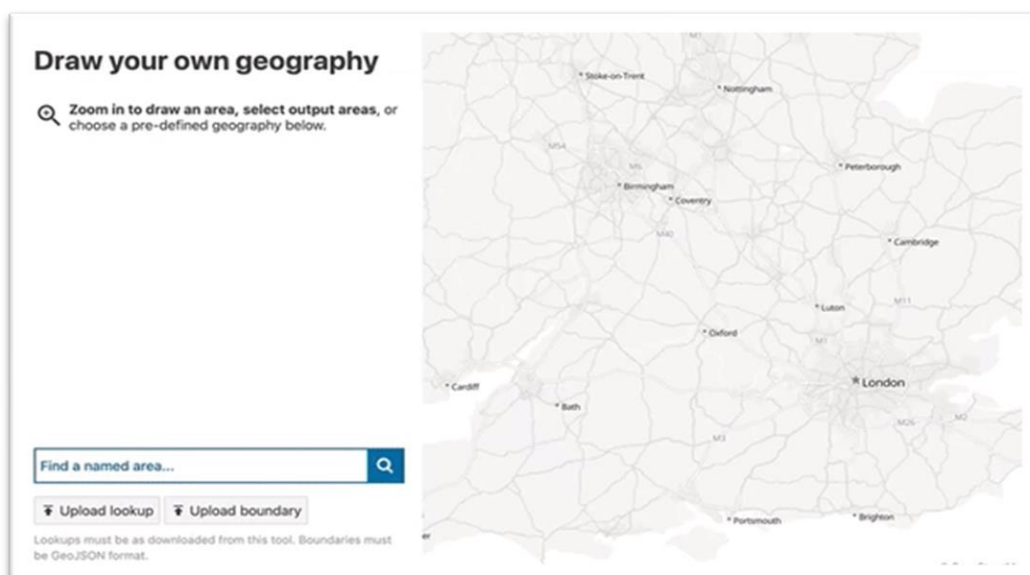
## A continuous improvement approach to Census

### Innovation and improvement in Census outputs

- 1.52 ONS has acknowledged that its past approach of trying to meet a range of user needs through a set of 'standard tables' has limitations. To address these limitations for Census 2021, ONS is developing a more flexible dissemination approach for multivariate data, that has automated disclosure control methods at its heart, by creating a Flexible Table Builder. This tool will allow users to generate bespoke tables in a timely and automated fashion, whilst still ensuring the data are subject to disclosure control. The Flexible Table Builder will involve three types of disclosure control methods: record swapping, cell key perturbation and disclosure checks. The development of this tool should significantly improve the flexibility and timely outputs offering from ONS for Census 2021 when this is realised.
- 1.53 As well as improving the accessibility, ONS has focused efforts on supporting public understanding of Census data through data visualisation. ONS presented its plans for new interactive outputs at the Royal Statistical Society (RSS) Conference 2021. These proposed outputs include mapping tools which allow users to aggregate data for non-GSS geographies, and 'data-driven templates' which can be embedded in a 'scrollytelling' release<sup>1</sup>. ONS has demonstrated a commitment to innovation and improvement through its plans for enhanced outputs tools and reporting media for Census 2021, which should serve to bring greater clarity, insight and accessibility for data users.

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<sup>1</sup> [Scrollytelling](#) is a new format for the ONS digital content team, being developed for Census data, where users can scroll to zoom into different levels of geographies and see how the data and narrative differs at each level.



## Retaining lessons learned

- 1.54 At the end of Census processing and outputs, ONS will undertake a full assessment of the benefits of Census as it did for Census 2011. The assessment team spoke with ONS about its current thinking regarding realising the benefits across ONS and the wider Government Statistical Service of what it has learned from Census. We were encouraged to hear about ONS's plans to establish a legacy working group to take this forward. This group will consider the wide range of developments across services, people and processes involved in Census, many of which already are recognised as having been successful. For example, the electronic questionnaire and digital delivery, branding and engagement, and field force management.

# Annex 1: Preliminary findings from the first phase of this assessment

## Finding 1

A1.1 Some users have reported difficulties in locating certain documents on the Census offices' websites. The design and navigation through these websites vary notably between Census offices and may provide a barrier to the easy access of information for users. **Census offices should consider the accessibility of research and other Census information on their websites and consider aligning website design and content where possible to provide a common user experience.**

A1.2 **Actions taken by ONS to address findings** ONS has added new content to its Census 2021 webpages, some in response to other assessment findings such as information on assurance mechanisms. ONS told us it has developed much of this new content working in collaboration with Northern Ireland Statistics and Research Agency (NISRA) and National Records of Scotland (NRS), so common layouts and wording were used where possible.

ONS has shared with us its plans to increase the accessibility of its current webpages which include employing a user-centric rather than topic-based approach to navigation through the webpages, and alignment with other Census offices where possible.

ONS recognises the need for harmonised content where possible to achieve a common user experience, with increased signposting and cross-site linking.

ONS also told us about the development of its outputs dissemination platform which will be integrated into its existing online presence. Any developments and solutions will be delivered in line with Government Digital Service standards. Separate developments are being taken forward by NRS and NISRA and, while the platforms may have differences, ONS has said it will aim to align web design and build similar user journeys across the different systems.

A1.3 **OSR's evaluation of evidence** The plans ONS outlined to improve its Census webpage are positive and take account of the issues highlighted through this assessment, although it is disappointing more could not be achieved or implemented to date. For example, within its 'Census Transformation' page there is content relating to Census 2021 and on the Admin Data Census Project; reorganisation and grouping of content with more intuitive naming would make it easier for users to locate materials they are interested in.

ONS should implement its plans for Census webpage improvements in the coming months and involve user testing as it considers navigation and accessibility. This will be more important as additional content is published on the website.

ONS's plans for the development of the outputs dissemination platform are positive

## Finding 2

A1.4 There has been much public debate relating to proposals for Census questions and the question development process across Census offices. Census offices must ensure their actions and decisions are visibly taken with the honesty, integrity and

independence necessary to deliver data and statistics that are of high quality and serve the public good. **Census offices should be open and transparent on their decision-making processes and in their decisions on Census questions and guidance, particularly in relation to any areas of contention.**

- A1.5 **Actions taken by ONS to address findings** ONS has published additional question development materials since the completion of the first phase of the assessment, these include
- i. Question and questionnaire development overview for Census 2021 (published March 2020) which provides users with information of the development processes including approach to question development, research methods, and criteria to evaluate question design.
  - ii. Summary of testing for Census 2021 (published March 2020) which lists all testing conducted between 2016 and 2020 that informed the question design for Census 2021 in an excel spreadsheet.
  - iii. Question development reports (published June 2020) which explain the research, testing and evaluation carried out on question design on topics such as sex and gender identity, ethnic group tick-box, national identity, ethnic group, language and religion, armed forces, qualifications and housing.

Materials on question development are all published on a common webpage.

ONS has kept the assessment team informed of activity, particularly in relation to the guidance for the sex question in the Census. The assessment team understands that there has been ongoing engagement with users and stakeholders on this subject and that ONS has committed to undertake further testing and engagement with data users.

- A1.6 **OSR's evaluation of evidence** ONS has published a range of materials to evidence its decision-making processes on Census questions. The question development overview, which provides details of its research methods, questionnaire design and evaluation criteria, is particularly useful in this regard.

The summary of all testing undertaken by ONS on Census questions and questionnaires is a helpful resource. This should be kept updated and would be further enhanced if it provided a link through to testing outcomes, such as topic reports where feasible.

While a range of materials has been published, the assessment team considers that more could be done to alert users and interested parties of new content when it is released.

The assessment team thinks it essential for ONS to consider the concerns raised by users during its further testing and research on the guidance on the sex question and consider the impact of data quality on the analysis of small sub-groups of the population.

ONS should continue to engage with stakeholders particularly in relation to areas of contention, meet any commitments it has made, and seek to provide answers or explanations on areas of concern, in a transparent and open way.

### Finding 3i

- A1.7 Census offices could benefit from working together more closely to better engage with users and stakeholders of UK Census data and statistics who have views and

insights that are relevant across Census offices. UK Census users and stakeholders may be unnecessarily overburdened if they are required to submit multiple feedback or consultation responses on similar topic areas across Census offices. **Census offices should consider how best to engage with users and stakeholders of UK Census data and statistics users and coordinate activities as appropriate.**

- A1.8 **Actions taken by ONS to address findings** Since the publication of the assessment report ONS, working with the other Census offices, has:
- i. established a UK Census Data working group. The working group is specifically looking at the assessment finding on UK Census data users. ONS has taken a lead role in this work and has a member of staff in place who has clear responsibilities for engagement with UK users. The group has been considering options such as UK wide events.
  - ii. added a new UK Census data webpage, inviting UK Census data users to contact the Census team. The webpage should serve as a clear route to publish materials of particular interest to UK users.
  - iii. attended cross-office user events. While this already happened, steps have been taken to be more visible at these events through ensuring people from other offices are introduced to attendees.

- A1.9 **OSR's evaluation of evidence** We consider the UK Census data working group an extremely positive initiative put in place to address this finding. We welcome the fact that ONS has taken the lead in driving forward activities focused on the UK Census data users.

The new UK harmonisation webpage is also a positive step and having tailored content for this specific group of users is a valuable addition. ONS should make this webpage more prominent and easier for UK Census data users to find.

We recognise the barriers that Census offices may face in identifying and engaging with this group of users. The assessment team is hopeful that the continuing efforts of the working group will help with this. The working group should look to increase the visibility of its activities and communications and draw on the expertise across the wider GSS in exploring new and creative ways to reach users groups that are harder to engage with.

### Finding 3ii

- A1.10 Published plans, research and topic reports from the individual Census offices are not always sufficiently clear on how country-specific proposals then relate to UK users' needs and about the impact of these decisions on the availability of on harmonised UK data. **Census offices should be clear about the impact of country-specific decision making for UK Census data and statistics and work together to provide greater transparency around their plans and decision making in meeting the needs of users interested in UK Census outputs.**

- A1.11 **Actions taken by ONS to address findings** ONS, with the other Census offices, released a progress update on the Conduct of the 2021 Censuses in the UK in January 2020, reflecting the position as of November 2019. The statement of agreement on the conduct of the censuses sets out the principles that the three Census offices will work together on to make sure the 2021 Censuses are successful. ONS told us there are plans to release a further updated position at the end of this year.

ONS, in its report How the Office for National Statistics is ensuring the 2021 Census will serve the public published as part of this assessment, set out the involvement of cross-Census offices in various groups and committees. This will be further supplemented by the collation of information on the range of harmonisation working groups across the range of Census activities. ONS told us it plans to publish this information and is considering whether the most appropriate vehicle to do so is alongside the planned update on the conduct of the Censuses.

Some high-level summary information on UK harmonisation is included on the new UK harmonisation webpage.

**A1.12 OSR's evaluation of evidence** ONS has frameworks in place to facilitate decision-making which takes account of the views and opinions from across the Census offices. There is an array of groups in place which consider harmonisation as part of Census plans and development. Putting information about these groups in the public domain will offer greater transparency to users and stakeholders.

When collating this information, if feasible, examples of how decision making has taken account of the needs of UK Census users should be included.

ONS should also seek to engage with UK Census users on their response to how it has taken account of their needs.

ONS should be transparent in how it meets the needs of users interested in UK Census outputs in future publications on harmonised questions, outputs and methods.

Due to the decision by Scottish Ministers to delay the Census in Scotland, it is even more important ONS must work with the other Census offices to explain the impacts of this to UK Census data users.

### Finding 3iii

**A1.13** Proposals from Census offices on Census questions will be subject to relevant legislative processes in finalising arrangements for Census in 2021. **Census offices should provide users, stakeholders and decision makers with information on harmonisation of Census questions and the impact on outputs at UK level to help inform users and support decision making.**

**A1.14 Actions taken by ONS to address findings** In response to this finding, ONS has described the collaborative approach to question development between the three Census offices.

ONS has shared the plans to review and produce information on harmonisation of Census questions when legislative processes are finalised and will likely publish this in 2021.

ONS has included question harmonisation content in its recent question development reports, which provides a summary of the approaches taken to questions across the three Censuses.

**A1.15 OSR's evaluation of evidence** The assessment team recognises the commitment of ONS and the other Census offices to publish information on harmonisation for users.

### Finding 4

**A1.16** Census offices have a work programme scheduled to establish and evaluate the data sources that will be used to support Census activities. In some cases, we are

not fully assured that the necessary conversations with all the various data suppliers are taking place to inform the understanding of the nature, operational context and overall quality of the sources to be used. **Census offices should build their awareness of the relative strengths and limitations of any administrative, commercial or other data sources used in the production of Census outputs, by regular engagement with suppliers. This should be undertaken on an ongoing basis and as part of a normal way of working.**

**A1.17 Actions taken by ONS to address findings** ONS has provided an overview of how it coordinates its requirements and arranges the supply of data from other government departments or organisations, how it manages relationships with data suppliers and how it records information on data quality.

In its evidence report, ONS talks about its involvement in the UK Population and Censuses Strategic Group – which considers the use of administrative data in the 2021 Census; the Administrative Data Research Group – to share information and best practice on the integration of administrative data in the Census process; and collaboration with other national statistical institutes. In the report ONS also mentions its work with Ministry of Defence (MoD) and Valuation Office Agency (VOA) on data for Census use. Further information on the use of MoD data can be found on the Armed forces community question development webpage. ONS has also recently published materials on number of rooms using VOA data including a summary of the quality assurance undertaken and its judgements on the quality of this data.

OSR ran a Quality Assurance of Administrative Data (QAAD) session with the three Census offices in May 2020, to respond to queries raised on our expectations for quality assurance of administrative data as part of Census. ONS attended and engaged positively in that session. OSR also spoke with ONS teams in July 2020 to better understand the processes and practices with regard to the acquisition and preparation of nonsurvey data through the Data as a Service (DaaS) division, ONS's administrative data strategy for Census, and the quality framework being developed for use of administrative data in Census processing.

ONS also plans to publish a paper proposing a quality framework and strategy for measuring the quality of administrative data used in Census 2021.

**A1.18 OSR's evaluation of evidence** The assessment team appreciates the openness of ONS teams to discuss and seek advice regarding its use of administrative data.

In discussions on the function and role of DaaS division, ONS spoke of changes to its operating model and its ambitions for improvements. We are encouraged ONS is reflecting and looking to enhance its processes. For example, ONS told us it is considering how it can improve the quality of the source data through greater collaboration and communication of its understanding of quality considerations with data suppliers.

We note the future publication of the paper on measuring the quality of administrative data used in Census. It will be a positive step to provide users and stakeholders with assurances of how ONS consider data quality when using administrative data.

We also note the recent publication of information on VOA's property attribute administrative data.



Being transparent and providing users and stakeholders with assurances on its judgements is a key aspect of the Code of Practice for Statistics. We consider that information on data sources used in the Census and ONS's judgement on quality and appropriateness for use should be made available in the public domain. ONS should continue to publish information on its use of data sources and, where appropriate, consider publishing provision information and building on this as its research and understanding continues to develop. ONS should ensure this information is easily accessible on its website.

## Finding 5

A1.19 Census offices are developing their quality management approaches and developing various methods to support Census operations, data processing and outputs. This includes addressing potential biases between online and paper collection modes. However, the timing for publication of methodology documentation and quality assurance arrangements is unclear. **Census offices should make information on the methodology and quality assurance arrangements available to users at the earliest opportunity.**

A1.20 **Actions taken by ONS to address findings** ONS published a document in January 2020 setting out its approach and processes for assuring the quality of 2021 Census data. This included an overview of its quality assurance strategy and further details on the processes involved – from the address frame through data collection and imputation, to published outputs – and how it manages those.

ONS has committed to update its methodology webpage and include links to census methods work from the GSS methods webpages.

ONS has also started to publish the papers and minutes from the Census Methodological Assurance Review panel on the UK Statistics Authority website.

The assessment team has held sessions in July 2020 with ONS to discuss census methods – what methods have been selected and why ONS consider these suitable for use. These sessions included discussions on item imputation, statistical disclosure control, and census coverage adjustment.

A1.21 **OSR's evaluation of evidence** The assessment team recognises ONS's commitment to update the Census methodology webpages as currently the information contained there is sparse.

We are pleased to see ONS publishing methods papers reviewed by the external assurance panel; this brings transparency to methods development and assurance over the rigor being taken in that regard. ONS could better alert users and interested parties to this information, not least by linking to these papers from the Census methodology webpage.

Based on the assessment team's methods sessions with ONS, we consider that ONS is taking a rigorous approach to its methods development. The assessment team is keen to continue conversations with ONS to understand how any decisions or approaches to methods may need to take account of behaviour changes of the UK population as a result of the COVID-19 pandemic.

However, as many methods approaches for Census are due to be signed off by the end of the year, we would again look for ONS to make its development work more visible and accessible to expert audiences. The assessment team also considers that ONS should, when publishing finalised methods information, make clear where

approaches may differ from other UK Census offices and the reasons why that decision has been made.

We welcome the publication of the quality assurance document. This is an important document to assure users and stakeholders of the processes and strategy in place. It is well set out and readable for users who may not have an in-depth knowledge of Census processes.

## Finding 6

A1.22 Users told us that they were unclear at what points certain decisions will be made or when certain information will be made available. While planning documents are published, there is no easily accessible high-level plan of key Census milestones. **Census offices should provide users with an indication of future Census milestones – including future user engagement opportunities, publication of further research or reporting, and legislative milestones – to provide an added level of transparency and support trustworthiness and public confidence.**

A1.23 **Actions taken by ONS to address findings** ONS has now added information on census milestones to its website. This covers areas such as legislative process, operational aspects, outputs, and this assessment process.

A1.24 **OSR's evaluation of evidence** The assessment team is pleased to see that this overview information is now available to users and interested parties.

ONS should maintain this information providing further detail or updates on timings as appropriate. ONS should also consider adding links to information on completed milestones where this is possible, such as linking to rehearsal evaluation materials once these are published.

## Finding 7

A1.25 Use of internal review, audit and other independent measures to evaluate the effectiveness of processes is important across all three Census offices and provides additional safeguards. **Census offices should be clear to users what assurance mechanisms are in place and be open about identified areas for improvement in a way that is a proportionate and accessible to users.**

A1.26 **Actions taken by ONS to address findings** ONS has published information on its webpage on the assurance mechanisms in place to underpin Census delivery. Information provided described both internal and external assurance processes and describes at a high level how these difference activities are managed and also mentions implementing improvements, such as lessons learnt through 2019 rehearsal.

A1.27 **OSR's evaluation of evidence** ONS has published the information required which allows users to better understand the broader assurance and audit activity in place to evaluate processes.

ONS should continue to be transparent on outcomes of evaluation and audit activities where this is feasible by publishing materials such as Census rehearsal evaluation reports.

