

# Scotland's Census 2021 – Topic Consultation

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## Table of Contents

1. Introduction.....	3
2. Census Design and other processes .....	6
3. Topics under consideration for collection in Scotland's Census 2021 .....	8
4. Other topics under consideration for collection in the 2021 Census .....	25
5. Evaluation criteria .....	31
Annex 1: Census Data Quality .....	35

## **1. Introduction**

The National Records of Scotland (NRS) on behalf of the Registrar General for Scotland, is responsible for conducting a census in Scotland. Planning has begun for Scotland's Census 2021 and will build on the success of the census in 2011. It will be designed and managed in Scotland, to best meet the needs of its users. NRS wants to hear from our users to learn and understand those needs and that is the main aim of this consultation.

The census is just one part of a much wider statistical system. Collecting information through a census represents a significant investment and places a legal obligation on households and individuals in Scotland to provide personal information. It is only appropriate when a census is the most effective way to collect information to meet a strong user requirement that cannot be met by other means, and the associated benefit outweighs the cost of collection.

### **1.1 Understanding requirements for Census 2021**

This consultation is our first step towards understanding what is needed from the census and your involvement and response is important. In some instances there will be other sources for the information you need and your responses will help us assess whether the census is the best way to meet that need.

We aim to maintain or improve the quality of the data, provide comparability where users tell us it is important and deliver information that is relevant to the needs of our users in 2021. We want you to use census data because accurate data helps make better decisions that benefit us all.

This paper provides the initial view from NRS on the topics currently under consideration for collection in the 2021 Census in Scotland. This view is informed by evaluation of the success of the 2011 topics and questions (including evidence from research and previous censuses), user requirements from the Beyond 2011 consultation carried out in 2013 and feedback from the Scotland's Census 2011 User Satisfaction Survey undertaken earlier this year.

This is only an initial view and the aim of the consultation is to encourage discussion and help us build strong cases and justify the inclusion of topics in the 2021 Census. The focus of this paper is on information required at topic-level, not the detailed questions that should be asked on the questionnaire. The detail of the content of the questionnaires will only be finalised after a comprehensive programme of research, testing and further discussions with users. The plans for this programme are currently being developed and will be published on Scotland's Census website in due course.

## 1.2 Changes to census content – 2011 and 2021

The topics and questions for the 2011 Census underwent comprehensive review, to ensure they were fit-for-purpose and relevant to user needs. As a result, new questions were asked about:

- long-term health conditions
- language (two new questions)
- national identity
- date of arrival in the UK

Other notable changes included substantial revisions to the question on ethnic group, following a review conducted in partnership with the Scottish Government. The existing question on Gaelic ability was expanded to also ask about abilities in English and Scots. Most of the 2011 questions worked well. For further information on data quality see Annex 1; this contains information on item non-response rates and gross agreement rates from the NRS 2011 Census Quality Survey (CQS)<sup>1</sup>.

Given these significant additions and revisions, we think that the overall length of about 35 questions per person is near the limit of acceptable burden to the public and it is important to recognise that constraints on the length of the questionnaire will remain. New topics may be considered for 2021 if the criteria for inclusion are met, although this may mean that trade-offs are required.

Changes to the content of the questionnaire will be considered to address:

- where questions didn't work well in 2011, particularly where there were issues with data quality and/or they didn't support users' requirements for outputs.
- new or emerging policy requirements that cannot be addressed through the use of alternative sources.
- changes in international guidelines (e.g. around the labour market topic) and in legislation.

Consultation on the content of previous censuses resulted in demand for more census topics than it was possible to accommodate. In order to contribute to a transparent process for determining the content of the 2021 Census questionnaires and so that users have a clear view of the constraints and trade-offs involved, the criteria against which cases for topics will be assessed are included in section five of this document, for information.

As in previous censuses, there will be separate censuses in England & Wales and Northern Ireland and the three census offices will work together to develop a set of questions that, wherever possible and necessary, deliver harmonised outputs across the UK.

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<sup>1</sup> The CQS was a voluntary survey carried in Scotland after the 2011 Census. It aimed to measure the accuracy of answers given to census questions by asking a sample of households the census questions again in a face-to-face interview. By comparing the responses given, agreement rates were calculated providing an indication of how accurately the 2011 Census was answered.

## Responding to the consultation

The best way to respond to this consultation is [online](#).

You can provide a response to all topics, or just to the individual topic(s) that are relevant to you. However, please answer ALL questions for each topic that you choose to respond to.

This will help us fully understand your requirements. There are different questions for topics which have not previously been included in Scotland's Census.

If you wish to respond to this consultation via email or on paper, please download a Consultation Response Form from the [Scotland's Census website](#).

When completed, please send to one of the following:

e-mail: [scotlandscensus@nrscotland.gov.uk](mailto:scotlandscensus@nrscotland.gov.uk)

post: Scotland's Census 2021 Topic Consultation  
Ladywell House  
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Responses to this consultation paper are invited until midnight 15 January 2016.

To support transparency in our decision making process, and unless you ask us otherwise, responses to this consultation will be made public and attributed to you. This will include the name of the responding organisation or individual. In responding, you will be asked to confirm that you are content for your name to be published. We will not publish personal contact details.

*(Please also be aware that any information provided in response to this consultation could be made publicly available if requested under a Freedom of Information request.)*

## 2. Census Design and other processes

### 2.1 Census Design

In March 2014, National Records of Scotland announced that it would focus on planning for a census in 2021. That planning has begun and Scotland's Census 2021 will be conducted primarily online, while offering alternative routes for completion where necessary. It will aim to make best use of technology, digital services and administrative data.

Its design will build on the successes of, and utilise many design aspects from 2011, when the opportunity to complete your census online was offered for the first time. The most significant change is that digital will be the **primary** method of data collection (as compared with paper previously), with the majority of respondents expected to complete their census questionnaire online.

The design for Scotland's Census 2021 is currently being progressed by NRS. High-level principles that will guide its development have been identified including:

- Designing questions for the online environment first, including a range of device formats, to make it as easy as possible for the public to respond
- Embracing new technologies and methods, where appropriate
- Utilising elements of the 2011 Census that worked well and are still relevant
- Testing the census design iteratively to assure us and stakeholders of the underlying system, processes, and security of the overall design
- Using estimation and adjustment to account for over and under enumeration, as has been done in the previous two censuses
- Making the first results available more quickly than results from the 2011 Census.
- Ensuring delivery of a safe, secure, easy-to-use online data collection environment, building on the success of 2011

Completing the census online offers a number of advantages for data collection and for respondents. These will be maximised in 2021, with the aim of improving data quality and hence accuracy of results, and improving respondent experience by reducing unnecessary burden. The associated reduction in data cleaning and processing required also offers operational advantages to NRS.

Some advantageous features of online data collection are listed here:

- Digital data entry – no poor/illegible handwriting to be interpreted by scanning system or operator
- Automatic routing through the questionnaire.  
Assuming filter questions are answered correctly, questions that are not relevant to an individual are never presented to them
- Control over whether people give a single or multiple response to a question

- Control over the format of responses – numeric, character or date format
- No need to provide duplicate information.  
The responses to any questions asking for information already supplied are pre-populated (e.g. names)
- Review pages  
Giving respondents the chance to check the information they have provided reduces the likelihood of incorrect responses being submitted in error.
- Validation checks  
Real-time checks to validate the responses provided. When certain conditions are met, a user is required to confirm or correct data they enter e.g. a date out-with a specified range

NRS will undertake research to understand any potentially negative implications resulting from the move to a predominantly online Census, to ensure that a robust design is developed. The results from that research will contribute to decisions on the scope of changes to questions, and therefore outputs. All relevant impact assessments will be carried out by NRS and published in due course.

## 2.2 Dissemination, disclosure control and geography

The 2011 Census provided more data than ever before, with data available at 16 different levels of geography, and also planned for alternative populations. Users were also given the ability to create bespoke geographies specific to their requirements. This consultation is seeking views on information requirements from the 2021 Census, and is **not** consulting on the formats in which the data will be available, or the ways in which the data will be accessed. Consultation on these issues and others will be carried out at appropriate times in the coming years. Details of consultations and other engagement activities to be undertaken for 2021 will be available on the Scotland's Census website in due course.



### 3. Topics under consideration for collection in Scotland's Census 2021

This section sets out the initial view of NRS on each of the topics currently under consideration for collection in Scotland's Census 2021. Each topic has been organised into a set of sub-topics and the initial view for that sub-topic is presented, using the classification system set out in the table below.

<b>Initial view</b>	<b>Definition</b>
Collect	Propose to include based on current understanding of user needs and quality considerations.
Further information required – existing topic/question <sup>2</sup>	Where further information is required for an existing census topic/question, based on quality considerations and/or to better understand user need for 2021.
Further information required – asked elsewhere in the UK in 2011	Where further information on user need is required for topics/questions not included in Scotland but asked elsewhere in the UK in 2011, to understand user need for 2021.
Further information required – not asked in 2011	Where further information on user need is required for topics/questions not included in any of the UK censuses in 2011, to understand user need for 2021.

Table 1 below provides a summary of NRS' initial views on the topics currently under consideration for collection in the Scotland's Census 2021.

**Table 1: Summary of topic recommendations**

<b>Topic</b>	<b>Collect</b>	<b>Further information required – existing topic/question</b>	<b>Further information required – asked elsewhere in the UK in 2011</b>	<b>Further information required – not asked in 2011</b>
<b>Housing and accommodation</b>	Accommodation type Self-contained accommodation Tenure and landlord (if renting)	Number of rooms Type of central heating Cars or vans	Number of bedrooms	

<sup>2</sup> All questions which were new for the 2011 questionnaire have a status of 'further information required' to ensure the correct information is being gathered.

<b>Basic demographics and household composition</b>	Sex Age Marital or same-sex civil partnership status	Student status Household and family relationships	Second address	
<b>Migration</b>	Country of birth Address one year ago	Date of arrival in the UK	Type of migration Citizenship	
<b>Travel to work or place of study</b>	Method of transport	Address of place of work Address of place of study		
<b>Ethnicity and national identity</b>	Ethnic group	National identity		
<b>Language</b>	Gaelic language	Scots language English language Other languages		
<b>Religion</b>	Religion			
<b>Health and care</b>	General health Long-term health problem or disability Unpaid care	Long-term health conditions		
<b>Educational attainment</b>	Qualifications held			
<b>Labour force and socio-economic classification*</b>	Economic activity Occupation Industry	Year last worked Supervisory status Hours worked	Voluntary and unpaid work	
<b>Sexual orientation</b>				Sexual orientation
<b>Income</b>				Income

\*NRS intends to collect the range of information needed to derive National Statistics Socio-economic Classification (NS-SeC).

You can access a copy of the 2011 household questionnaire via Scotland's Census website: [http://www.scotlandscensus.gov.uk/documents/Householdpre-addressed27\\_05\\_10specimen.pdf](http://www.scotlandscensus.gov.uk/documents/Householdpre-addressed27_05_10specimen.pdf).

## 3.1 Housing and accommodation

Sub-topic	Initial view	Collected in 2011?	Comment
Accommodation type Self-contained accommodation	Collect	Yes	Provides housing stock information; including the number of household spaces within dwellings.
Number of rooms	Further information required – existing topic/question	Yes	Provides information on housing stock. Information on number of rooms is required by Eurostat in lieu of floor-space. Further information is required to better understand user need for 2021.
Type of central heating	Further information required – existing topic/question	Yes	Collected for the first time in 2011. The previous question (whether the accommodation had central heating or not) was changed to collect information on type of central heating, offering users additional insight on deprivation and fuel poverty. Further information is required to better understand user need for 2021.
Tenure and landlord (if renting)	Collect	Yes	Provides housing stock information and details on tenure.
Cars or vans	Further information required – existing topic/question	Yes	Provides information to inform traffic planning and historically has been used to provide a proxy measure for deprivation/affluence. Further information is required to better understand user need for 2021.

Number of bedrooms	Further information required – asked elsewhere in the UK in 2011	No	Please see section 4.4 for commentary.
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Data from questions about **accommodation type** (collected since 2001), **self-containment** (collected since 1971) and **tenure** (collected since 1961) feed into the estimates of housing stock that are used for national and local government planning purposes. Key household outputs of the census are based on responses to these questions. An increasing need for detailed information on housing (to monitor the effects of the UK Government's Welfare Reform programme) was highlighted by users via the Beyond 2011 consultation in 2013. Due to the known requirements, NRS intend to collect information on accommodation type, self-containment and tenure in 2021.

Information about **number of rooms** has been collected in Scotland since 1861<sup>3</sup> and provides information about household overcrowding and under-occupation. The question however is complex, requires detailed guidance and the CQS showed that it was poorly answered in comparison to other household questions, with an agreement rate of 88.6 per cent. This was however a significant improvement on the 2001 figure of 77.5 per cent.

A question on availability of **central heating** was asked in Scotland in 1991 and 2001. In 2011 the question was expanded to collect information on type of heating, since the question asking whether central heating was available or not was considered largely redundant. Information on type of central heating allows additional insight on deprivation and fuel poverty. Policies in place to promote the use of renewable heating technologies may also mean that census information would be beneficial to understanding the impact of these on the mix of central heating types in the future. NRS require further information to better understand user need for 2021.

A question about the number of **cars or vans** available for use by households has been asked in Scotland since 1971. This information has historically been used to provide a proxy measure of affluence / deprivation. It also assists central and local government with transport planning, but census data about the methods of travel to work and residence to workplace flows are likely to be more useful for these purposes. Hence, NRS require further information to understand whether there is a continuing requirement to collect information about the number of cars or vans available for use by households in the 2021 Census.

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<sup>3</sup> Information on number of rooms with more than one window was collected in Scotland between 1861 and 1931. Number of rooms has been collected since 1951.

## 3.2 Basic demographics and household composition

Sub-topic	Initial view	Collected in 2011?	Comment
Sex	Collect	Yes	Essential demographic information.
Age	Collect	Yes	Essential demographic information. Age is derived from date of birth.
Marital or same-sex civil partnership status	Collect	Yes	Essential demographic information. Response categories to be reviewed in light of the Marriage and Civil Partnership (Scotland) Act 2014
Student status	Further information required – existing topic/question	Yes	Essential demographic information. Further information is required to better understand user needs and to ensure they are being met by the detail of the information being collected.
Household and family relationships	Further information required	Yes	Essential demographic information. Further information is required to better understand user need for data on household relationships. The question asked in 2011 did not work well and was difficult for respondents to answer.
Second address	Further information required – asked elsewhere in the UK in 2011	No	Please see section 4.3 for commentary.

Basic demographic information is essential for the majority of census outputs and is assumed to be a key requirement of census users. In this context basic demographic information is considered to be **age, sex, legal marital or same-sex civil partnership status, student status** and **household and family relationships**.

Consultation in 2013 as part of the NRS Beyond 2011 project confirmed the already well-established user need for population data by **age** and **sex** – particularly at lower geographic levels. It also confirmed a need for a range of age breakdowns in census outputs, for example outputs covering single years of age up to age 100. Population counts by single year of age and sex are also essential for the production of mid-year population estimates.

The 2011 Census collected information on legal **marital** and **same-sex civil partnerships**. We expect that there will be a user requirement for the 2021 Census to take account of the Marriage and Civil Partnership (Scotland) Act, which allows same-sex couples to marry – or to convert civil partnerships to marriage - in Scotland from December 2014. This being the case, the response categories required would be reviewed accordingly, to best meet this need.

Information on **student status** has been collected in the census since 1851<sup>4</sup>. In 2001 and 2011, information was collected to identify schoolchildren and students in full-time education. Information about whether they live at home, or at a different address during term-time has also been collected since 1991, to identify where they should be counted as 'usually living' for census purposes. Currently, the student questions asked in the census, along with those about economic activity, allow identification of full-time students who are part of the labour force (whether employed or unemployed), but not part-time students who are also employed.

Analysis of 2011 data suggests that some respondents were confused by the 'student status' question, evidenced by a sizeable undercount of schoolchildren identified by the census, as compared to the school census. NRS intend to review the information collected to ensure that the questions can be answered easily and accurately and better serve operational requirements. The review will also consider whether additional questions are necessary to achieve this; for example collecting information on level of education. Further information is required by NRS to better understand user needs for data relating to students.

The census provides detailed information on the social composition of **families** and **households** that is not available from any other source. The 'household relationship matrix' question was revised for 2011, to make it easier for respondents to understand how they should respond. Despite this, the question still proved problematic for people to answer, both on the paper and online questionnaires. The agreement rate for 'relationship to person 1' as measured by the Census Quality Survey (CQS), was 97.2 per cent and while agreement rates were not calculated for other relationships, the quality of the responses provided generally decreases as the number of people in the household increases. The survey also showed that the most common type of error made was for relationships to be recorded the wrong way round (for example, "mother or father" instead of "son or daughter").

Increasing or emerging requirements in relation to household and family structures were reported to NRS via the Beyond 2011 consultation, related to the increasing

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<sup>4</sup> No information on students was collected in 1931, 1961, 1971 or 1981.

complexity of household types and structures and policy requirements, such as the UK Government's Welfare Reform programme. To ensure that the best approach to collecting the correct information in 2021, NRS requires further information to better understand specific user needs for data on family and household relationships.

As well as information about people in households, the census also collects information about the population living in communal establishments, such as care homes and prisons. As in previous censuses, NRS does not intend to collect information about relationships between people living in communal establishments.

### 3.3 Migration

Sub-topic	Initial view	Collected in 2011?	Comment
Country of birth	Collect	Yes	Country of birth information is a key indicator of population change through migration.
Address one year ago	Collect	Yes	Address one year ago is used to identify internal and international migration.
Date of arrival in the UK	Further information required – existing topic/question	Yes	Information on date of arrival in the UK contributes to better understanding of patterns of international migration. Further information is required to better understand user need for 2021.
Type of migration	Further information required – asked elsewhere in UK in 2011	No	Please see section 4.5 for commentary.
Citizenship	Further information required – asked elsewhere in UK in 2011	No	Please see section 4.6 for commentary.

The 2011 Census allowed identification of international migrants via two questions - **country of birth**, and **usual address one year ago**. Most recent migration to the UK was also used to classify international migrants by their length of residence. Address one year ago was used to identify migration within the UK. Data derived from these migration questions was used extensively in analyses published by Scottish Government on characteristics of migrants; additionally migration data was used to inform mid-year estimates, population projections and estimates of migration. NRS intend to continue to collect information on country of birth and usual address one year ago in the census in 2021, to allow production of information on internal and international migration.

The 2011 Census included, for the first time, a question on most recent **date of arrival in the UK** (for those born outside the UK) in order to better understand patterns of international migration and characteristics of different groups of international migrants. This enabled the identification of individuals' migration history, alongside health, social and labour market questions to obtain a clearer view of different types of migrants and their socio-economic outcomes, down to low geographic levels. This in turn facilitated assessment of the social and economic outcomes of different migration cohorts over time. Since this was a new question in 2011, further information is required by NRS to understand user need for 2021.

### 3.4 Travel to work or place of study

Sub-topic	Initial view	Collected in 2011?	Comment
Address of place of work	Collect	Yes	Data on travel flows to places of work are widely used across central and local government for service provision and planning.
Address of place of study	Further information required – existing topic/question	Yes	Information on address of place of study provides useful additional information on travel flows. The combined question on work and study address does not work well and so further information is required to better understand user need for address of place of study in 2021.
Method of transport	Collect	Yes	This information is widely used across central and local government for planning and monitoring transport policy.

Information on **travel to place of work** has been collected in the census since 1971, with **travel to place of study** also being collected in Scotland from 2001, providing both addresses of work or study locations and method of transport used to get there. The travel flow data are widely used by central and local government, to inform development of transport planning policy and provision of public transport services, particularly where congestion is a problem.

These data are most often analysed with those on 'Home Address', to understand commuter flows, and the 'Origin – Destination' products, produced to facilitate this, are among the most requested and analysed census outputs.

The combined question on address of place of work or study introduced in 2001 has not worked well. It requires respondents who both work and study to make a choice between reporting the address of their work or course of study address, based on where they spend the most time. Consultation in 2006 and 2007 showed that whilst the majority of respondents supported continuing to gather information on both travel



to work and study, it was felt that two separate questions were required to do so. Some users however felt that asking about travel to work was sufficient for their needs and that asking about both work and study negatively affected the quality of the data gathered on work. In the Beyond 2011 consultation, emerging technologies such as global positioning systems (GPS) were acknowledged as being potentially useful for gathering information on travel activities, but only as an addition to data from census or other surveys.

Due to questionnaire space constraints and competing demands for information on other topics in 2011, it was not possible to consider accommodating two separate questions. NRS requires further information to fully understand user needs in this topic area; **specifically whether there is sufficient demand for travel to study data to consider asking two separate questions in 2021** (the need for travel to work data is well established).

### 3.5 Ethnicity and national identity

Sub-topic	Initial view	Collected in 2011?	Comment
Ethnic group	Collect	Yes	A key census variable, ethnic group is required for a wide range of uses by government, academia and the wider user community. It is also a key equalities measure.
National identity	Further information required – existing topic/question	Yes	Collected for the first time in 2011. National Identity provides complementary information to ethnic group, enabling a wider range of analyses to be undertaken, and allows respondents to record these different aspects of their identity more fully. Further information is required to understand user need for 2021.

**Ethnic group** has been collected in the census since 1991, and has become one of the most widely used output variables. These data are used for resource allocation by central and local government, to inform policy development and to help organisations meet and monitor their statutory obligations which stem from the Race Relations Act 1976, Race Relations (Amendment) Act 2000 and Equalities Act 2010. Collecting this information in the census is particularly important because many minority ethnic groups in Scotland are too small in number to be captured effectively by sample surveys. The census gives the only robust information on size of groups at small area level. In consultation prior to the 2011 Census ethnicity was a frequently requested topic, and the data collected were widely analysed and reported. NRS is confident that this will remain the case for the 2021 Census, and NRS' initial view is that the 2021 Census will continue to collect information on ethnic group.

The Scottish Government (SG) worked in partnership with the then General Register Office for Scotland (GROS) to conduct the comprehensive and wide-reaching review. The result was a revised official ethnicity classification for use in Scottish surveys and Scotland's 2011 Census. The details of the review and the new classification itself were published by the SG in July 2008:

<http://www.gov.scot/Publications/2008/07/29095058/0> <sup>5</sup>

Ethnicity is a complex concept, where people hold strong (and sometimes polarised) views. Peoples' concept of their ethnicity, and the way that they choose to express it, changes over the years. The new classification was designed to meet changing user requirements and use acceptable terminology, while retaining an element of comparability for 2011 statistics with those from the 2001 Census and statistics relating to the rest of the UK.

The review also identified benefits in developing a separate national identity question for use on the Census and relevant Scottish official statistics, to complement the question on ethnic group. Hence a question on **national identity** was also asked for the first time in 2011, in conjunction with the question on ethnic group, to provide respondents with the opportunity to say what they feel their national identity to be - whether 'Scottish', 'British' or any other national identity - before expressing their ethnicity. This allows people to more fully describe their identity, whilst also being able to distinguish between their ethnic origin or heritage and their present sense of national identity.

The data collected have been analysed both in conjunction with, and independently of, those for ethnic group. Since national identity was a new question in the 2011 Census, NRS require further information to understand user need for 2021.

### 3.6 Language

Sub-topic	Initial view	Collected in 2011?	Comment
Gaelic language	Collect	Yes	Information on proficiency in the Gaelic language is used to inform policy development and monitoring as well as in local service provision, in the context of legislative requirements.
Scots language	Further information required – existing topic/question	Yes	Collected for the first time in 2011. Research carried out prior to the census suggested that people vary considerably in their interpretation of what is meant by "Scots". These findings were reflected in the data that

<sup>5</sup> The classification was discussed by members of the Scottish Parliament during consideration of the 2011 Census in Scotland and was subsequently amended for use in the Census. Following further consultation and consideration, the Scottish Government revised the ethnicity classification for use in Scottish Official Statistics to be consistent with the recommended Census question.

			were collected. Data quality considerations mean that further information is required to clarify user need for 2021.
English language	Further information required – existing topic/question	Yes	Collected for the first time in 2011. A strong user need was identified for this data to inform service planning and resource allocation. Further information is required to understand user need for 2021.
Other languages	Further information required – existing topic/question	Yes	Collected for the first time in 2011. A strong user need was identified for data on other languages, to inform service planning and resource allocation. Further information is required to understand user need for 2021.

In consultation in 2007, there were more responses to the language consultation point than to any other topic, with the vast majority in favour of collecting information on other languages as well as Gaelic. Increasing migration in recent years has meant central and local government have highlighted increasing information requirements on language, to help understand needs and put appropriate support services in place.

Understanding the use of language has two aspects: skills and proficiency. Language skills are the abilities to understand spoken language, and to speak it, read it and write it. Proficiency relates to the level of these skills. Consultation revealed most interest in 'spoken' language but there was also support for a question based around 'proficiency or competency' in a language, as well as primary and additional languages used. As a result, a set of questions was developed and tested on the topic of language, to best meet this strong user need.

The census has gathered information on the **Gaelic language** since 1881. Data on the number of Gaelic speakers from the census is used widely across Scotland to monitor the health of the language and to underpin service planning and provision. Due to known user and legislative requirements, the initial view of NRS is that the 2021 Census will collect data on Gaelic language skills.

The 2011 Census was the first to collect information on the **Scots language**. Consultation in 2006 and 2007 identified user need for data on Scots, mostly in relation to the spoken version of the language. Opinion was polarised however, primarily because of the difficulties involved in defining the term. Research carried out prior to the census suggested that people vary considerably in their interpretation of what is meant by "Scots" and that it was therefore likely that the census statistics would reflect a very broad definition of the language. These findings were reflected in the data that was collected. The CQS showed that the 'Scots' part of the language matrix question (which asked about abilities in English, Gaelic and Scots) had one of the lowest agreement rates of all questions, at 88.5 per cent. Since 2011 was the

first census to collect information on the Scots language and given the concerns which exist around data quality, NRS require further information to understand user need for 2021.

The 2011 Census also collected information for the first time on the **English language**. A strong user requirement for this information was identified, particularly to identify those with little or no English language ability to assist in resource allocation and service planning. Since 2011 was the first census to collect information on the English language, NRS require further information to understand user need for 2021.

There were some apparent inconsistencies in the data collected in the 2011 Census for language, particularly in relation to Scots and English. For example, a significant number of respondents indicated they were fully skilled in Scots (that is, could understand, speak, read and write Scots) but had no corresponding skills in English - despite then going on to state that they spoke English “very well” or “well” in the following question. Collecting information on language skills does involve subjective assessment and so people may not report their skills in a consistent or comparable way, particularly when a variety of interpretations are, or can be applied to a language.

Information on **other languages** – specifically languages other than English used at home – was also collected in the census for the first time in 2011. A strong user need was identified for data on other languages, including British Sign Language, to inform service planning and resource allocation. NRS anticipate continuing strong demand for data on a range of languages. Since 2011 was the first census to collect information on other languages, NRS require further information to understand user need for 2021.

### 3.7 Religion

Sub-topic	Initial view	Collected in 2011?	Comment
Religion	Collect	Yes	Collecting information on religion is especially sensitive to the precise wording and format of the question. NRS has asked about ‘belonging to’ a religion, religious denomination or belief in both 2001 and 2011. Further information is required to better understand user need for 2021.

The census first included the **religion** topic in 2001. A late addition to the questionnaire, its inclusion was allowed on the condition that the question was voluntary, and in 2011 it remained so.

Most recently, the Beyond 2011 consultation in 2013 showed that many public bodies were using religion data along with other identity-related information to assist with monitoring discrimination, linked to the introduction of public sector duties arising from the Equality Act 2010. Other common uses included informing service provision for health, social care and education since these are all impacted by religious diversity.

It is common practice when measuring the religion of a population to distinguish the concepts of religious affiliation, belief or practice. In both 2001 and 2011, the question in Scotland's Census asked about sense of 'belonging to' a religion, religious denomination or belief. Since the question was asked for the first time in 2001, comparability with the 2011 Census data was important for users. However, consultation also identified a demand for alternative concepts.

Comparability with previous censuses is always important to users and any change that would affect comparability would have to meet a clearly identified and strong user need. Whilst NRS intends to continue to collect information on religion, further information is required to better understand user needs for 2021. NRS intends to continue to collect religion on a voluntary basis in the 2021 Census.

### 3.8 Health and care

Sub-topic	Initial view	Collected in 2011?	Comment
General health	Collect	Yes	This information is used for resource allocation, identifying health inequalities and policy development and assessment.
Long-term health problem or disability	Collect	Yes	This information is required for resource allocation, understanding health inequalities and policy development and assessment.
Long-term health conditions	Further information required – existing topic/question	Yes	Collected for the first time in 2011. A strong user need for this information was identified to further inform resource allocation, understanding health inequalities and policy development and assessment. Data quality considerations mean further information is required to better understand user need for 2021.
Unpaid care	Collect	Yes	Required for policy formulation, planning formal care needs and resource allocation.

A question on **general health** was first included in the 2001 Census. Despite being a self-assessment of one's general state of health, the data is a good predictor of future demands on health services; for example, uptake of GP services. Limitation in

performing normal day-to-day activities, or activity restriction, is an indicator of disability. A question on **long-term health problem or disability** was first included in the 1991 Census.

Information on self-assessed general health and long-term health problem or disability are needed to identify health and social care service needs and allocate health resources at local and national level. The data are widely used to develop, monitor and assess policies on population health and health inequalities. They also enable statutory obligations placed on public bodies, such as the public sector equality duty, to be met.

The availability of health data at small geographic area level is also important to users to enable targeting of services. Many users rely on census health data despite the existence of alternative sources of data. NRS intends to continue to collect information about general health, and information required about the extent of limitation of activities by long-term health conditions or illnesses in the 2021 Census will be reviewed in the light of the definition of disability introduced by the Equality Act (2010).

The 2011 Census also collected information for the first time on the nature of **long-term health conditions**, following very strong user demand for the data in consultation. Users were particularly keen to have this information collected in census because of the additional insight that would be afforded by cross-analysis with other census variables. However, the question caused considerable difficulty for respondents. The high number of write-in responses to the question (around 350,000) and subsequent back-coding, indicates that people had difficulty in deciding which response option they should select. The question also had the second lowest agreement rate of all questions in the CQS (78.7 per cent) and the highest non-response rate (15.2 per cent).

The detail of the information to be collected in 2021 for this topic will therefore be reviewed to ensure that it meets user needs in terms of outputs and quality. NRS require further information on user requirements for data on long term health conditions to ensure the correct approach to gathering the information in 2021; **specifically to consider whether a question based on an impairment-based model of health might provide a more useful framework for data collection.**

In the 2011 Census a person was defined as a provider of **unpaid care** if they looked after or gave any help or support to family members, friends, neighbours or others because of long-term physical or mental ill health or disability, or problems related to old age.

In consultation prior to 2011, respondents indicated many broad uses for the data, including policy formulation, planning formal care needs, and resource allocation. Carers are regarded as a vulnerable group, and a fast-growing one, particularly the population providing the greatest amount of care (50 or more hours in the 2011 Census).

NRS intends to continue to collect information regarding the provision of unpaid care, including the number of hours a week for which care is provided.

### 3.9 Educational attainment

Sub-topic	Initial view	Collected in 2011?	Comment
Qualifications held	Collect	Yes	There is a strong user need for this data to derive highest level of qualification. This is used for developing policy, service planning and resource allocation.

Information on qualifications has been gathered in the census since 1961. In 2011, data were collected on academic, vocational and professional **qualifications held**. Highest level of qualification is derived from this data. Uses of the highest level of qualifications data include government resource allocation and evidence-based policy making in relation to disadvantaged population groups; to help target employment and training schemes; and to improve the quality of the coding of occupation.

Due to the known user requirement, the initial view of NRS is that we will continue to collect data on academic, vocational and professional qualifications held in 2021.

The qualifications question was very poorly answered in 2001. Although revisions were made for 2011, testing showed that some respondents were still unsure how qualifications not listed fitted into the options given, were reluctant to guess the nearest equivalent, and forgot qualifications and grades. Despite a substantial improvement in the reported CQS gross agreement rate, from 60.6 per cent in 2001 to 77.8 per cent in 2011, the question clearly still causes difficulties for respondents. This is also reflected in a high (6.5 per cent) non-response rate. A proxy measure was derived in the CQS for highest level of qualifications, which showed an agreement rate of 88.8 per cent; still a relatively poor score. The detail of the information to be collected in 2021 for this topic will therefore be reviewed to ensure that it meets user needs in terms of outputs and quality.

The initial view of NRS is that information on qualifications will be collected in 2021, but specific user requirements need to be fully understood to ensure the correct information is gathered.

## 3.10 Labour force and socio-economic classification

Sub-topic	Initial view	Collected in 2011?	Comment
Economic activity	Collect	Yes	There is a user need for information about economic activity for central and local government resource allocation, planning and implementing policy, monitoring local economic performance, and analysing local labour supply.
Occupation	Collect	Yes	There is a user need for information about occupation for central and local government resource allocation, understanding local economic performance and analysing local labour markets.
National Statistics socio-economic classification (NS-SeC)	Collect	Yes	NS-SeC provides a measure of advantage. It is an important tool for exploring inequalities. It is also used to assess local labour markets and the mix of skills.
Industry	Collect	Yes	There is a user need for industry information to understand local economic performance, local labour force, land use and planning needs. It is also used operationally to improve the coding of occupation.
Year last worked	Further information required – existing topic/question	Yes	Primarily used operationally to improve the coding of NS-SeC. Further information is required to better understand user need for 2021.
Supervisory status	Further information required – existing topic/question	Yes	Primarily used operationally to improve the coding of NS-SeC. Further information is required to better understand user need for 2021.
Hours worked	Further information required – existing topic/question	Yes	Primarily used operationally to improve the coding of NS-SeC. Also useful for labour force analysis. Further information is required to better understand user need for 2021.
Voluntary and unpaid work	Further information required – asked	No	Please see section 4.7 for commentary.



	elsewhere in the UK in 2011		
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Labour force information is used in a variety of census outputs, showing how different sections of the population participate in various forms of work. The 2011 Census collected information about economic activity, occupation, industry, year last worked and supervisory status. This information was also used to derive NS-SeC. Information about **economic activity** and **occupation** is used for:

- central and local government resource allocation
- planning and implementing policy
- monitoring local economic performance
- analysing local labour markets
- land use and planning needs

NRS intends to collect information about occupation and economic activity in Scotland's Census 2021.

**National Statistics Socio-economic Classification (NS-SeC)** provides an indication of socio-economic position based on occupation and is used for understanding inequalities, particularly in relation to health. Data from questions on **industry, year last worked, supervisory status and hours worked** are primarily used in the classification and coding of occupation and NS-SeC. Previous consultation has shown strong support for retaining the questions on industry and hours worked, with users concerned about any drop in the quality of coding for NS-SeC and occupation, particularly if industry were excluded. Industry is also used to analyse local economic performance, local labour markets and land use and planning requirements. Information on hours worked was thought useful for labour force monitoring and understanding changing working patterns.

The initial view of NRS is that information on industry will be collected in 2021. The user need for supervisory status, hours worked and year last worked data requires clarification, hence NRS require further information to better understand requirements for 2021.

## 4. Other topics under consideration for collection in the 2021 Census

### 4.1 Sexual orientation

Topic	Initial view	Collected in 2011?	Comment
Sexual orientation	Further information required – not asked in 2011	No	It is important that information is collected on sexual orientation. NRS needs to consider whether the Census is the most appropriate survey to do so, because of concerns about privacy, acceptability, accuracy and the effect on overall response rate. NRS require further information to understand user need for 2021.

Discrimination on the basis of someone's sexual orientation is unlawful as prescribed by the Equality Act 2010. The legislation covers areas including education, employment, the provision of goods and services to the public and the exercise of public functions. The Act also introduced a new public sector equality duty which came into force on 5 April 2011. The duty requires Government and public authorities to tackle discrimination and promote equal opportunities. The duty covers nine protected characteristics<sup>6</sup>, including sexual orientation. Consultation with users for the 2011 Census indicated strong user need for information on sexual orientation, in order to provide a benchmark against which equality monitoring policies could be better assessed.

A question was not included in the 2011 Census because of concerns around individual privacy and the public acceptability of including a question in a compulsory household survey and the quality of the resulting data. In a small-scale postal survey carried in 2005, which included a question on sexual orientation, one in seven of the 31 per cent of households that responded did not provide useful data – either because they chose the “prefer not to answer” option or because they did not complete the question at all. This far outweighed the percentage of respondents who declared a non-heterosexual orientation.

In 2006 the Office for National Statistics (ONS) initiated a project to develop and test a question to collect information on sexual orientation for use on social surveys, as a direct response to user needs for data on sexual orientation captured during topic consultation for the 2011 Census. All the work conducted by the ONS relating to this project, including question development, testing and guidance on using the question, can be found at <http://www.ons.gov.uk/about-statistics/measuring-equality/sexual-identity-project/index.html>.<sup>7</sup>

<sup>6</sup> The protected characteristics are age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex and sexual orientation.

<sup>7</sup> The Scottish Government recommends using the title self-identified sexual orientation when using the question and when reporting the results. This is to avoid confusion with the term gender identity which is widely used in Scotland to describe how a person defines their gender.

The development of questions for use in surveys and the well-established user need for information on sexual orientation has led to the Scottish Government including a question in the three major Scottish surveys – the Scottish Household Survey, the Scottish Health Survey and the Scottish Crime and Justice Survey. These surveys are interviewer-led.

It is important that the Scottish statistical system collects information on sexual orientation. NRS needs to consider whether the census is the most appropriate survey for doing so; there are concerns regarding privacy, acceptability, accuracy and the effect on overall response rate that need to be considered. NRS however anticipate a continuing strong user demand for this data, and so to assist in determining the best approach and to provide information which may shape a testing programme, further information is required to understand user need for 2021.

#### 4.2 Income

Topic	Initial view	Collected in 2011?	Comment
Income	Further information required – not asked in 2011	No	A household income question was recommended for inclusion in the 2011 Census, but was removed by the Scottish Parliament to ensure that all questions to be asked were acceptable to the public. NRS needs to fully understand information requirements on income for 2021.

The strength of user need identified via consultation for a question on income, balanced against the pressure on space for individual questions, led to the decision to test and subsequently recommend a question on household income for the 2011 Census questionnaire in Scotland. In 2010, following concerns about personal privacy, the Scottish Parliament advised that the question should be removed to ensure that all the questions to be asked were acceptable to the public.

Respondents to previous consultations have cited many potential uses of income data and NRS expect a continuing strong user demand for information on income in 2021. To assist in determining the best approach to providing this information, further information is required by NRS to fully understand user need for 2021..

#### 4.3 Basic demographics and household composition - Second address

Sub-topic	Initial view	Collected in 2011?	Comment
Second address	Further information required – asked elsewhere in the UK in 2011	No	Two questions on second address were asked by ONS for England & Wales in 2011. Further information is required to understand user need for 2021.

In an increasingly mobile age, more people have two or more homes and/or spend time between two or more addresses. The Beyond 2011 Consultation in 2013 indicated that it would be useful for housing and transport planning to know more about these **second addresses** and their effect on the population of local areas. This kind of information would also serve census operational requirements, to ensure that over or under enumeration is avoided (people who stay away from home for work, for example).

Two questions on second addresses were included on the England & Wales questionnaire in 2011. Due to competing demands on space and higher user demand for information on other new topics (long term health conditions and language, notably) the questions were not included in Scotland. Gathering information on other addresses where people spend time away from home would potentially improve the accuracy of the population estimates by identifying duplicate returns received from different locations and to inform coverage adjustment calculations. It could also improve the accuracy of outputs produced under different residence definitions; for example to provide a population base for estimates of the weekday population. The accuracy of travel to work and study data could also be improved. In combination with other census variables, second address data could allow better understanding of commuting patterns and journeys made to work or study and could potentially improve understanding of the increasingly complex living patterns of the Scottish population.

The initial view of NRS is that information on second addresses would be useful for operational purposes. Further information is required to understand user need for this information in 2021.

#### 4.4 Housing and accommodation – number of bedrooms

Sub-topic	Initial view	Collected in 2011?	Comment
Number of bedrooms	Further information required – asked elsewhere in the UK in 2011	No	Not asked in Scotland in 2011. Counts of bedrooms provides information on overcrowding and under-occupation via the occupancy rating. Further information is required to understand whether there is user need for this information in 2021.

A question about the **number of bedrooms** was asked for the first time in the rest of the UK in 2011, but not in Scotland, due to higher user demand for other household questions and some concerns around definitional complexities. Information published by ONS indicates that the question about the number of bedrooms was answered well in 2011 and could provide information about household overcrowding and under-occupation that is perceived to be more useful than the equivalent using the number of rooms. Information about overcrowding and under-occupancy are used for policy purposes such as the allocation of affordable housing by local authorities. To ensure the most useful information is collected, NRS requires further information to understand user requirement for information on number of bedrooms for 2021.

#### 4.5 Migration – type of migration

Sub-topic	Initial view	Collected in 2011?	Comment
Type of migration	Further information required – asked elsewhere in the UK in 2011	No	People who arrived in the UK in the year before 27 March 2011 were asked a question about their intended length of stay in the UK, in the 2011 census in England & Wales and Northern Ireland. Further information is required to understand user need for 2021.

A question on intended length of stay in the UK was included in the 2011 Census in England & Wales and Northern Ireland. Asking such a question would potentially allow NRS to differentiate **type of migration** (short or long term) and produce estimates of short-term migrants, as well as helping to define the 12-month usual residence output base. However, the question can be difficult for people to answer and this was reflected in the high non-response rate (14.5 per cent) as reported by ONS. User requirement for this information in Scotland for 2011 was limited, with

support for collecting short-term migration statistics via other methods that would afford more timely updates, given the nature of short-term migration. There are also potentially other pieces of information, such as refugee/asylum status and reason for migration, that may be of interest to users.

NRS anticipates a strong user demand for a range of migration-related data in the future. Further information is therefore required by NRS, to establish user needs on this topic and to assist in determining the best approach to providing the information required.

#### 4.6 Migration – Citizenship

Sub-topic	Initial view	Collected in 2011?	Comment
Citizenship	Further information required – asked elsewhere in the UK in 2011	No	A question on passports held was asked in England & Wales and Northern Ireland in 2011. Further information is required to understand user need for 2021.

Internationally, **citizenship**/nationality is a key dimension when considering both the stock and flow of migrants. It is a core topic in the European Union regulations for the provision of information to Eurostat, which requires information on the citizenship of all usual residents. The 2011 Census in England and Wales included, for the first time, a question on passports held (as a proxy question for citizenship that respondents could understand). The question was not included in Scotland, due primarily to lack of strong user requirement for the information and higher demand for other questions.

NRS anticipates a strong user demand for a range of migration-related data in the future. Further information is therefore required by NRS, to establish user needs on this topic and to assist in determining the best approach to providing the information required.

#### 4.7 Labour force and socio-economic classification - Voluntary and unpaid work

Sub-topic	Initial view	Collected in 2011?	Comment
Voluntary and unpaid work	Further information required – asked elsewhere in UK in 2011	No	Changes to the ILO guidelines on participation in the labour force place more emphasis on volunteering and unpaid work. Further information is required to understand user need for 2021.

Since 2011, the International Labour Organisation (ILO) has introduced new concepts about economic activity, which include placing more emphasis on whether or not people are paid for the work they do.

A question on voluntary work without pay was asked in 2011 Census in Northern Ireland. Insufficient space on the questionnaire however meant that it was not possible to collect details such as the type of voluntary work undertaken or the length of time spent volunteering. Although limited user support for gathering information on voluntary work in the census has previously been identified in Scotland, alternative sources, such as the Scottish Household Survey, may offer greater scope to explore the topic to the level of detail required.

In this context, NRS requires further information to understand user requirements for information about **voluntary and unpaid work** for 2021.

## 5. Evaluation criteria

The evaluation criteria to be used for Scotland's Census 2021 topic consultation are broadly the same as those used for 2011. However, some changes have been made in order to make the evaluation criteria more robust and transparent and to take into account the move to a primarily online census.

The criteria relating to user requirements remain the key criteria for evaluation. Operational requirements strengthen the case for inclusion of topics, especially if a topic is thought to improve coverage.

The considerations criteria will predominantly be used in conjunction with the strength of user requirements score to steer the development of the Census questionnaire. However, issues identified using the considerations criteria may mean a topic is not included in Scotland's Census 2021 despite a known user or operational need (for instance if we cannot develop a question that respondents can accurately answer).

<b>User requirements</b>	<b>Considerations</b>	<b>Operational requirements</b>
<ul style="list-style-type: none"> <li>✓ Strength of user need</li> <li>✓ Need for information for small geographies or populations</li> <li>✓ Suitability of alternative sources</li> <li>✓ Need for multivariate analysis</li> <li>✓ Need for UK comparability</li> <li>✓ Need for continuity with previous Censuses</li> </ul>	<ul style="list-style-type: none"> <li>✓ Data quality</li> <li>✓ Public acceptability</li> <li>✓ Respondent burden</li> <li>✓ Financial concerns</li> <li>✓ Questionnaire design</li> </ul>	<ul style="list-style-type: none"> <li>✓ Improving coverage</li> <li>✓ Coding of derived variables</li> </ul>

### 5.1 User requirements

Topics must carry a strong and clearly defined user need. A robust case must be made, or exist, for topics to be included in the 2021 Census. Responses from users on the importance of the information to them will help inform the final list of topics to be included in the Scotland's Census 2021.



Criteria	Description
Strength of user need	<p>Strength of user need, identified primarily by the purpose it serves, is central to the evaluation process. User need could be justified in terms of, for example: significant resource allocation, improved service provision, major policy development or policy monitoring.</p> <p>Additionally, requirements arising from national or international legislation strengthen the case for inclusion. For example, requirements of the UN, UN Economic Commission for Europe and Eurostat will be taken into account.</p>
Need for information for small geographies or populations	<p>There must be a need for information for small population groups and/or at detailed geographical levels. Information that is only required for broad geographic areas or large population groups might be better obtained from other statistical sources.</p> <p>All small geography data must easily be aggregated to higher levels of geography, enabling outputs to be consistent and comparable regionally and nationally.</p>
Suitability of alternative sources	<p>The 2021 Census will only seek to collect information that there is no other sufficient means of obtaining. Consideration should be given to whether or not suitable information is available from other sources; for example administrative records or sample surveys.</p> <p>In addition, the Census should only collect information that will remain relevant for a significant time after collection due to the time lag between census night and the publication of results.</p>
Need for multivariate analysis	<p>A key benefit of census data is the ability to analyse particular variables in conjunction with one or more others. A requirement to undertake multivariate analysis will affect whether suitable alternative sources for the information exist and can strengthen the case for inclusion in the Census.</p>
Need for UK comparability	<p>A requirement to obtain comparable data for a topic or sub-topic at a UK level is considered. Where possible, if there is a user need, the three UK Census Offices will release Census outputs that are consistent across the UK.</p>
Need for continuity with previous Censuses	<p>Comparison with previous censuses is an important aspect of census analysis and, wherever appropriate, the 2021 Census questionnaire will collect the same information as the 2011 Census questionnaire.</p> <p>However, other aspects of user needs may override the need for comparability.</p>

## 5.2 Considerations

The census is a compulsory survey carried out on a self-enumeration basis; each respondent is required to complete all relevant questions on the questionnaire. The following considerations are therefore important.

Criteria	Description
Data quality	The data collected in the 2021 Census should be expected to be of sufficient quality for outputs to be robust and useful. Hence information should not be collected that is not reliable or replicable, or causes difficulty for people to answer accurately.
Public acceptability	The census needs to carefully consider whether sensitive or potentially intrusive questions should be asked that may have a negative impact on response rate, or lead to respondents giving socially acceptable rather than accurate answers. It should also not enquire about opinions or attitudes.
Respondent burden	The inclusion of questions on a topic should not impose an excessive burden on respondents. Burden could, for example, result from lengthy instruction or explanation, large numbers of response categories, or large numbers of questions on a single topic.
Financial concerns	The cost of including a topic or question that presents major difficulties for coding the information, or requires extensive processing, must be considered carefully. The collection of information on a topic and/or question should not significantly add to the overall cost of the Census.
Questionnaire design	The move to a predominantly online data collection creates new opportunities as well as challenges. These will be taken into account when considering which topics to include in the 2021 Census. Although the primary mode of data collection will be online there will also be a paper questionnaire, therefore space and design considerations on the paper questionnaire and comparability between the two modes will also be considered.

## 5.3 Operational requirements

A number of operational factors could also affect the content of the 2021 Census. The most important of these is improving coverage of the population, as the primary aim of the census is to provide a robust count of the population of Scotland.

<b>Criteria</b>	<b>Description</b>
Improving coverage	The 2021 Census questionnaire may include some questions that aid respondents in identifying who should be included in the response; for example questions on visitors and defining the types of usual resident that live in the household. Such questions may be included despite a lack of strong user need for outputs related to these questions, as they are key to delivering high quality outputs.
Coding of derived variables	It is expected that some key outputs will be based on derived variables (for example age derived from date of birth). Variables may be included in the 2021 Census questionnaire if a user need is identified for data that is derived from a variable, even if there is no user need for outputs relating directly to the question.

## Annex 1: Census Data Quality

Two aspects of the quality of the 2011 Census data are considered in detail in this section - item non-response rates and Census Quality Survey (CQS) gross agreement rates. Both item non-response and agreement rates are used to understand the quality of the information collected from each of the census questions. Levels of completeness are measured through item non-response rates and respondent error is assessed through the CQS. Using these measures to evaluate the data helps further develop the census questions to improve the quality of data collected in the future.

Completeness is an indirect assessment of how well the self-completion census questionnaire was designed. High levels of completeness indicate that the methods and effort put into qualitative and quantitative testing of individual groups of questions and then the whole questionnaire were successful and had a positive impact on maximising completeness and the accuracy of responses.

Completeness was assessed by measuring how many responses to each census question were missing as a proportion of all of the people who should have responded to that question (but not including persons and whole households that were missed).

Item non-response includes all responses that were missing or not valid, including multi-ticks, out-of-range values and partially answered responses. Item imputation was applied to estimate for a missing value when there was item non-response or where there were inconsistency errors. The latter were correctly recorded values which were considered invalid because they were inconsistent either with other values on the questionnaire, or with auxiliary information or definitions. Inconsistency errors were detected by validating the data against a set of pre-defined edit rules.

Item non-response rates for the main census questions are shown in Table A1. Item non-response rates for the household questions ranged from 1.2 per cent for number of cars and vans to 3.5 per cent for relationship to person one. All household questions had item non-response rates lower than in 2001.<sup>8</sup>

For individual questions shown in Table A2, the item non-response rate showed wider variation ranging from only 0.7 per cent for age, to 16.9 per cent for the year last worked. Other notably high item non-response rates were 15.2 per cent for the new question on long term health conditions, and high rates for workplace/study address indicator (8.6 per cent) and industry (8.5 per cent), although this is much lower for people who are currently working.

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<sup>8</sup> It is worth noting that there are some differences in the way non-response rates were calculated between the two censuses. The 2001 results were measured after the application of some hard edits which means that for some questions they will underestimate the level of non-response. There were considerably fewer hard edits applied in 2011 than in 2001. In most cases the non-response rates for 2011 are lower than the corresponding published figures for 2001 which suggests that the level of missing or invalid data was lower in 2011.

The Census Quality Survey is a small-scale voluntary survey undertaken shortly after the census. It aims to measure the accuracy of answers given to census questions by asking a sample of household the census questions again in a face-to-face interview. By comparing the responses given in the CQS to those given in the census, agreement rates are calculated which provide an indication of how accurately the 2011 Census questionnaire had been completed by the general public. The CQS interview responses are considered to be more accurate as research suggests that answers given to questions in face-to-face interviews tend to result in more accurate answers (for non-sensitive questions) than those given on a self-completion questionnaire.

A clustered sample was selected in three census regions (Glasgow East, Fife and Scottish Borders); each area chosen to represent one of the main area types in Scotland. A sample of 520 households was selected in each area, representative of both paper and internet response modes. Household included in the Census Coverage Survey were excluded and only household with five or fewer residents were selected. The design and methodology used were tailored to ensure a smooth integration with the overall Census operation in Scotland. In total, 1,760 individuals were interviewed in 787 households; a household response rate of 50 per cent. This was much lower than the target rate of 60 per cent for the survey and the rate achieved in the previous census<sup>9</sup>.

Gross agreement rates for the main census questions are shown alongside the item non-response rates in Tables A1 and A2. The gross agreement rates for the household questions were all above 95 per cent, with the exception of the number of rooms question, which had a relatively poor rate of 86.6 per cent. The lowest gross agreement rates for the individual questions were seen in qualifications (77.8 per cent), long term health conditions (78.7 per cent) and hours worked (84 per cent). Questions on date of arrival in the UK (84.2 per cent) and language skills (84.6 per cent) also showed relatively poor agreement rates.

As part of the quality reporting on Census 2011, further analysis of imputation rates will be published later this year. This analysis will be used to inform aspects of the design of the Census 2021 questionnaire, and will summarise the processes of identifying the response category for both missing and inconsistent variables.

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<sup>9</sup> For the 2001 Census, the CQS was run after the 1999 Rehearsal, concentrated on questions specific to Scotland and was based on a slightly different set of questions from those asked in 2001. Consequently, the results in 2001 were very limited in Scotland and not entirely consistent with the final outputs.

**Table A1: 2011 Item non-response rates and CQS Agreement Rates – Household questions**

Question Number	Question	Item non-response rate (%)	CQS Agreement Rate (%)
H6	<a href="#">Accommodation type</a>	1.7	95.8
H7	Self-Contained accommodation	1.3	99.7
H8	<a href="#">Number of Rooms</a>	2.2	86.6
H9	<a href="#">Central heating (type of)</a>	1.6	94.8
H10	<a href="#">Tenure</a>	1.5	97.0
H11	Landlord	1.8	95.1
H12	<a href="#">Car or van availability (number of)</a>	1.2	97.1
H13	Relationship to person one	3.5	97.2

**Table A2: 2011 Item non-response rates and CQS Agreement Rates – Individual questions**

Question Number	Question	Item non-response rate (%)	CQS Agreement Rate (%)
2	<a href="#">Sex</a>	0.8	99.9
3	<a href="#">Age</a>	0.7	98.1
4	<a href="#">Marital and Civil Partnership status</a>	2.3	98.5
5	<a href="#">Schoolchild or full-time student indicator</a>	5.5	98.8
6	<a href="#">Term-time address indicator</a>	2.2	99.6
7	<a href="#">Country of Birth</a>	2.0	99.8
8	Arrival in the UK (year or month)	5.1	84.2
9	<a href="#">Provision of unpaid care</a>	2.9	96.8
10	Address one year ago (indicator)	3.5	99.0
10	Address one year ago (postcode)	3.5	-
11	Workplace/study address (indicator)	8.6	89.9
11	Workplace/study address (postcode)	8.5	-
12	<a href="#">Method of travel to work/study</a>	2.2	97.1
13	<a href="#">Religion</a>	7.0	93.8
14	<a href="#">National Identity – tick box</a>	1.6	85.9
15	<a href="#">Ethnic Group – tick box</a>	2.1	96.8
16	Language skills	1.9	84.6
	- <a href="#">English</a>		95.0
	- <a href="#">Gaelic</a>		99.5
	- <a href="#">Scots</a>		88.5
17	<a href="#">Proficiency in spoken English</a>	2.7	96.8

18	<a href="#">Language other than English used at home</a>	3.9	98.3
19	<a href="#">General health</a>	2.3	92.4
20	<a href="#">Long-term health condition</a>	15.2	78.7
21	<a href="#">Long-term health problem or disability</a>	3.7	95.7
23	<a href="#">Qualifications</a>	6.5	77.8
24	<a href="#">Activity last week</a>	5.6	95.7
29	<a href="#">Ever worked</a>	4.8	98.8
29	Last year worked	16.8	90.2
31	<a href="#">Employee status</a>	4.1	97.6
32	<a href="#">Occupation</a> (currently working)	4.6 (2.4)	95.8
34	Supervisor status	3.9	94.0
35	<a href="#">Hours worked</a>	4.9	84.0
36	<a href="#">Industry</a> (currently working)	8.5 (4.8)	93.9

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