

Data Protection Impact Assessment (DPIA)
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Administrative data for Census Estimation
Version 1.0

September 2022

Document Control

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This document is owned by

Role	Team / Branch	Directorate
Head of admin data	Administrative data	Scotland's Census

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Document Reviewers

The document is required to be reviewed by:

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Head of Information Governance
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Distribution List

This document has been distributed to:

Role
Health and Social Care Public Benefit and Privacy Panel

Part 1: Data protection impact assessment screening questions

These questions are intended to help you decide whether a DPIA is necessary. Answering 'yes' to any of these questions is an indication that a DPIA would be a useful exercise. You can expand on your answers as the project develops if you need to. You can adapt these questions to align more closely to the project you are assessing.

1. Please provide a summary / outline of the proposed project or initiative

National Records of Scotland (NRS) is responsible for Scotland's Census. It happens every decade, providing information on all people and households in Scotland.

The census is of national strategic importance, being fundamental to resource allocation between UK countries, and across Scotland. Government, councils, the NHS, and public, private and third-sector users rely on census outputs. Accurate census outputs support the planning of many vital public services across Scotland, aiming to improve the lives of Scotland's people.

International best practice complements census collection with "post-collection work". This includes the census coverage survey (CCS) and other statistical methodological and assurance work, which ensures high-quality census outputs.

Scotland's Census 2022 faced unexpected challenges, leading to a lower-than-expected return rate. **The scale of this means it is essential to consider new methods including using administrative sources to count those missed by the census field collection.**

NRS propose:

1. using administrative data alongside census and CCS records when calculating the high-level population estimates, improving their accuracy and ensuring they are representative of all groups of society
2. using demographic information from administrative data to guide the imputation of records to the census dataset to represent the non-responding population, improving the accuracy of lower community-level census estimates.

The proposal is vital to NRS' quest to provide accurate basic information on population size, age, sex and location. It draws on international best practice, for example in New Zealand¹ on using administrative data in a trustworthy way to enhance the public benefit of the Census.

2. Will the project involve the collection of new information about individuals?

No.

¹ [Using Integrated Administrative Data to Support A Field Enumeration Census: The Case of The New Zealand 2018 Census | International Journal of Population Data Science \(ijpds.org\)](https://www.ijpds.org/)

3. Will the project compel individuals to provide information about themselves?

No.

4. Will information about individuals be disclosed to organisations or people who have not previously had routine access to the information?

Information about individuals will not be disclosed.

5. Are you using information about individuals for a purpose it is not currently used for, or in a way it is not currently used?

Yes, information from administrative sources will be used to support the estimation of Scotland's population.

6. Does the project involve matching data or combing datasets from different sources?

Yes, we propose to link a number of administrative datasets to each other, to the Census and to the Census Coverage Survey.

7. Does the project involve you using new technology that might be perceived as being privacy intrusive?

No this project will use standard statistical software such as excel or SAS.

8. Will the project result in you making decisions or taking action against individuals in ways that can have a significant impact on them? Will you profile individuals on a large scale?

This project will not have a direct effect on any individual. This project is not part of census non-compliance follow up.

9. Will you profile children or target marketing or online services at them?

No.

10. Is the information about individuals of a kind particularly likely to raise privacy concerns or expectations? For example, special category data such as health records or criminal records, or other information that people would consider to be private.

Yes special category data is included.

11. Will the project require you to contact individuals in ways that they may find intrusive?

No contact will be made with individuals on the basis of this project.

12. Is the project collecting personal data from a source other than the individual without providing them with a privacy notice ('invisible processing')

No. NRS has published information on its plans to use administrative data both on the Scotland's Census [website](#) and in the main [Census Data Protection Impact Assessment](#). Privacy information was provided to respondents when census information was collected.

13. Is the project tracking individuals' location or behaviour?

No. The administrative data records will include the permanent address of the individual they relate to. Locations will not be tracked over time.

NRS maintains a record of answers to the screening questions in order to document that the decision on whether to carry out a DPIA was properly considered. If after completing the screening questions you decided a DPIA is not necessary you must send a record your answers to the [NRS Data Protection mailbox](#). The NRS Information Governance Team will review answers, and where appropriate ask the NRS Privacy Group for their opinion.

Decision of Information Governance Team

DPIA Required: Yes	
Reason for decision: The project involves the linking of a range of administrative datasets and comparison of the linked dataset with census data. A full DPIA is required to determine the necessity and proportionality of the proposed processing and to assess the privacy risks and identify measures to reduce them.	
Name: Head of Information Governance	Date: 01/08/2022

Part 2: Data protection impact assessment report

Step 1: Describe the project and identify the need for a DPIA

Explain what the project aims to achieve, what the benefits will be to NRS, to individuals and to other parties. You may find it helpful to link to other relevant documents related to the project, for example a project proposal or business case.

It is important to include information about the benefits to be gained from the project in order to help balance any risk identified in the DPIA. This can help inform decisions on the level of risk to privacy that is acceptable, when balanced against the benefits or other justification for the project. Is there a benefit to the public? If a statutory duty exists provide details of this. Also summarise why the need for a DPIA was identified (this can draw on your answers to the screening questions) and identify the legal basis for processing.

Aim

The aim of this project is to use administrative data to ensure the population estimates from Scotland's Census are as accurate and high quality as possible at a national and local level. The objectives are:

- **To use administrative data to support estimation** – the statistical process of identifying who is missing from our original census returns. This allows us to estimate the overall size of the Scottish population.
- **To use administrative data to support adjustment** – the statistical process of imputing skeleton records where data is missing. This allows our population estimates to be accurate to lower levels.
- **To harness administrative data** that include many people who are typically missed from census collection. We can use these data to assure ourselves of the quality of the final census outputs.

The data will only be used for statistical purposes – for example, it will not be used to contact people who have not filled in census returns.

Producing accurate estimates of Scotland's population will feed into the wider benefits that census provides. This includes providing UK Government, Scottish Government, local governments, health boards, and other service providers with the information they need to make decisions.

Benefits

The objective of this proposal is to use administrative data as part of our statistical processes to estimate the Scottish population at a national and

local level. This will mean the outputs from Scotland's Census 2022 will be of the highest possible quality and accuracy.

- Accurate population estimates from the census are of national strategic importance. They are used in a number of ways - to allocate resources, plan policies, deliver services and conduct research by national and international organisations. Some examples of use are set out in this section. **Because of the integral use of census data in society, this project has a direct benefit to all people across the United Kingdom.**
- Census population estimates are used to allocate funding across the United Kingdom, through the Barnett formula. If population estimates are inaccurate, Scotland's funding could be inaccurate over the long term. For every 16,000 people by which the census underestimates the Scotland population (0.3%), the Scottish Government could lose around £1 billion from the block grant over the next decade.
- The Scottish Government in turn uses census data to allocate funding to local authorities, health boards and other public services. For funding to be allocated correctly, is essential that population estimates are as accurate as possible.
- The method proposed will allow us to produce accurate outputs within the time periods census users need

Step 2: Describe the processing

Describe the nature of the processing: how will you collect, use, store and delete data? What is the source of the data? Will you be sharing data with anyone? You might find it useful to refer to a flow diagram or other way of describing data flows. What types of processing identified as likely high risk are involved?

How will the information be collected?

The project involves using data gathered by administrative systems of the data provider. No new data will be collected as part of this project. Data providers send their data through a secure transfer system as agreed in the data sharing agreements. Data will be encrypted in transfer with a password provided through a separate mechanism. Data will be transferred to the Head of Administrative Data only. The datasets used in this project are given in the table below.

Dataset	Provider
National Health Service Central Register (NHSCR)	National Records of Scotland
Health Activity (Primary Care)	Public Health Scotland
Health Activity (Secondary Care)	Public Health Scotland
Higher Education Student Data (Scotland)	Higher Education Statistics Agency

School Pupil Census	Scottish Government
Birth Registrations (Child)	National Records of Scotland
Birth Registrations (Mother)	National Records of Scotland
Birth Registrations (Father)	National Records of Scotland
Marriage Registrations	National Records of Scotland
Civil Partnership Registrations	National Records of Scotland
Death Registrations (Deceased)	National Records of Scotland
Death Registrations (Informant)	National Records of Scotland
Electoral Register (separate datasets from each of the electoral registration officers)	Individual Valuation Joint Boards

How will the information be used?

The administrative datasets will be transferred into the secure admin data processing area, to be quality assured and standardised by a member of the admin data team. This team member can only access one dataset at a time. Quality assured and standardised data is then transferred to the National Safe Haven.

We will link a range of administrative datasets together, to create a population spine. This linking will be carried out in the National Safe Haven, with access restricted to named members of the admin data team. This linking will be done 'in the clear' (i.e. on personal information such as name, age and sex), so that we can reduce linking error, and increase confidence in the quality and strength of the links.

We will then link this population spine to Scotland's Census 2022, and Census Coverage Survey (CCS) data, allowing us to identify individuals living in Scotland, who do not appear on the census. We then output a cut of these records from the Safe Haven, to our secure census processing environment. Only variables essential for estimation and adjustment processes will be transferred from the Safe Haven back into NRS IT systems (age, sex, address, Census ID, CCS ID, strength of links, ethnicity, full-time student flag, and the strength of evidence for the individual being in the population). Names are needed for effective linking in the Safe Haven, but they are not needed for the following stages so we don't propose to bring names out of the Safe Haven.

Estimation

Estimation is the process of calculating the total size of the Scottish population, including those who were missed by census collection.

NRS propose to enhance their standard estimation procedure by including administrative records in the calculations, either as part of the census or CCS datasets, in place of people who did not respond. We will then use statistical models to calculate who might be missing. Once population estimates have been created, the administrative data would be removed from the census and CCS datasets.

This would provide two substantial benefits to the estimation calculation. Firstly, there is a smaller unknown population to be estimated, so the total population

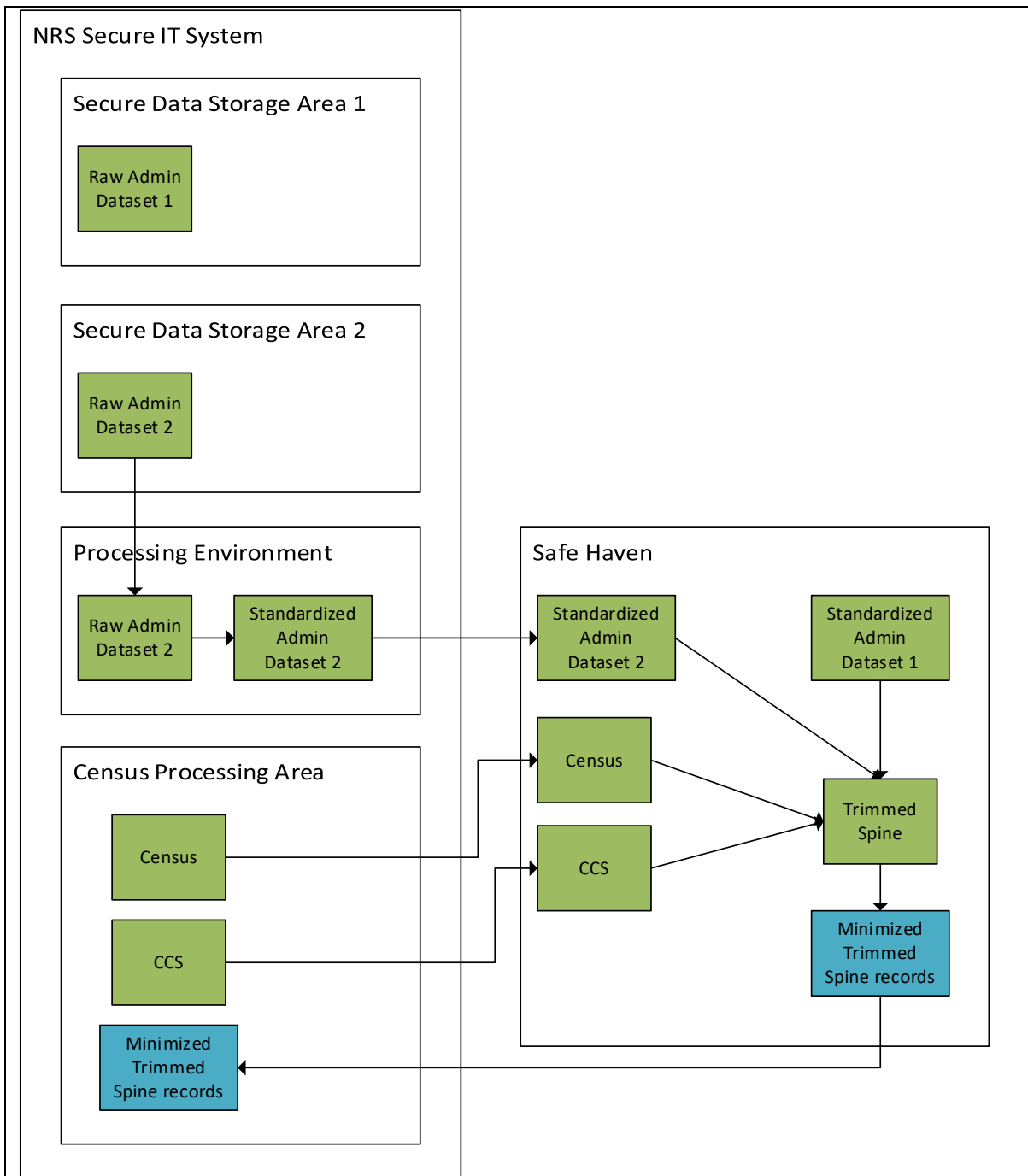
estimate will be more accurate. Secondly the administrative data does not rely on the general public responding, so it will reduce dependence between the data sources. This makes our statistical models work better, or in statistical terms means that our estimates will be less biased.

Adjustment

Adjustment is the process of adding new records to the census database, to bring the number up to match the estimated population. This improves the accuracy of our population estimates at a lower level.

The current adjustment process involves creating 'imputed' records, by selecting donor records from the census to copy. This is based on how likely different demographic groups were to respond to the census. We can improve the quality and accuracy of these imputed records by using administrative data. We can use the characteristics of non-responding individuals from the administrative data (such as age and sex), to select a similar donor record from the census dataset. We can also use the administrative records to identify where these records should be placed within Scotland. This will allow us to place the missing records in the correct addresses, and reduce the change of us placing records into vacant rather than non-responding households, and to represent communities within Scotland more accurately.

This data flow is shown below:



How will the information be stored?

The Head of Administrative Data will store the raw data within NRS secure IT systems. Data will be encrypted in transfer and at rest. Access is restricted to a limited number of personnel.

How will the information be deleted?

The data for this project will be deleted in line with each individual data sharing agreement.

Data which is no longer required will be securely deleted from NRS systems in accordance with HMG Infosec Standard 5 at the enhanced level and the National Cyber Security Centre (NCSC) guidance on secure sanitisation.

Describe the scope of the processing: what is the nature of the data, and does it include special category or criminal offence data? How much data will you be collecting and using? How often? How long will you keep it? How many individuals are affected? What geographical area does it cover?

NRS considered a range of available datasets, selecting those set out in Section 2 above because: 1) they could be combined to provide sufficient coverage of the Scottish population to allow this work to be accurate and 2) they could be delivered in-time for this project. The variables requested for each dataset can be found in the Project Specification Document

Special category data

This project is requesting data from health providers. However the variables provided will only include a flag to indicate the presence of the person in the population, **no health information will be included.**

Ethnicity is the only special category data requested to be used in this project. This is because it used as part of our estimation statistical modelling.

The response rate to the census is likely to vary by ethnicity (this was true in 2011). The variation in response rate is due to different attitudes to civil participation among different groups and the correlation between ethnicity and other factors that determine census response rates that are not recorded in the census. Therefore, ethnicity is used as a key predictor in the census estimation model to address this. This predictor allows the population estimates to be adjusted specifically for ethnicity, thereby preventing minority communities from being disadvantaged by underrepresentation in census results.

How often?

Data is provided as per the data sharing agreements. For most data providers, this will be a one-off transfer of data, covering the time period closest to census day (20th March 2022).

There may be additional transfers if necessary to address any quality issues.

How long will you keep it?

Data will be retained for the period set out in each Data Sharing Agreement. This is December 2024.

How many individuals are affected? What geographical area does it cover?

The data for this project is intended to be linked to provide coverage of the population of Scotland.

Describe the context of the processing: what is the nature of your relationship with the individuals? How much control will they have? Would they expect you to use their data in this way? Do they include children or other vulnerable groups? Are there prior concerns over this type of processing or security flaws? Is it novel in any way? What is the current state of technology in this area? Are there any current issues of public concern that you should factor in? Are you signed up to any approved code of conduct or certification scheme (once any have been approved)?

NRS will not be contacting individuals. Information about the use of administrative data has instead been published on the Scotland's Census website and in the main Scotland's Census 2022 DPIA. The datasets are being used by NRS for statistics and research purposes only and the processing will be subject to appropriate safeguards for the individuals' rights and freedoms in accordance with Article 89 of the UK GDPR and section 19 of the Data Protection Act 2018.

All processing of the personal data at NRS will take place within a secure environment with provision for audit in place. All staff working on the project have completed internal courses on Data Protection and Information Governance. The team have further completed the Medical Research Council online course on Information Governance, UK GDPR and confidentiality in order to use the National Safe Haven. All Census statisticians have signed the Census Confidentiality Undertaking. All members of the team are part of the Government Statistical Service and as such are bound by the Code of Practice For Statistics.

Describe the purposes of the processing: what do you want to achieve? What is the intended effect on individuals? What are the benefits of the processing – for NRS, and more broadly?

This processing will not have a direct effect on any individual. The objective of this project is to provide accurate population estimates at a national and local level.

Benefits

The objective of this proposal is to use administrative data as part of our statistical processes to estimate the Scottish population at a national and local level. This will mean the outputs from Scotland's Census 2022 will be of the highest possible quality and accuracy.

- Accurate population estimates from the census are of national strategic importance. They are used in a number of ways - to allocate resources, plan policies, deliver services and conduct research by national and international organisations. Some examples of use are set out in this section. **Because of the integral use of census data in society, this project has a direct benefit to all people across the United Kingdom.**
- Census population estimates are used to allocate funding across the United Kingdom, through the Barnett formula. If population estimates are inaccurate, Scotland's funding could be inaccurate over the long term. For

every 16,000 people by which the census underestimates the Scotland population (0.3%), the Scottish Government could lose around £1 billion from the block grant over the next decade.

- The Scottish Government in turn uses census data to allocate funding to local authorities, health boards and other public services. For funding to be allocated correctly, is essential that population estimates are as accurate as possible.
- The method proposed will allow us to produce accurate outputs within the time periods census users need

Step 3: Consultation process

Consider how to consult with relevant stakeholders: describe when and how you will seek individuals' views – or justify why it's not appropriate to do so. Who else do you need to involve within your organisation? Do you need to ask your processors to assist? Do you plan to consult information security experts, or any other experts? Describe the groups you will be consulting with and their interest in the project. Who should be consulted internally and externally? Explain the method you will use for consultation with any stakeholder groups and how you will communicate the outcomes of the DPIA back to them. How will you carry out the consultation? Explain what you learned from the consultation process and how they shaped your approach to the management of privacy risks. Explain what practical steps you will take to ensure that you identify and address privacy risks. You should link this to the relevant stages of your project management process. You can use consultation at any stage of the DPIA process.

NRS engaged with a range of partners and key stakeholder organisations throughout the planning of the census, including members of the public, local government, third sector interfaces, stakeholder organisations and community groups. Following a topic consultation in 2015, further engagement and investigation of how to improve the quality of data collected on equality characteristics continued, to meet identified user need for Scotland's Census 2022. This engagement focused on outputs and how census data can be more accessible to users for equality monitoring. Following a programme of research, stakeholder engagement, and question testing, NRS set out recommendations on all of these topics in the Plans for Scotland's Census 2021², accompanied by the research findings on question development.³

NRS consulted on the methodology to use administrative data to quality assure census returns with an external methodology assurance panel comprising a group of external experts⁴. The use of administrative data in the remove false persons, resolve multiple returns, and overcount correction processes, was presented and made available on the website, along with the plan to use administrative data to assist with missing dates of birth.

NRS is having regular meetings with an International Steering Group, which includes a panel of census and administrative data experts who have scrutinised and advised on all aspects of this proposal.⁵ Membership of this group includes:

- Professor James Brown, Australian Bureau of Statistics Professor of Official Statistics, University of Technology, Sydney,
- Professor Sir Ian Diamond, UK National Statistician,

² [Plans for Scotland's Census 2022 | Scotland's Census \(scotlandscensus.gov.uk\)](https://scotlandscensus.gov.uk/plans-for-scotland-s-census-2022)

³ [Developing census questions | Scotland's Census \(scotlandscensus.gov.uk\)](https://scotlandscensus.gov.uk/developing-census-questions)

⁴ [Peer review and governance | Scotland's Census \(scotlandscensus.gov.uk\)](https://scotlandscensus.gov.uk/peer-review-and-governance)

⁵ [International Steering Group | Scotland's Census \(scotlandscensus.gov.uk\)](https://scotlandscensus.gov.uk/international-steering-group)

- Professor David Martin, Professor of Geography at the University of Southampton and Deputy Director of the UK Data Service,
- Owen Abbott OBE, Deputy Director, Methods & Statistical Design at the Office for National Statistics,
- Abby Morgan, Senior Design Analyst, Statistics New Zealand,
- Alastair McAlpine, Interim Chief Statistician, Scottish Government,
- Professor Andrew Morris, Director, Health Data Research UK,
- Roeland Beerten, Chief Statistician, Statistics Flanders.

Minutes from these meetings will be published on the Census Website.

Statistics New Zealand (Stats NZ), who have a representative in the International Steering Group, had a response rate of 83 per cent in their 2018 census. Stats NZ used administrative data to identify people who had been missed, and added these into the census. The approach NRS is proposing, is largely similar to that carried out by Stats NZ⁶.

Furthermore, the Northern Ireland Statistics and Research Agency (NISRA) have also followed a similar process to this proposal in their 2011 and 2021 censuses. The NISRA process goes further than the processed proposed in this application, because they add administrative data records directly into the census. In particular, the NISRA Census 2021 Quality Assurance Report⁷ states:

“As was done in the 2011 Census, the 2021 Census has used high quality administrative data records to add a small number of people into the census dataset, to account for domestic addresses where the systems indicate no response had been made. This approach has been used since the 2011 Census in other countries (Canada 2016, New Zealand 2018) and is now **an international standard** in terms of helping to address any undercount found.”

The Scottish Parliament’s ‘Constitution, Europe, External Affairs and Culture Committee’ has started an inquiry into the next stage of Scotland’s Census, including the use of administrative data ([link](#)). The inquiry has welcomed views from the public and will shortly begin taking evidence from invited panel members, including expert data users. NRS will continue to incorporate advice and feedback as appropriate.

⁶ [Overview of statistical methods for adding admin records to the 2018 Census dataset | Stats NZ](#)

[Overview of international peer review of 2018 Census methodology | Stats NZ](#)

⁷ [Census 2021 population and household estimates for Northern Ireland quality assurance report](#)

NRS are running a consultation on census outputs in Autumn 2022 ([link](#)), which will cover any outputs from this project. We can incorporate feedback from these groups as we finalise our methodology.

Step 4: Assess necessity and proportionality

Describe compliance and proportionality measures, in particular: what is your lawful basis for processing? Does the processing actually achieve your purpose? Is there another way to achieve the same outcome? How will you prevent function creep? How will you ensure data quality and data minimisation? What information will you give individuals? How will you help to support their rights? What measures do you take to ensure processors comply? How do you safeguard any international transfers?

Legal gateway

The Registrar General for Scotland, whose function NRS fulfils, has a statutory duty under section 2(1) of the [Census Act 1920](#) to “make such arrangements and do all such things as are necessary for the taking of a census”. Section 4 of the Census Act gives the Registrar General the power to prepare statistical reports. Section 4(1) requires that the Registrar General “shall, as soon as may be after the taking of a census, prepare reports on the census returns.” Inherent in section 4(1) is the power to do what is necessary to prepare such reports, including the acquisition and processing of necessary data.

The legal gateway to share data comes from the data provider and has been established in each data sharing agreement

Lawful basis

NRS’s lawful basis for processing is UK GDPR Article 6(1)(e) “processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller.”

UK GDPR Article 9(2)(j) “processing is necessary for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes in accordance with Article 89(1) based on domestic law which shall be proportionate to the aim pursued, respect the essence of the right to data protection and provide for suitable and specific measures to safeguard the fundamental rights and the interests of the data subject.”

The requirement for a basis in domestic law is provided by the Data Protection Act 2018 Schedule 1 Part 1 Condition 4 Research etc:

“This condition is met if processing –

- (a) is necessary for archiving purposes, scientific or historical research purposes or statistical purposes,
- (b) is carried out in accordance with Article 89(1) of the UK GDPR (as supplemented by section 19), and
- (c) is in the public interest.”

Necessity and proportionality

This processing is necessary to allow us to produce the most accurate population estimates from the census at a national and local level. Accurate population estimates from the census are of national strategic importance. They are used in a

number of ways - to allocate resources, plan policies, deliver services and conduct research by national and international organisations. If population estimates from the census are inaccurate, even to very small margins, the efficacy of these processes could be disrupted. An example of this is funding for Scotland - For every 16,000 people by which the census underestimates the Scotland population (0.3%), the Scottish Government could lose around £1 billion from the block grant over the next decade.

NRS has considered a range of data sources in this project, and brought together only those necessary to fulfil the needs of this project, which includes 1) coverage of the Scottish population, with a particular focus on areas which have not returned a census form and 2) available within the timescales required for this project.

We have taken care to minimise the variables we are requesting to those that are necessary for the project. For example, when proposing to use data from health providers, we only ask for date of last interaction with the health service, so we can determine if the person is still in the Scottish population. We don't ask for any details about which service has been interacted with, or medical background, because this information is not relevant to the project. A list of variables requested and justification for each is included in the Project Specification Document.

The project is required to be scrutinized and approved by the NHS Scotland Public Benefit and Privacy Panel for Health and Social Care, and the Statistics Public Benefit and Privacy Panel. Both panels will scrutinise the project, and data being requested to ensure that we are only accessing data that is essential to the project, and that all privacy implications have been fully considered. We will not receive data, or perform any processing, until all approvals have been granted.

Step 5: Identify and assess risks				
Describe source of risk and nature of potential impact on individuals. Include associated compliance and corporate risks as necessary. Larger-scale DPIAs might record this information on a more formal risk register.				
No.	Risk and potential impact	Likelihood of harm (Remote, possible or probable)	Severity of harm (minimal, significant or severe)	Overall risk (low, medium or high)
1.	<p>Risks to individuals</p> <ul style="list-style-type: none"> • harm or distress to an individual or group of individuals <p>a) Unauthorised disclosure of information – IT – There is a possibility that data processed at the National Safe Haven and on NRS systems could be compromised. This could result in personal data provided in administrative datasets being compromised or lost or subject to misuse or identity fraud.</p>	Possible	Significant	High
	<p>b) Unauthorised disclosure of information – Personnel – There is a risk of unauthorised access to identifiable data within the data processing environment to unauthorised staff. This could result in a possible breach of confidentiality causing potential distress and frustration to individual.</p>	Possible	Significant	Low
	<p>c) Invasion of privacy – There is a risk that robust profiles of individuals could be built up from the census and census coverage survey responses combined with administrative data sets provided by other public bodies. This could result in a greater invasion of privacy for individuals where more</p>	Possible	Minimal	Medium

	information is exposed than they would like. The risk here is that the individuals may not be aware of the extent of the data linkage from other provided sources which is increasing the breadth of the information held by NRS. This could result in frustration and distress to individuals.			
	d) Personal Risk – Function creep – There is a risk of function creep where the project is potentially used for unexpected or unintended future purposes. This could result in a breach of the law and distress and frustration to individuals who may not be aware of future data processing activities	Possible	Minimal	Low
	e) Personal Risk – Storage/Transfer loss There is a risk that personal data are lost due to poor storage and transfer processes. This could result in potential harm, compromised data and identity fraud to those whose personal data is involved in the breach. This risk includes manual transfer of data.	Possible	Severe	High
	f) Personal Risk (Insider Threat) There is a risk that employees, who are authorised to access data, may exploit their access to misuse or steal personal data. This could result in harm, identity fraud, financial loss and distress and upset to the relevant data subject or household involved. There is a risk of staff not having appropriate qualifications or training to manage the data in the appropriate way.	Rare	Severe	Medium
	g) Personal Risk (Re-identification) There is a risk that individuals are identified or perceived to be identifiable through published tables. This could result in the disclosure of personal or sensitive data about a specific individual or household which could cause	Possible	Significant	Medium

	distress since this information would constitute as personal information.			
2.	<p>Risks to NRS</p> <ul style="list-style-type: none"> • reputational damage to NRS and/or the data providers; • possible enforcement action against NRS; • loss of confidence in NRS and/or the data providers; and, • loss of public finances to NRS and/or data providers. <p>a) Unauthorised disclosure of information by NRS – Examples include inadvertent compromise by a statistical process such as disclosure control, deliberate compromise by a member of staff or a targeted attack by cyber criminals</p>	Possible	Significant	Medium
	<p>b) Vulnerability in or malfunction of security controls – Data subjects may have privacy concerns relating to the security of information technology used to process their data and about the extent of organisational measures in place to protect their data.</p>	Possible	Significant	High
	<p>c) Information sharing of data – There is a risk that data is inappropriately shared due to the failure to apply statistical disclosure controls or follow robust information governance processes.</p>	Remote	Significant	Medium
	<p>d) Processing is unlawful and unnecessary – There is a risk that the processing of the administrative datasets will not be considered fair and lawful if the lawfulness and necessity of processing cannot be established, leading to: loss of confidence in NRS as trusted custodian of personal data; reputational damage to NRS and/or the data provider; possible enforcement action against NRS; and, loss of public or non-public finances. Public may have privacy concerns if the outcomes can be delivered</p>	Remote	Significant	Medium

	by other means			
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Step 6: Identify measures to reduce risk				
Identify additional measures you could take to reduce or eliminate risks identified as medium or high risk in step 5.				
No.	Options to reduce or eliminate risk	Effect of risk (eliminated, reduced or accepted)	Residual risk (low, medium or high)	Measure approved (yes, no)
1a	<p>Unauthorised disclosure of information – IT</p> <ul style="list-style-type: none"> • National Safe Haven provides a secure analytic environment providing with secure file transfer on IT infrastructure provided by EPCC at University of Edinburgh. • A comprehensive security programme of policies and procedures has been implemented by NRS. These align to current regulatory legislation and industry standards e.g. UK and EU GDPR, Data Protection Legislation, NCSC etc. • Strong, auditable security controls between the Census Data Processing Environment, the rest of the NRScotland network and the SCOTS network have been put into place. • Frequent audits, penetration tests, vulnerability scanning and monitoring is of NRS IT infrastructure have been implemented whilst assurance of Scottish Government network is requested and validated frequently. • When not in use the data will be encrypted, and stored in the secure Admin Data area, with access restricted to authorised personnel. • All working output to be deleted with only summary information provided on the quality assurance process. 	Reduced	Medium	Yes

1b	<p>Unauthorised disclosure of information – personnel</p> <ul style="list-style-type: none"> • Robust security controls are in place at the National Safe Haven to ensure that only approved researchers can access research data. • Access controls policies have been put in place at NRS to ensure only relevant key staff have access to the Admin Data area. • Staff are required to take mandatory data protection training and training and are appropriately qualified for their roles. • Only named individuals from the administrative data team can work on the data linkage project. These individuals will need to be approved by the PBPP. • NRS staff have passed as a minimum the Baseline Personnel Security Standard (BPSS) and follow the code of official statistics. • Regular IT audit access reviews are carried out to monitor access privileges and joiner, movers and leavers. • All NRS staff involved in processing Census data sign the Census Confidentiality Undertaking, which is underpinned by the Census Act 1920, prohibiting the sharing or unauthorised use of census data. This Act makes it a criminal offence, punishable by imprisonment, a fine or both, for any person to disclose any personal census information to another person without lawful authority. 	Reduced	Low	Yes
1c	<p>Invasion of privacy</p> <ul style="list-style-type: none"> • NRS has taken steps to inform users that census data will be linked and merged with public admin data sets to improve the quality of the statistical processing requirements. This was highlighted in census privacy information and online census guidance. • Information about the project will be updated on our website and in our publications as processing progresses. 	Reduced	Negligible	Yes

1d	<p>Personal risk - Function Creep</p> <ul style="list-style-type: none"> Any changes to use of data for this project will need to be approved by Health and Social care and Statistics PBPP panels. It will also need to be approved by data providers and information asset owners. Approvals, evaluations and policy reviews for increased use of census data will be required. Any future uses will be advised in the census privacy notices so all respondents are fully informed of how their data will be used. 	Reduced	Negligible Risk	Yes
1e	<p>Measures Personal Risk – Storage/Transfer loss</p> <ul style="list-style-type: none"> Appropriate storage policies/procedures that outline specific physical security controls are in place within NRS to manage admin data received. Frequent physical security assessments will be conducted by NRS to ensure NRS sites processing data are safe and secure. Security Improvement Plans will be formed to track mitigation actions. Appropriate security and Information Governance training is in place and has been provided to NRS staff. All personal data will only be stored in the UK. Access to personal data will be based on job role requirements only. All staff will have up to date security checks in place for security clearance purposes. All security controls for the storage, transfer and destruction of data will be aligned to UK and EU GDPR, the ISO 27001 Security standard, the ISO 15489 Records Management Standard and guidance from the National Cyber Security Centre (NCSC). 	Reduced	Medium	Yes

	<ul style="list-style-type: none"> All Census Information Asset Registers will be up to date to reflect that a relevant Information Asset Owner (IAO) has ownership of a physical asset for each service area whilst key information risks for each asset will be highlighted in the Corporate Census Information Risk Register. 			
1f	<p>Measures Personal Risk (Insider Threat)</p> <ul style="list-style-type: none"> All employees have a minimum level of security clearance to Baseline Personnel Security Standard (BPSS). All employees with access to census data will receive data protection training and are appropriately qualified for their roles. Employees will only have access to data required to perform their role. Security incident and event monitoring tools will be implemented. All NRS staff involved in processing Census data sign the Census Confidentiality Undertaking. which is underpinned by the Census Act 1920, prohibiting the sharing or unauthorised use of census data. This Act makes it a criminal offence, punishable by imprisonment, a fine or both, for any person to disclose any personal census information to another person without lawful authority. 	Reduced	Medium	Yes
1g	<p>Measures Personal Risk (Re-identification)</p> <ul style="list-style-type: none"> Administrative data collected for the purposes of this project will not be published or made publically available in any form. Census outputs, including imputed records guided by administrative data (which don't include administrative data) will made available and the following applies: <ul style="list-style-type: none"> - All statistical disclosure control documentation will follow industry standards and best practices to avoid the re-identification of individuals in published statistical tables and 	Reduced	Low	Yes

	<p>research data. These methodologies have been assessed through External Methodology Assurance Panels (EMAPs) and aligned to other UK census offices where they have been reviewed the UK Census Committee before being approved.</p> <ul style="list-style-type: none"> - System statistical processes will be validated and assured before the census goes live to ensure special characteristics of individuals, households or groups remain protected. - NRS has many years' experience of deidentifying data and ensuring safe research practices are deployed in our census operations. 			
2a	<p>Unauthorised disclosure of information by NRS</p> <ul style="list-style-type: none"> • No administrative data collected as part of this project will be made available in any form • Only named individuals from the Admin Data team will access the data, to perform transfers, conduct linkage and perform clerical review. These individuals will need to be approved by PBPPs. • Data Provider and NRS will complete and sign Data Sharing Agreement which will explain and agree to the minimum data requested, purpose, and roles and responsibilities (including dissemination restrictions) of both parties. • The transfer of data will be one way through secure transfer agreed from providers to NRS. • All persons who may come into contact with census information will be required to sign the Census Confidentiality Undertaking which is underpinned by the Census Act 1920, prohibiting the sharing or unauthorised use of census data. This Act makes it a criminal offence, punishable by imprisonment, a fine or both, for any person to disclose any personal census information to another person without lawful authority. 	Reduced	Low	Yes

	<ul style="list-style-type: none"> • NRS is committed to ensuring that privacy of every individual whose data will be collected and processed as part of this programme will be protected. All statistical outputs produced by NRS fully comply with the Code of Practice for Statistics: Under section T6 on Data governance: Organisations should look after people's information securely and manage data in ways that are consistent with relevant legislation and serve the public good. • NRS has a Security Breach process in place in the event that a personal data breach should occur. • All staff receive mandatory Data Protection Training. • NRS has Data Protection Policy and Information Security Policy. 			
2b	<p>Measures Vulnerability in or malfunction of security controls</p> <ul style="list-style-type: none"> • Appropriate security controls are on NRS servers, all data will be processed in secure IT area with access limited to named staff. • Administrative datasets will be stored in the secure admin data area, with access restricted to authorized personnel. • Datasets will be encrypted at rest, and only decrypted when it is needed for data processing. The unencrypted file will be deleted when processing is complete. • NRS has a Security Breach process in place in the event that a personal data breach should occur. • All staff receive mandatory security training. 	Reduced	Medium	Yes
2c	<p>Inappropriate sharing of data</p> <ul style="list-style-type: none"> • Datasets received from providers will not be shared outwith the named individuals from the admin data team. • No administrative data provided as part of this project will be made publically available in any form. 	Reduced	Low	Yes

	<ul style="list-style-type: none"> • Robust, transparent, consistent, and proportionate information governance will be applied to all external data requests. 			
2d	<p><u>Processing is unlawful and unnecessary</u></p> <ul style="list-style-type: none"> • The legal gateway and lawful basis under the UK GDPR for processing the administrative datasets have been established and are as described above. • The Admin Data team determined that the results obtained by using the administrative datasets could not be achieved by other datasets within the timeframe required for the Census processing. • Proportionality and necessity of processing has been established in Step 4 above 	Reduced	Low	Yes

Step 7: Sign off and record outcomes		
Item	Name/date	Notes
Measures approved by:	Director of statistical services 05/09/2022	Integrate actions back into project plan, with date and responsibility for completion
Residual risks approved by:	N/A	If accepting any residual high risk, consult the ICO before going ahead
DPO advice provided:	NRS Data Protection Officer 05/09/2022	DPO should advise on compliance, step 6 measures and whether processing can proceed
<p>Summary of DPO advice:</p> <p>The necessity of using the administrative data to improve the quality of 2022 Census information has been evidenced and the basis in law for processing the data has been established. Consultation has taken place, including with independent experts, and processing will not take place until the proposals have been scrutinised and approved by both the NHS Scotland Public Benefit and Privacy Panel for Health and Social Care, and the Statistics Public Benefit and Privacy Panel. Appropriate security controls and other measures have been identified under step 6 to reduce the risks associated with the processing identified under step 5, and the seeking of DPO advice has mitigated any potential/perceived conflict of interest on the part of the IAO.</p>		
DPO advice accepted or overruled by:	Director of Statistical Services Date 05/09/2022	If overruled, you must explain your reasons
Comments:		
Consultation responses reviewed by:		If your decision departs from individuals' views, you must explain your reasons
Comments:		

This DPIA will kept under review by:	NRS: Head of Admin Data	The DPO should also review ongoing compliance with DPIA
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Part 3: Linking the DPIA to the UK GDPR AND EU GDPR data protection principles

Answering these questions during the DPIA process will help you to identify where there is a risk that the project will fail to comply with the UK GDPR AND EU GDPR or other relevant privacy legislation, including the Human Rights Act.

UK GDPR AND EU GDPR Principle (a) (Article 5(1)(a))

Personal data shall be processed fairly and lawfully and, in particular, shall not be processed unless:

- a) at least one of the conditions in Article 6 is met, and
- b) in the case of special category personal data, at least one of the conditions in Article 9 is also met.

Have you identified the purpose of the project?

The purpose of the project is to accurately estimate the population of Scotland.

How will you tell individuals about the use of their personal data?

- NRS will publish a statement on the website.
- The census privacy notice will be updated
- NRS will update and publish the Census DPIA.
- NRS regularly provides updates on census methodologies and processing through our websites and other communication channels.

Do you need to amend your privacy notices?

NRS continuously reviews its privacy notices to ensure that they reflect the current position. We make clear that NRS receives data from other public bodies and uses this for statistical and research purposes.

Have you established which conditions for processing apply?

NRS's lawful basis for processing is UK GDPR Article 6(1)(e) "processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller."

The condition for processing special category personal data is:

UK GDPR Article 9(2)(j) "processing is necessary for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes in accordance with Article 89(1) based on domestic law which shall be proportionate to the aim pursued, respect the essence of the right to data protection and provide for suitable and specific measures to safeguard the fundamental rights and the interests of the data subject."

The requirement for a basis in domestic law is provided by the Data Protection Act 2018 Schedule 1 Part 1 Condition 4 Research etc:

"This condition is met if processing –

- (a) is necessary for archiving purposes, scientific or historical research purposes or statistical purposes,
- (b) is carried out in accordance with Article 89(1) of the UK GDPR (as supplemented by section 19), and
- (c) is in the public interest."

If you are relying on consent to process personal data, how will this be collected and what will you do if it is withheld or withdrawn?

Consent is not the lawful basis we are relying on.

If your organisation NRS is subject to the Human Rights Act, so you also need to consider:

Will your actions interfere with the right to privacy under Article 8?

Processing of personal data by professional statisticians to improve the quality and accuracy of Scotland's Census is not envisaged to present any additional interference with the privacy rights of individuals. The provisions of Article 8 as incorporated in the Human

Rights Act 1998 allow public authorities to enquire into a person's private life where they have a legal authority to do so and where such an enquiry is necessary in a democratic society for one of the aims stated in the Article. Lawful authority is given by the Census Act 1920 and the processing is necessary for the economic well-being of the country and for the purposes of the protection of health and the rights and freedoms of others.

Have you identified the social need and aims of the project?

Use of accurate Census data guides significant public expenditure and provides material benefit to society. These are set out in more detail above.

Are your actions a proportionate response to the social need?

Yes. The approach identified enables the use of administrative data to meet the social needs and aims of the project, whilst balancing the need for individual privacy.

UK GDPR AND EU GDPR Principle (b) (Article 5(1)(b))

Personal data shall be obtained only for one or more specified and lawful purposes, and shall not be further processed in any manner incompatible with that purpose or those purposes.

Does your project plan cover all of the purposes for processing personal data?

Safeguards are in place to ensure that the data collected are only used for lawful purposes.

Have you identified potential new purposes as the scope of the project expands?

This project is to be used to support the quality and accuracy of Scotland's 2022 Census outputs only.

UK GDPR AND EU GDPR Principle (c) (Article 5(1)(c))

Personal data shall be adequate, relevant and not excessive in relation to the purpose or purposes for which they are processed.

Is the quality of the information good enough for the purposes it is used?

Quality assurance processes will be put in place to ensure that the statistics produced using the information collected are fit for purpose and best meet the needs of data users. The administrative data team produces Quality Assurance of Administrative Data (QAADs) for each administrative dataset used.

Which personal data could you not use, without compromising the needs of the project?

This project would not be possible without linking – therefore name, date of birth, sex and address variables are needed.

UK GDPR AND EU GDPR Principle (d) (Article 5(1)(d))– accurate, kept up to date, deletion

Personal data shall be accurate and, where necessary, kept up to date.

If you are procuring new software does it allow you to amend data when necessary?

No. This is a statistical project. We will be using SAS, Microsoft Excel and Microsoft Access to process the data.

How are you ensuring that personal data obtained from individuals or other organisations is accurate?

A Quality Assurance of Administrative Data (QAAD) report for each admin dataset will be produced, reporting on quality assurance measures taken.

UK GDPR AND EU GDPR Principle (e) (Article 5(1)(e))

Personal data processed for any purpose or purposes shall not be kept for longer than necessary for that purpose or those purposes.

What retention periods are suitable for the personal data you will be processing?

Administrative data will be retained as per the Data Sharing agreements after which it will be securely destroyed. Census data will be retained permanently.

Are you procuring software that will allow you to delete information in line with your retention periods?

No specialist software is being procured as part of this data linkage project.

UK GDPR AND EU GDPR Articles 12-22

Personal data shall be processed in accordance with the rights of data subjects under this Act.

Will the systems you are putting in place allow you to respond to subject access requests more easily?

No. Existing arrangements allow us to respond to data subject requests. Because the data is being processed for statistics and research purposes only, the rights of data subjects are restricted by Article 89(2) of the GDPR and Schedule 2, Part 6 Paragraph 27 of the Data Protection Act 2018.

If the project involves marketing, have you got a procedure for individuals to opt out of their information being used for that purpose?

This project does not involve marketing.

UK GDPR AND EU GDPR Principle (f) (Article 5 (1)(f))

Appropriate technical and organisational measures shall be taken against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data.

Do any new systems provide protection against the security risks you have identified?

No new systems are being procured for this project.

What training and instructions are necessary to ensure that staff know how to operate a new system securely?

No new systems are being procured for this project.

UK GDPR AND EU GDPR Article 24

Personal data shall not be transferred to a country or territory outside the European Economic Area unless that country or territory ensures an adequate level of protection for the rights and freedoms of data subjects in relation to the processing of personal data.

Will the project require you to transfer data outside of the European Economic Area (EEA)?

No.

If you will be making transfers, how will you ensure that the data is adequately protected?

Data will be transferred securely from providers to the Head of admin data. The head of admin data will store data securely in NRS IT systems. Data will be encrypted for transfers and at rest. Transfers must all be approved by a senior member of staff.