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Census 2021

Outputs and dissemination webinar

27 and 28 September 2023

@NICensus2021

Introduction

Including a high level recap of Census 2021

Census 2021 results

Publications to date, key messages and plans for future releases

New Census 2021 output geography

What they are and how they are used

Our self-service products

How to access and use the Census Area Explorer and Flexible Table Builder

Round up and discussion

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Introduction

Purpose of this webinar

- To provide an update to our users on the data we have released so far, what data is still to come and where to find it
- To provide an overview of the new output geography
- To help users understand and make best use of the Flexible Table Builder and Census Area Explorer

Context

- Census is a vast operational and statistical exercise
- Undertaken every 10 years here
- Underpins all Government policies (directly or indirectly), for example:
 - planning services – population/household size
 - allocating money
 - policy development – equality monitoring, deprivation
- Planning started in 2014/2015
- Census Day - 21 March 2021

Some facts and figures...

Operations

- 2,000 field staff employed
- 375,000 field visits
- 150,000 phone calls received
- Large advertising campaign

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Advertising campaign images



↑
Belfast Met – “Education”

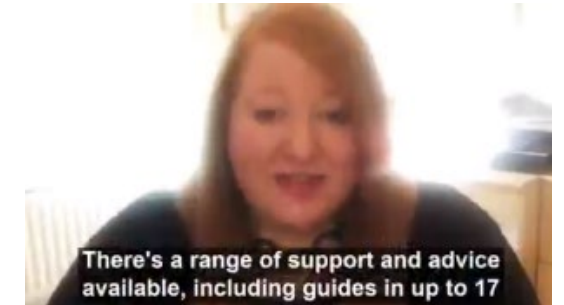
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Advertising across Northern Ireland



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Endorsements



More facts and figures...

Operations

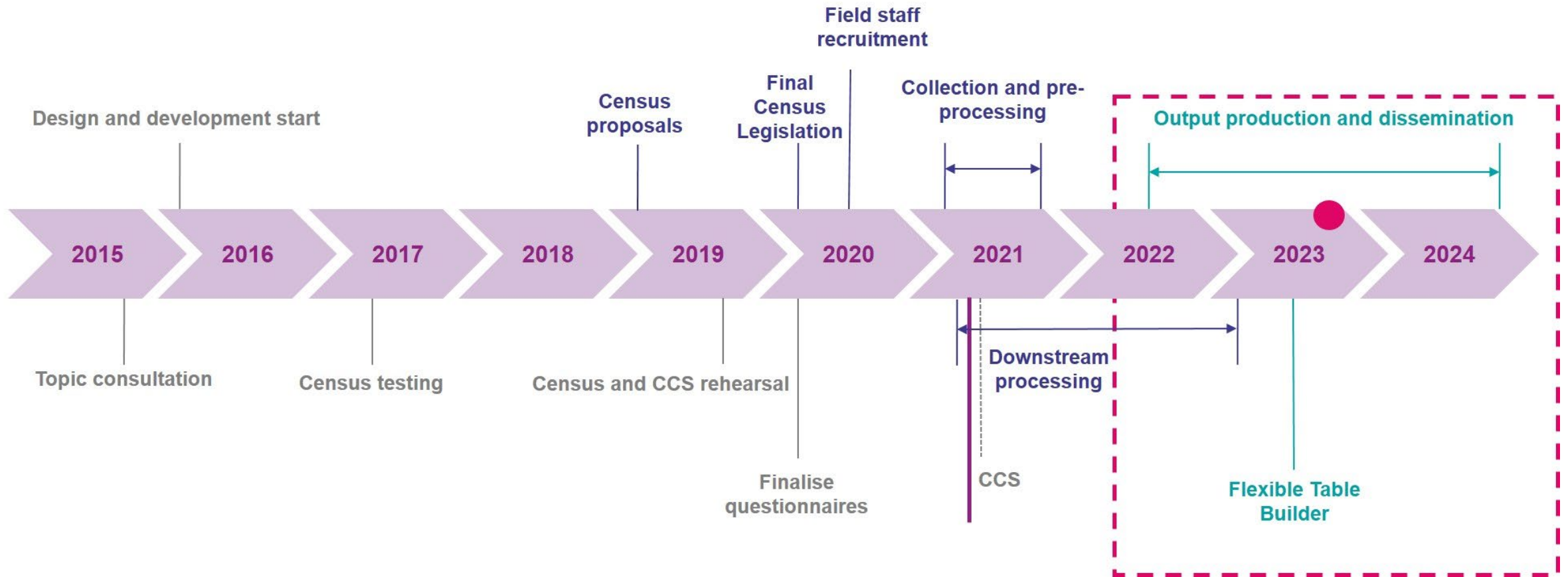
- 2,000 field staff employed
- 375,000 field visits
- 150,000 phone calls received
- Large advertising campaign

Outcomes

- Overall 815k returns
- HH Return rate 97.2%
- CE Return rate 99.6%
- 80+% of returns online
- Response rate of 97%

More information in our Census 2021 Operational Report
www.nisra.gov.uk/publications/census-2021-operational-report

Census 2021 timeline



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Census 2021 Results

census 2021 Overview

- Publications to date
- Where to access Census 2021 content
- Some key messages from Census 2021 results
- Future plans for outputs

census 2021 Publications to date

Title and content	Release date	Geography
Population and household estimates (rounded)	24 May 2022	
Main Statistics – Phase 1 (Culture)	22 Sept 2022	NI & LGD
Main Statistics – Phase 2 (Health and Housing)	15 Dec 2022	
New local geography (Population and household estimates)	21 Feb 2023	DEA/SDZ/DZ
Main Statistics – Phase 3 (Labour market, Qualls, SO etc)	21 Mar 2023	NI & LGD
Main Statistics – Supplemental (further detail for some topics)	31 May 2023	NI, LGD, HSCT
Flexible Table Builder	22 June 2023	Various

census 2021 What is available?

To date these publications have included:

- over 200 Excel workbooks
- 17 Statistical Bulletins
- infographics for each topic

Other supporting information:

[Census outputs definitions](#)

[Census 2021 variables index](#)

[Frequently asked questions](#)

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Where can I access it?

All results published on
www.nisra.gov.uk

Census results pages
www.nisra.gov.uk/statistics/2021-census/results

The screenshot shows the NISRA website interface. At the top left is the NISRA logo with the text 'Northern Ireland Statistics and Research Agency' and its Irish equivalent. To the right is a search bar with the text 'Search this site...' and a 'Go' button. Below the logo is a navigation menu with links for 'Home', 'Statistics', 'Publications', 'Census results', 'Selected for a survey', and 'Contact us'. The main content area is titled 'Results' and contains the following information:

- A tip: 'Try our Flexible Table Builder to create your own custom Census 2021 tables.'
- Flexible Table Builder**: 'Census 2021 Flexible Table Builder is live at build.nisra.gov.uk [Read more](#)'
- Area explorer**: 'We have updated our census area explorer to include more data for District Electoral Areas, Super Data Zones and Data Zones. [Read more](#)'
- Main statistics**: 'Main Statistics (MS) tables provide summary statistics for the majority of census questions and topics. [Read more](#)'
- Population and household estimates**: 'These first results from Census 2021 provide the usual resident population and number of households in Northern Ireland. [Read more](#)'
- Census output geography**: 'Understanding census statistical output geography. [Read more](#)'
- Quality notes, issues and corrections**: 'Details of quality notes, issues, and corrections to published Census 2021 data. [Read more](#)'
- Revisions and corrections policy**: 'Outlines the revisions and corrections policy for census outputs. [Read more](#)'

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Census 2021 Results

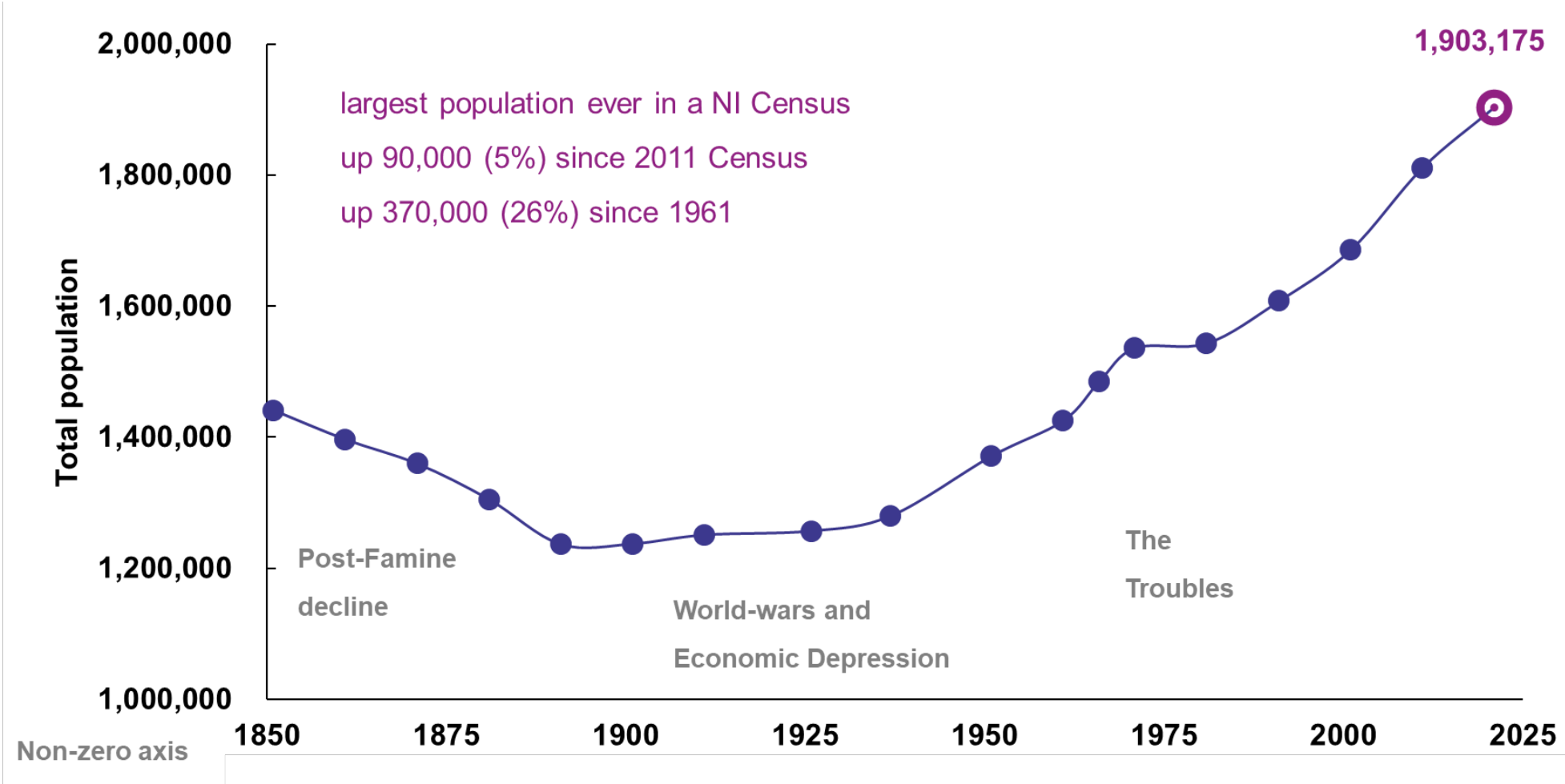
Key messages: Population and households

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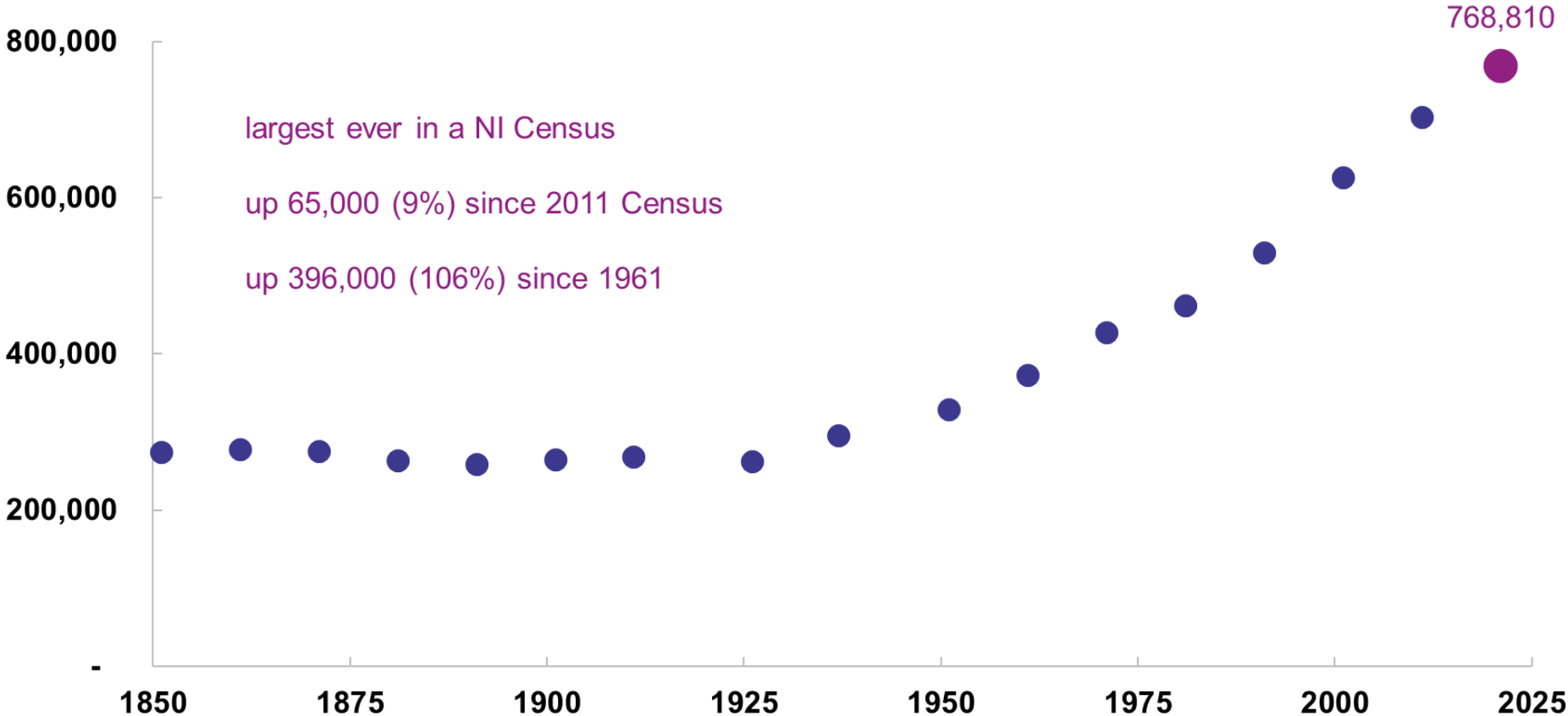
Headline figures



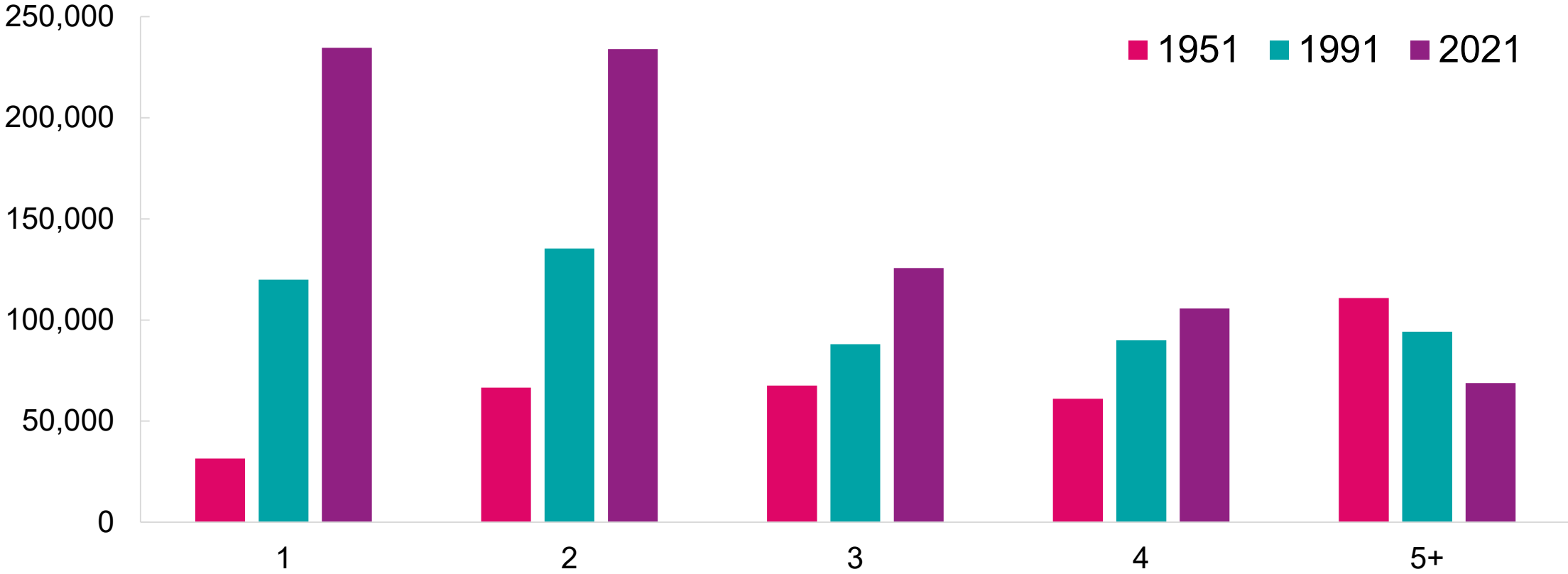
Census year population estimates (1851-2021)



Census year households estimates (1851-2021)

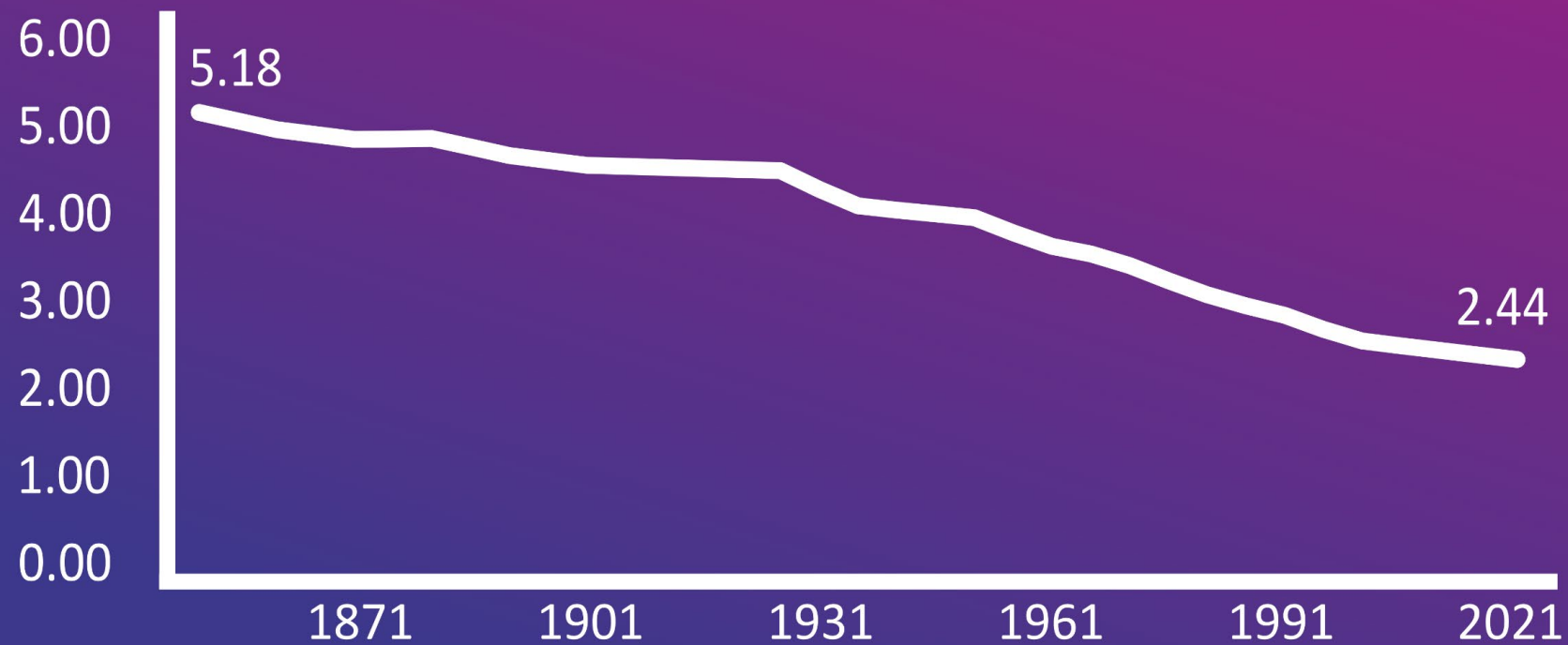


Household size – 1951, 1991, 2021



Average household size

Average household size - trend

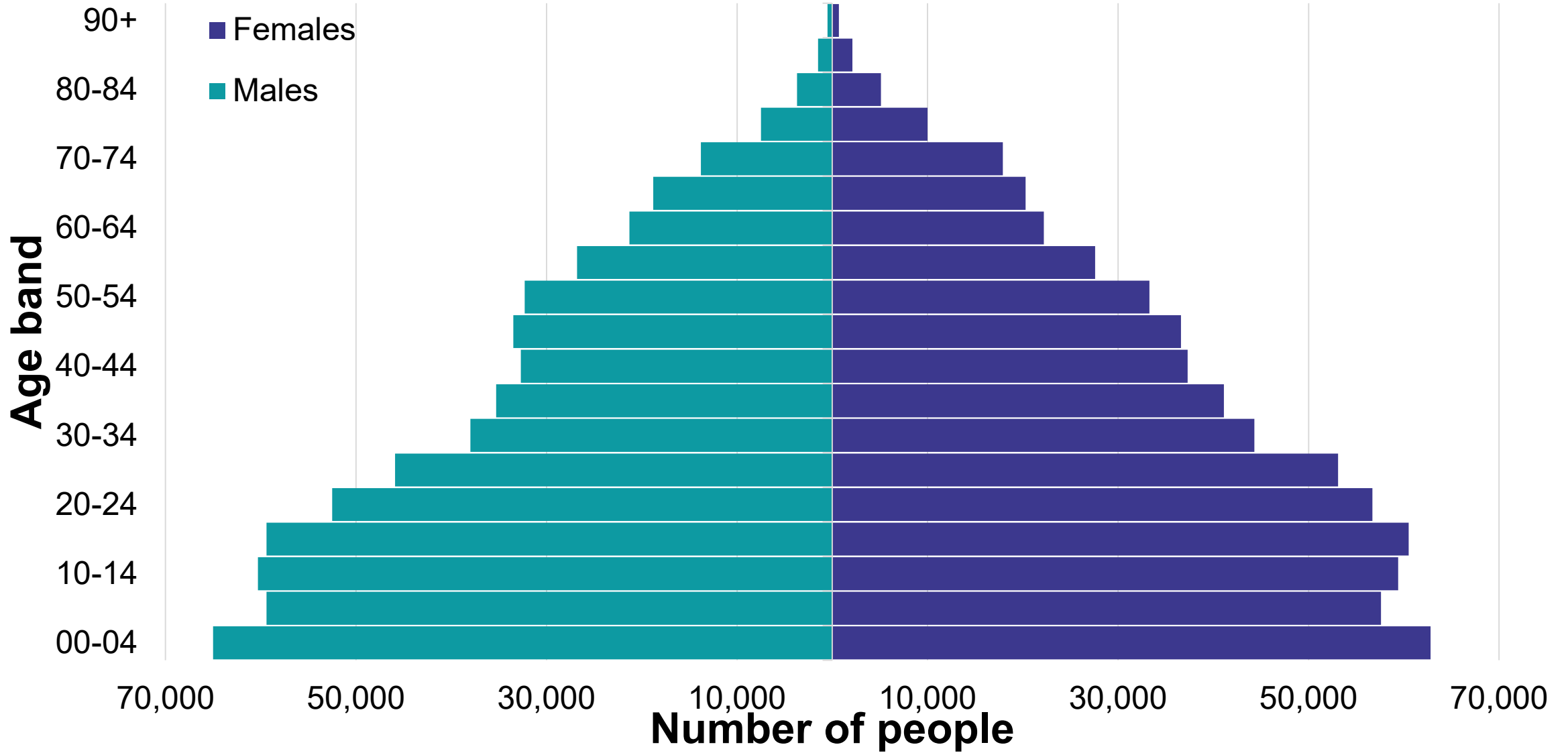


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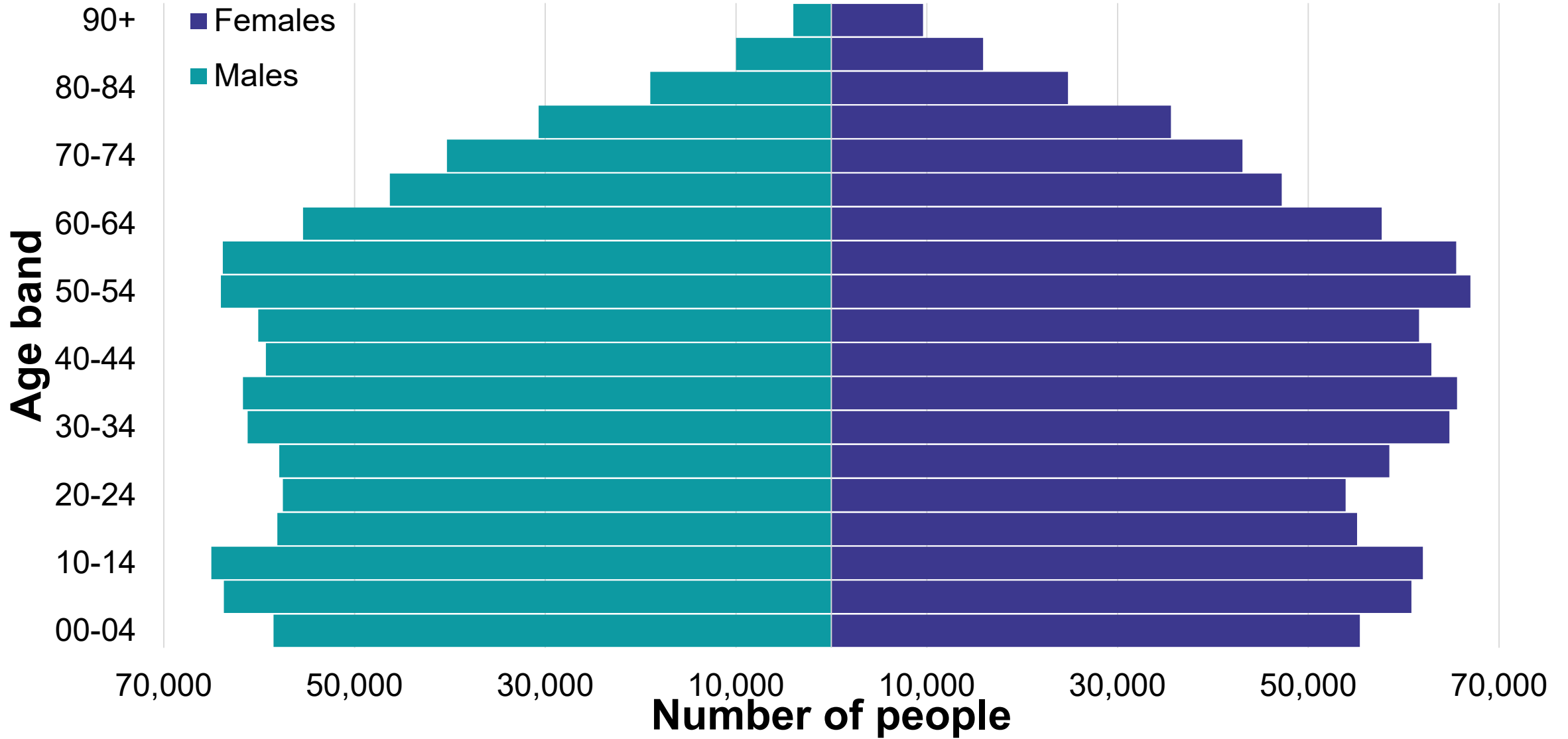
Census 2021 Results

Key messages: Ageing, Diversity and Religion

1926



2021



census 2021 Diversity

Ethnicity

65,600 people are from a **non white group** (3.4%)

- doubled from 2011 (32,400 people)
- quadrupled from 2001 (14,300 people)

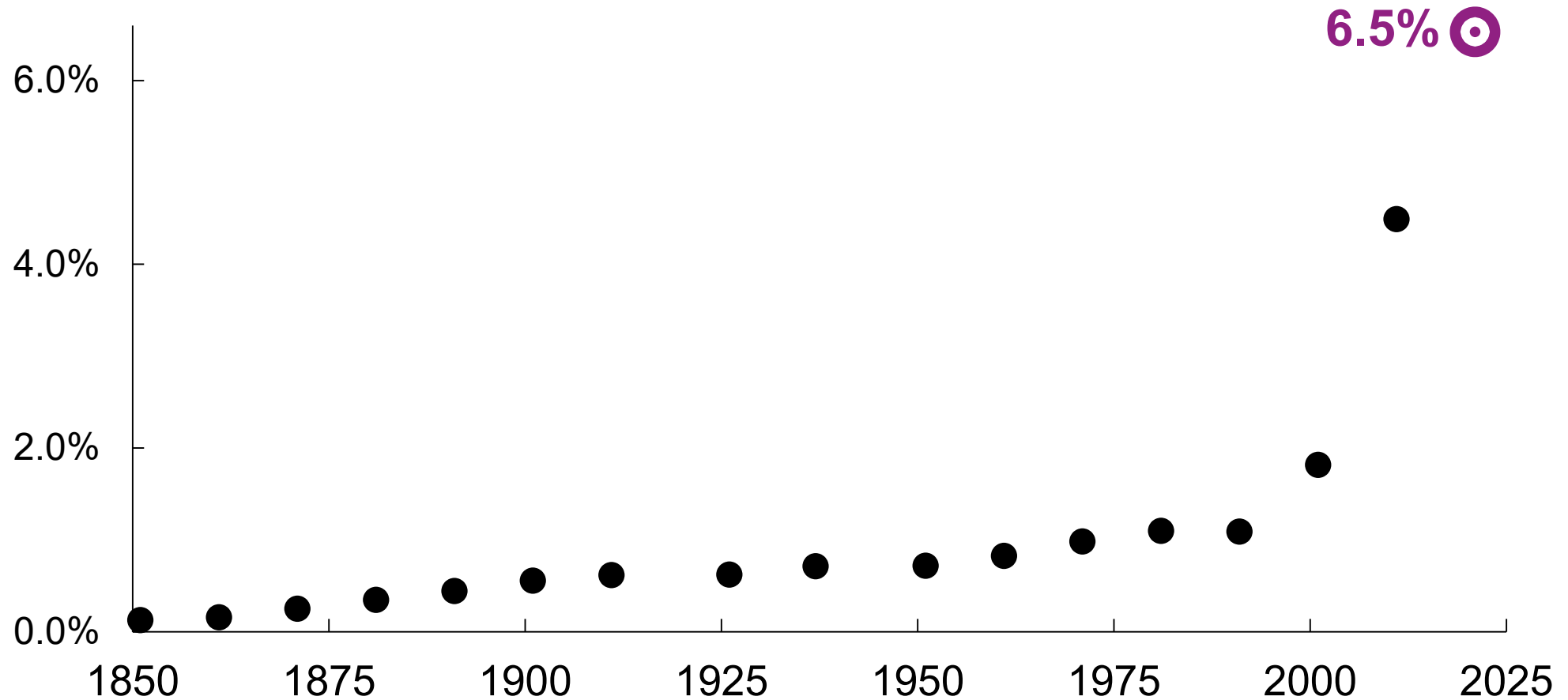
Language

85k people with **main language other than English** (55k in 2011)

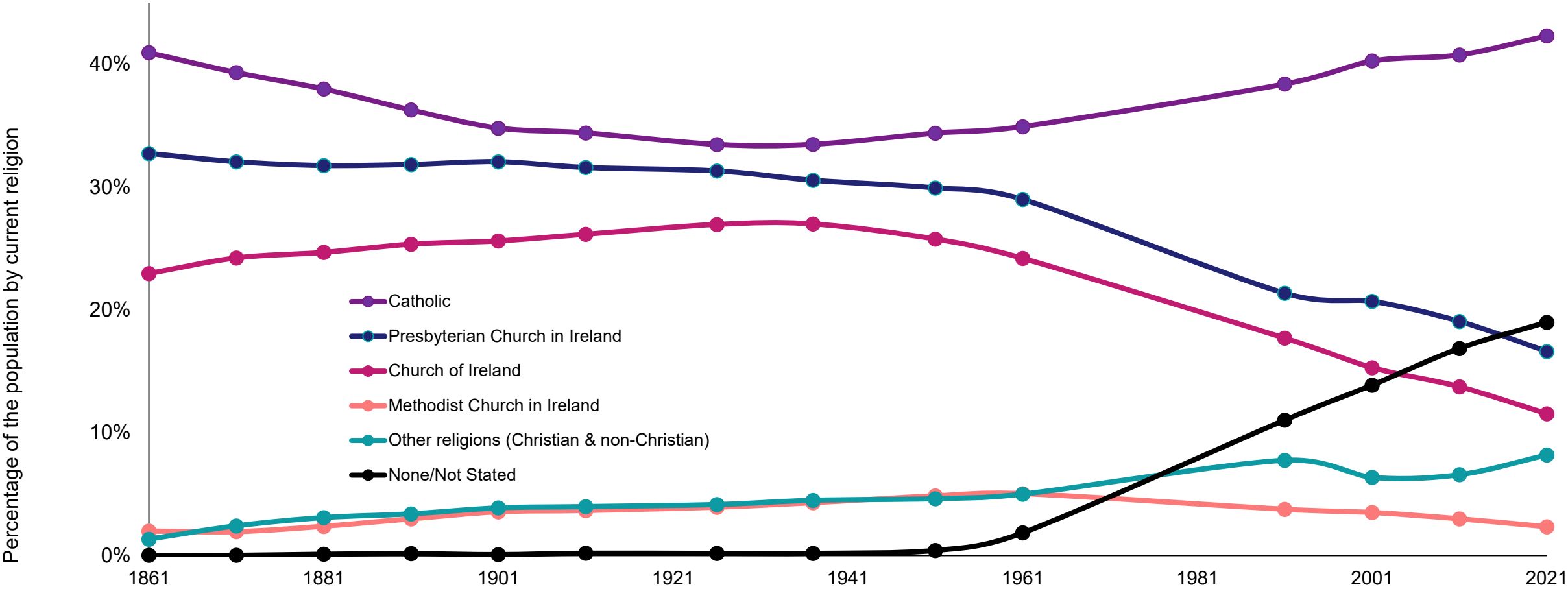
Country of birth

Born outside UK/Ireland up to 6.5% (next slide)

Percentage of NI population born outside UK and Ireland



Percentage of the population by current religion (1861 - 2021)



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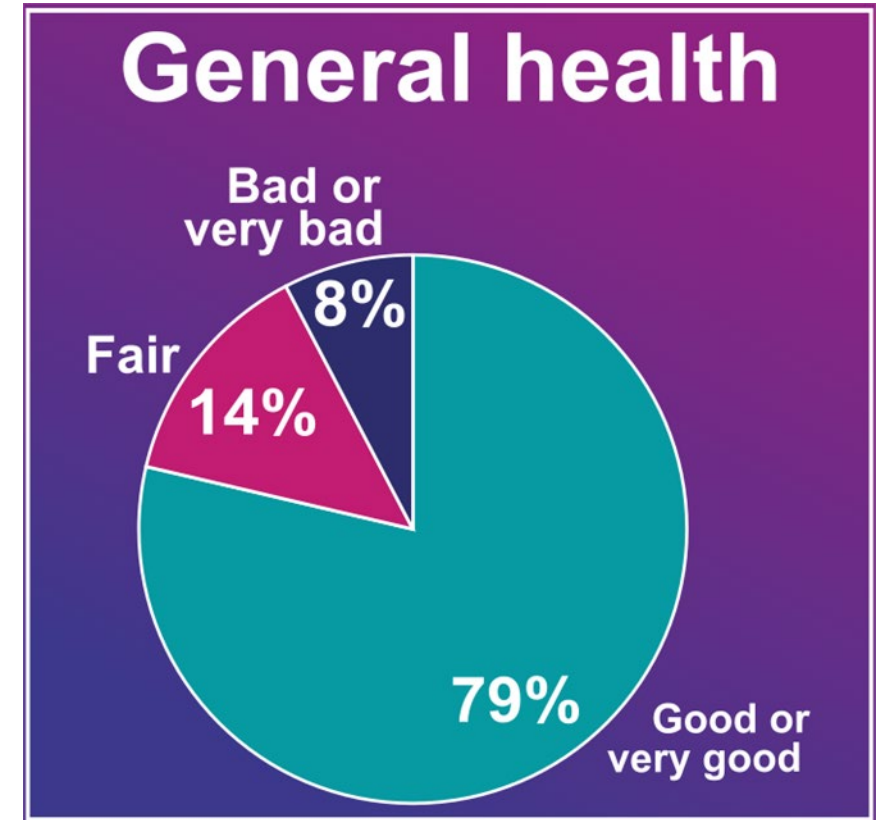
Census 2021 Results

Key messages: Health, Labour Market and Qualifications

More 'bad or very bad' general health

- 1.5 million people, or just under four persons in every five (79%), had 'good or very good' general health.
- 260,000 people had 'fair' general health.
- 150,000 people had 'bad or very bad' general health. (7.7%) (5.6%)

(%) - 2011 figure

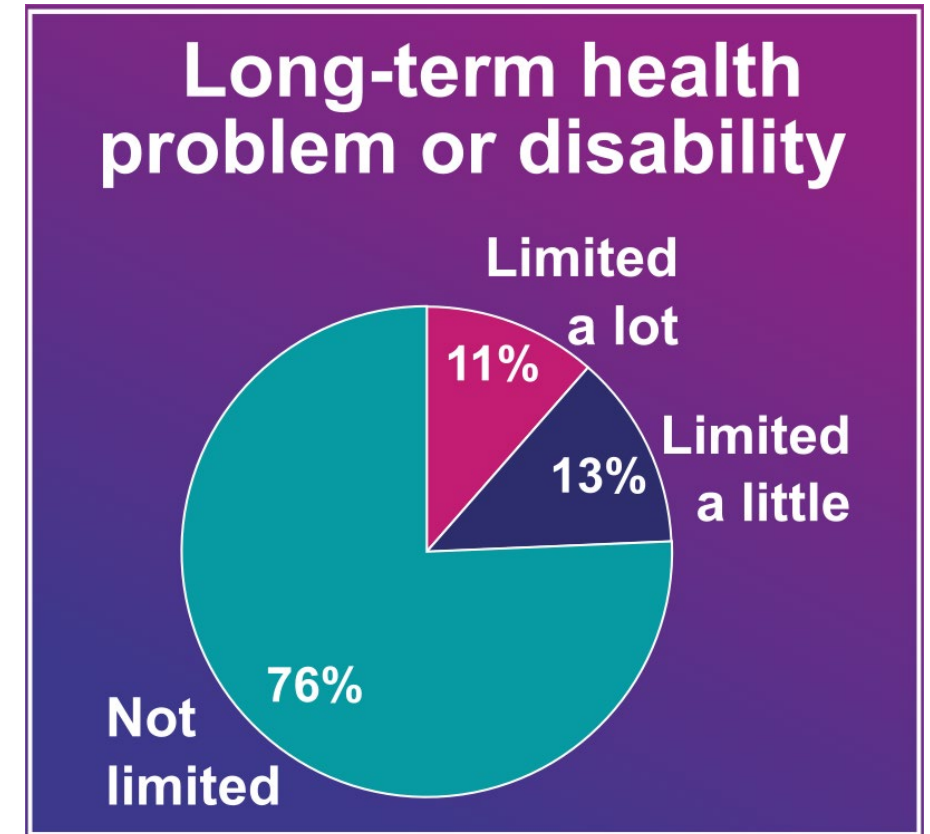


Long-term health problems more prevalent

One person in four (24% or 463,000 people) had a limiting long-term health problem or disability (21%)

1.44 million people (76%) indicated they were not limited (79%)

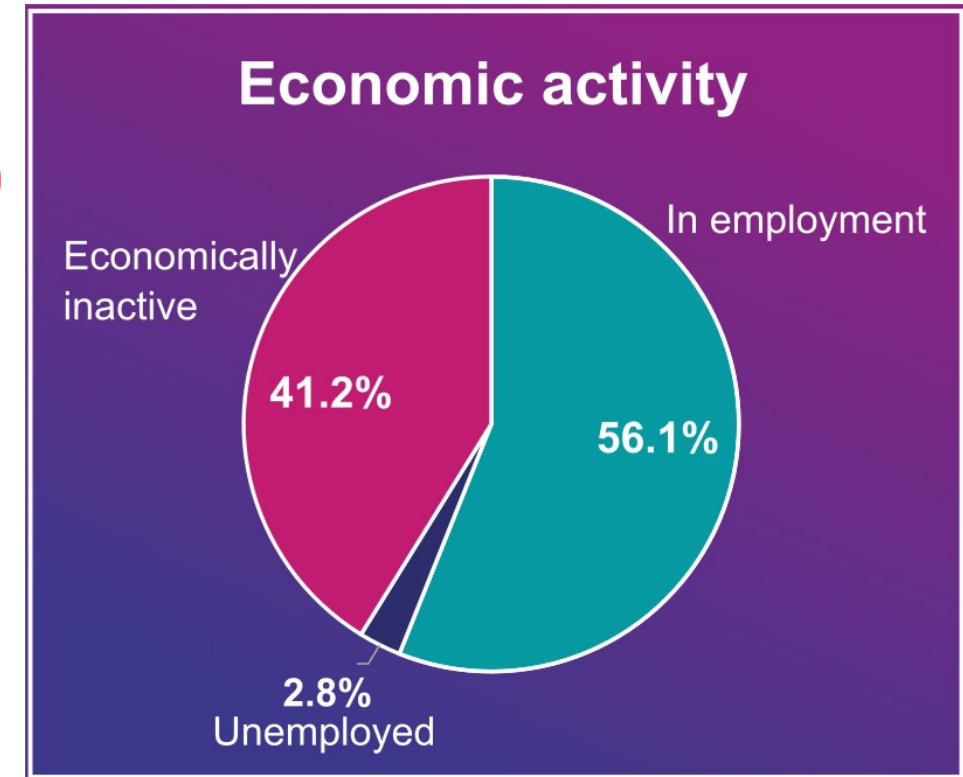
(%) - 2011 figures



Labour Market – employment levels similar

1.5 million adults aged 16 and over

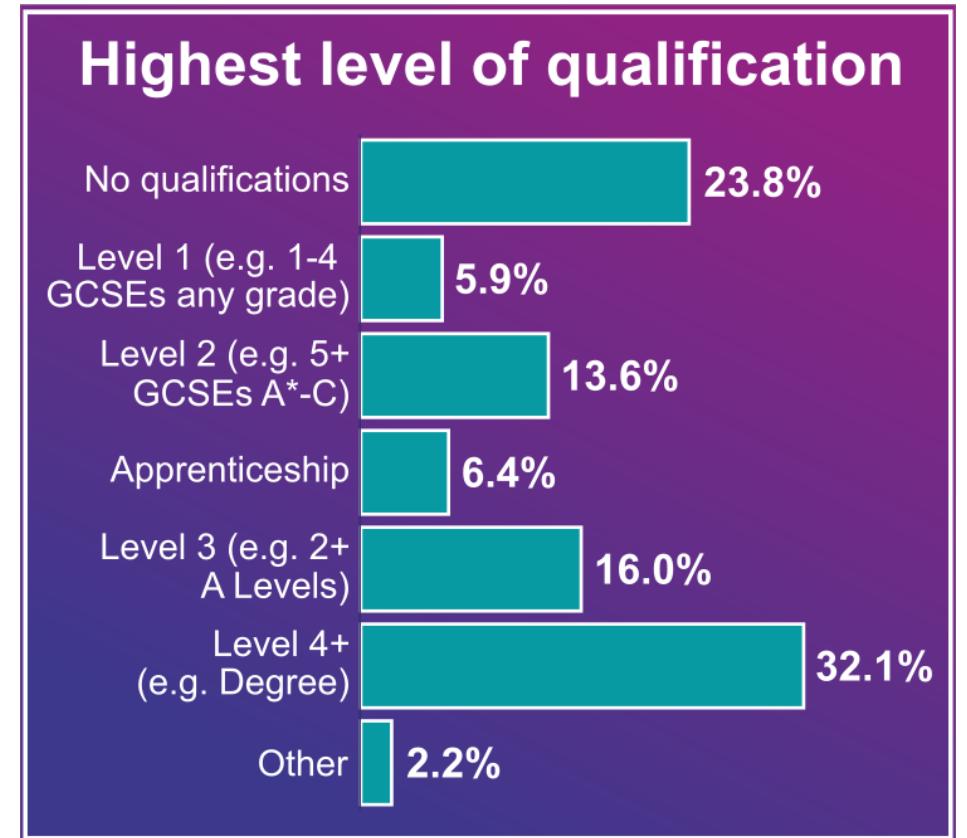
- 849,100 (56%) in employment (56%)
- 41,900 (3%) unemployed (5%)
- 623,700 (41%) economically inactive (39%)



(%) - 2011 figures

Fewer people with no qualifications

- Almost 1 in 3 adults (32%, 486,300) had degree/NVQ 4 or above (24%)
- While just under one-quarter (24%, or 360,600) had no qualifications (29%)



(%) - 2011 figures

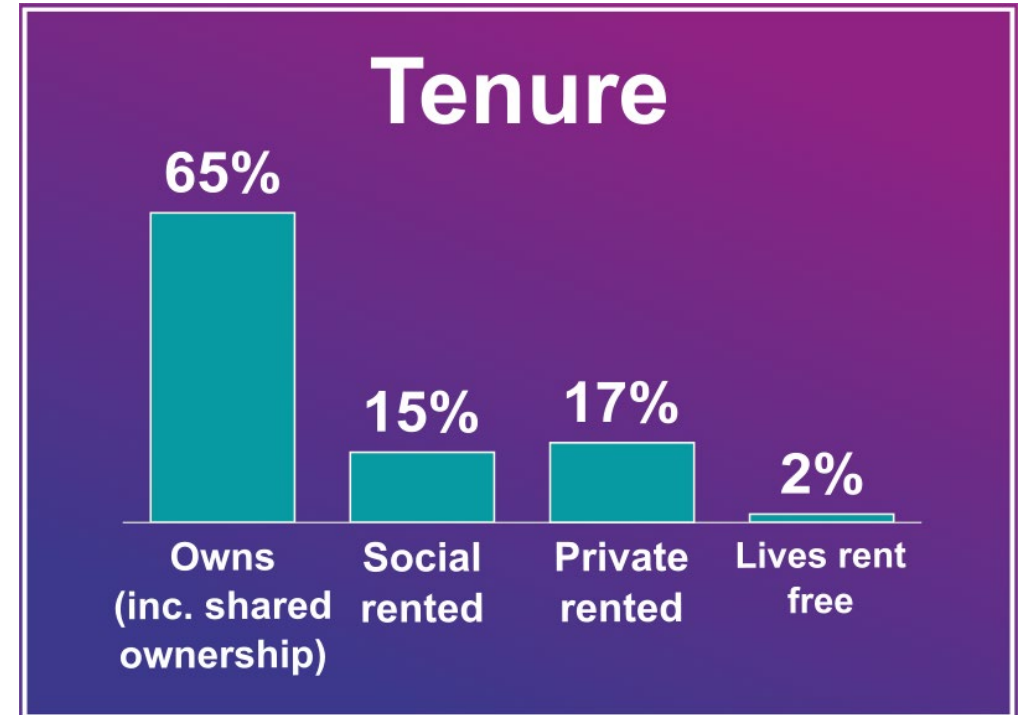
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Census 2021 Results

Key messages: Housing

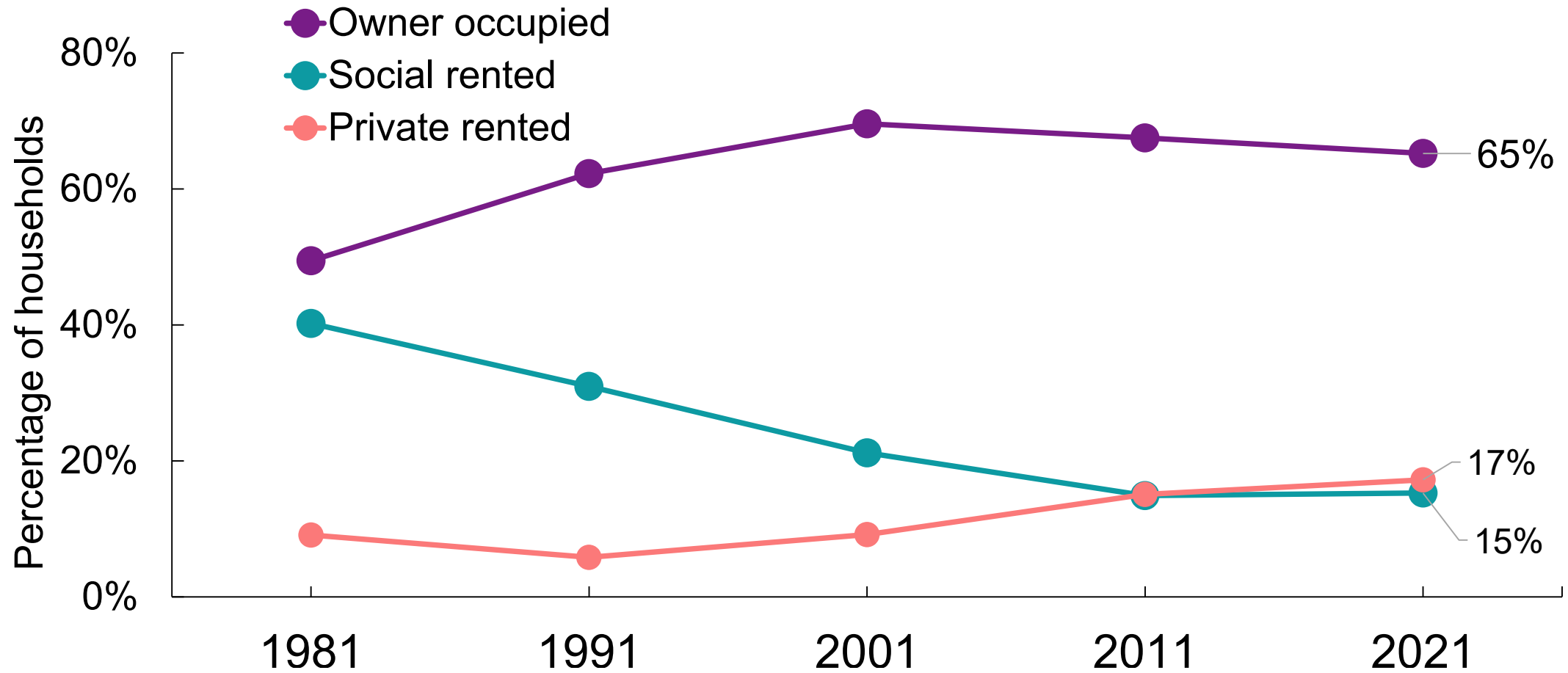
Over half a million households own their own homes

- Owner occupied – either outright or with a mortgage 501,500 (65%) (68%)
- Social rented 104,900 (15%) (15%)
- Private rented 132,400 (17%) (15%)



(%) - 2011 figures

Tenure (1981-2021)

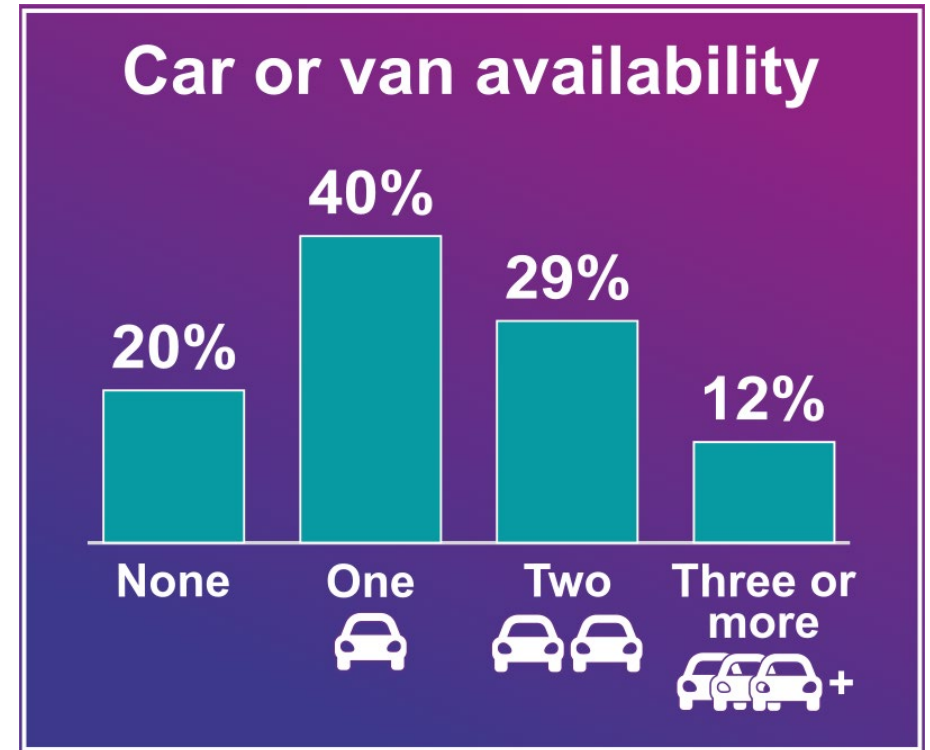


There are over 1 million cars or vans

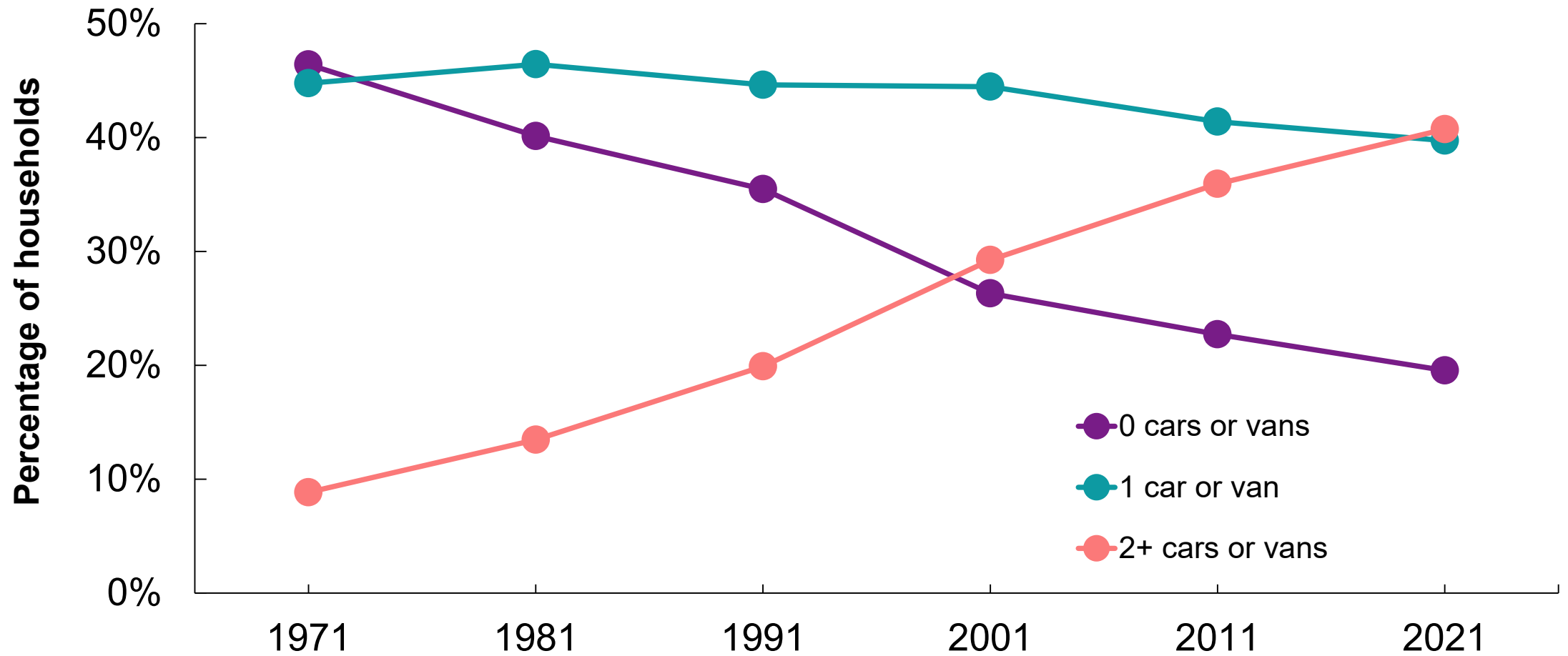
For the first time in a Northern Ireland census, over one million cars or vans (1.067 million)

- up from 271,500 in the 1971 Census, a four fold increase
- over 80% of households had a car or van available (77%)
- only one in five did not have access to a car or van (23%)

(%) - 2011 figures



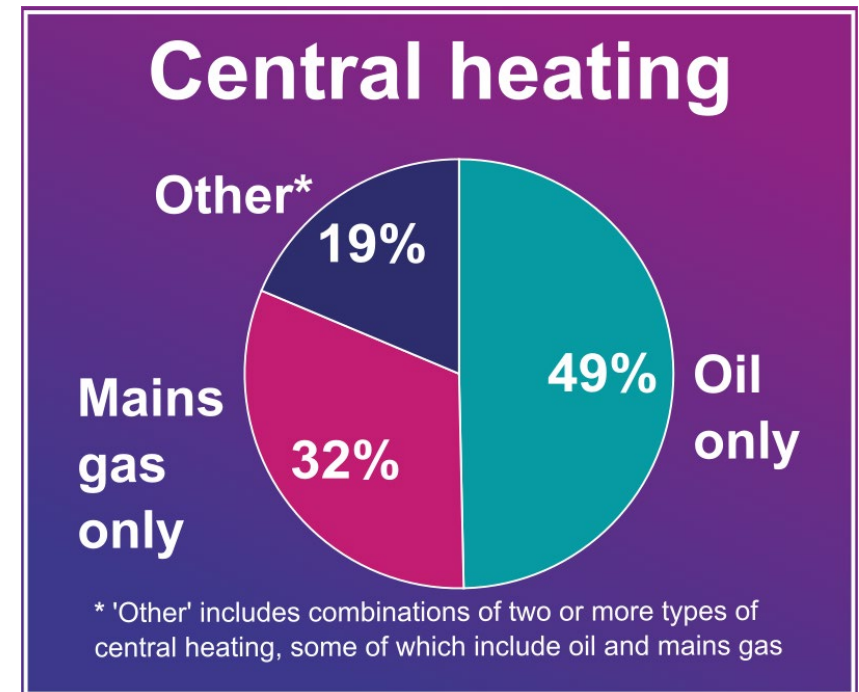
Car or van availability (1971-2021)



Oil still the most common central heating

- Oil is the most common central heating 480,600 households (or 62.5%)
- Mains gas is second with 256,500 households (or 33.4%)
- 2,400 households (0.3%) had no central heating (0.5%)

(%) - 2011 figure



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Census 2021 Results

Key messages: New questions

Sexual orientation question

Which of the following best describes your sexual orientation?

Straight or Heterosexual

Gay or Lesbian

Bisexual

Other sexual orientation
Enter sexual orientation

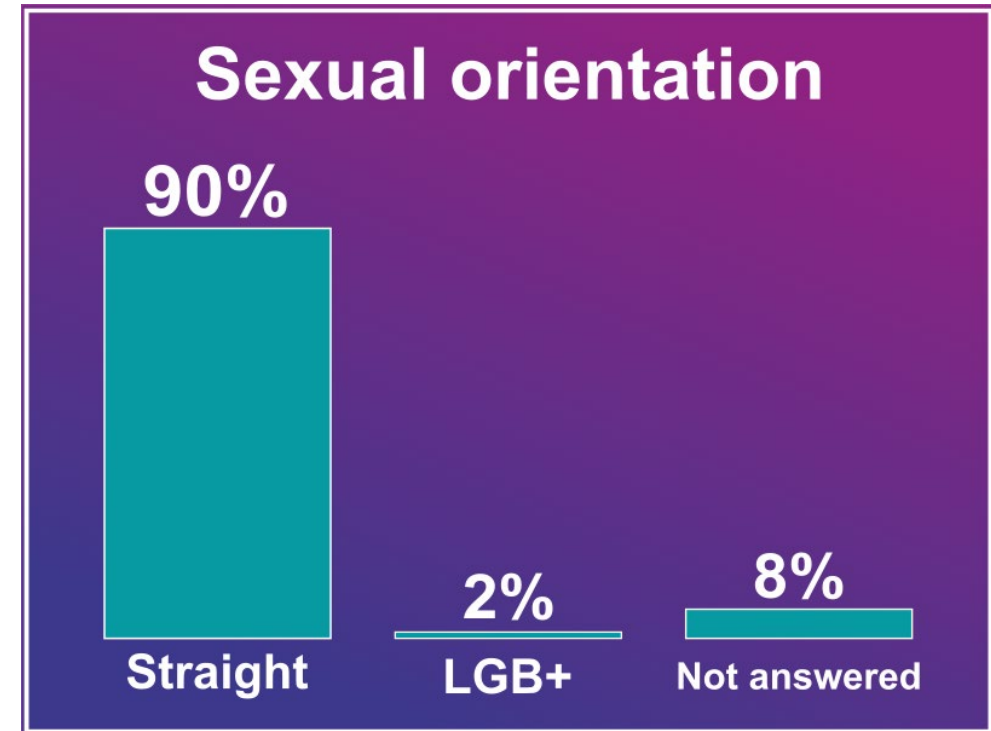
or

Prefer not to say

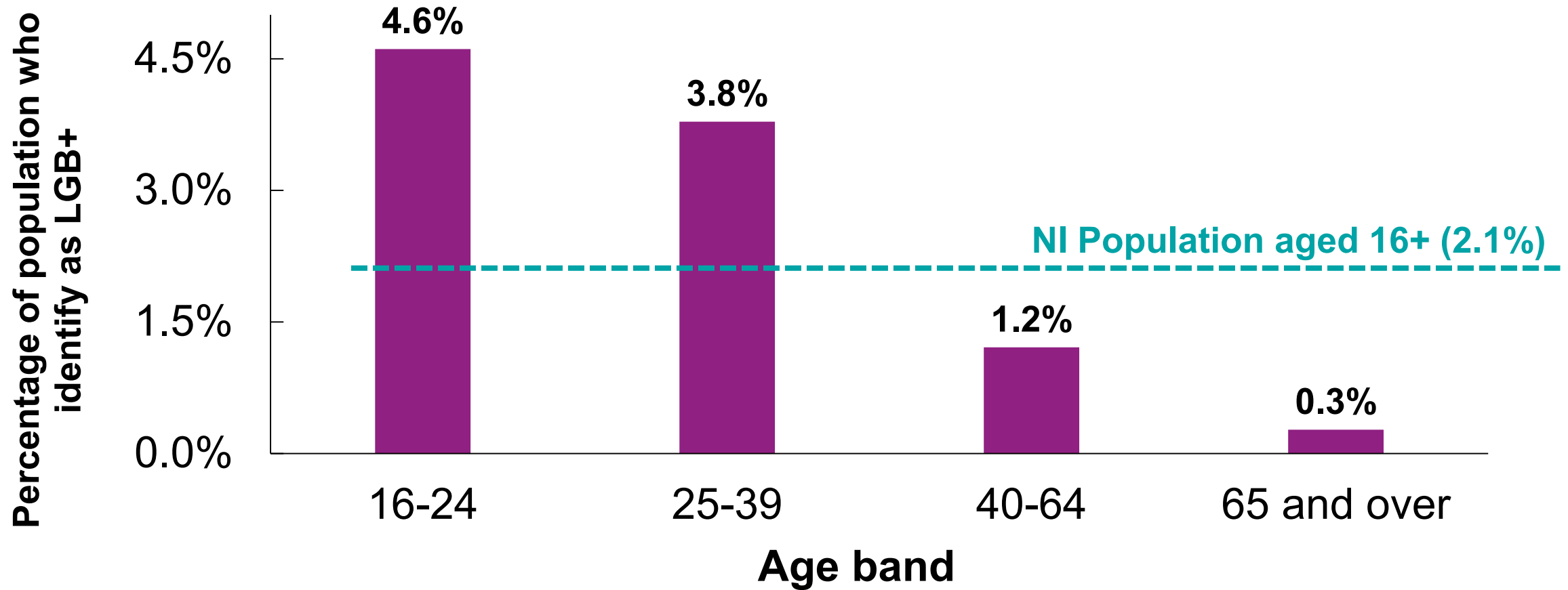
- new question in Census 2021
- only asked of people aged 16 and over
- while census is compulsory - sexual orientation question had **no** statutory penalty

Sexual orientation

- 1.364 million people (90%) identified as 'straight or heterosexual'
- 31,600 people (or 2%) identified as LGB+ ('lesbian, gay, bisexual or other sexual orientation')
- 119,000 people (8%) either did not answer the question or ticked 'prefer not to say'



Percentage of population within age band who identify as LGB+



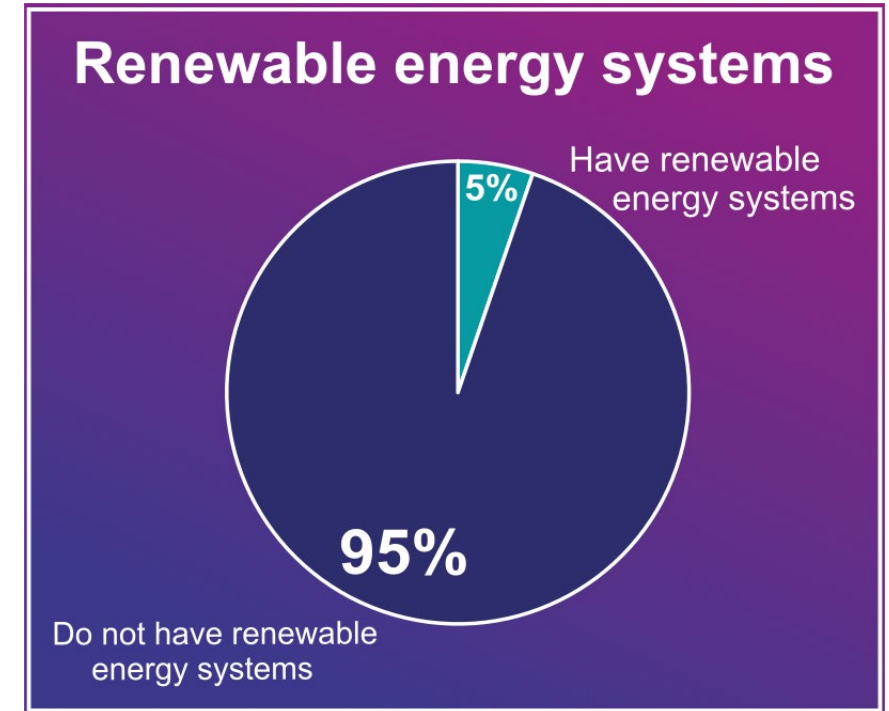
Renewable energy systems

New question for Census 2021

Over 5% of households had one or more renewable energy systems installed

The most common systems are:

- solar panels for electricity (24,200 households) and
- solar panels for heating water (18,600 households)



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Census 2021 Results

Future plans

Future release plans

Release Title	Detail	Geography
Flexible Table Builder – Updates	As new variables or geographies become available, for example, parliamentary constituencies	Release dependent
Postcode level estimates	Postcode level outputs of estimated count of households and population	Postcode
Main Statistics for smaller areas	Selection of main statistics tables for Settlements and current Electoral Wards	Settlements and Wards
Grid square product	Grid square level dataset of Census 2021 variables	Grid square
Longitudinal Study	Updating the NLS to include Census 2021	Project dependent

Updated release plans published will be published in our Census 2021 outputs prospectus:
www.nisra.gov.uk/statistics/2021-census/outputs-prospectus/release-plans

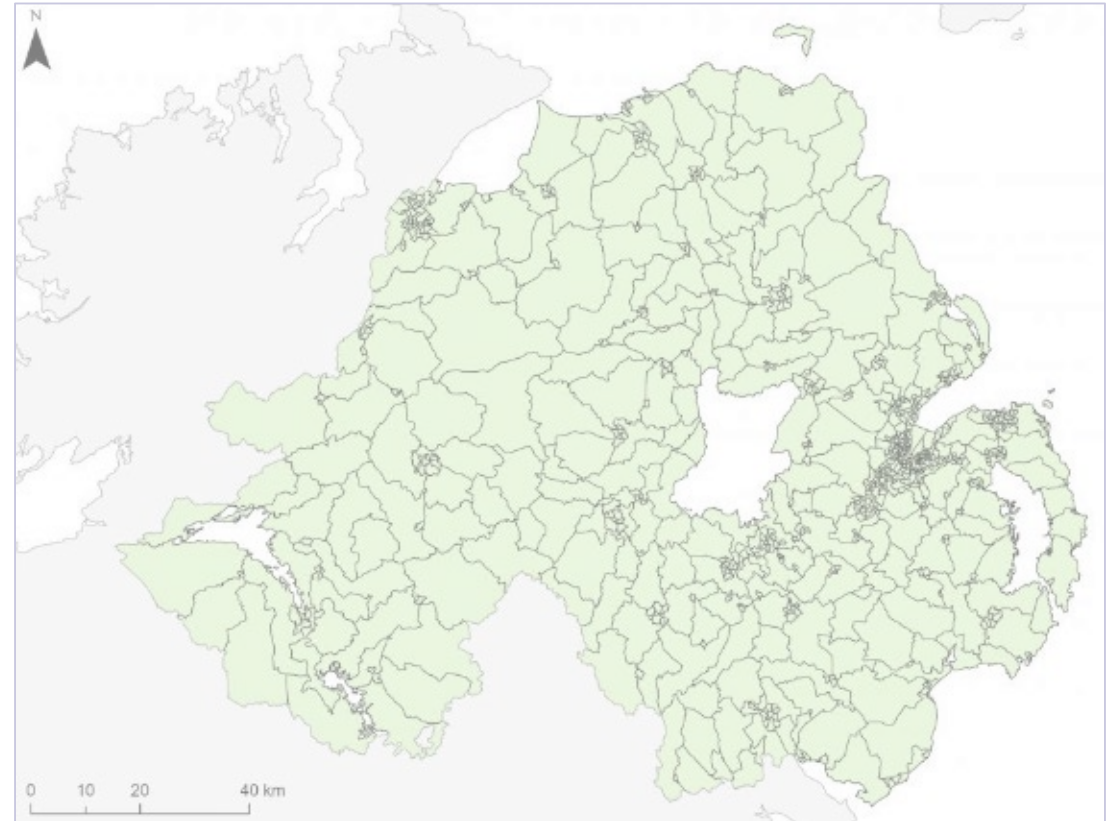
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New Census 2021 output geography

New Geography: Overview

- Brief overview of Northern Ireland (NI) census geography
- New output geographies for Census 2021
 - why they were required
 - hierarchy, codes and names, key features
- Census 2021 statistics for other geographies

- Geography has a central role
- Preparation and collection
- Outputs produced for range of geographical areas while protecting confidentiality of the data



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Census local-level geographies

Census 2001

Output Areas (5,022)

Super Output Areas (890)

Census 2011

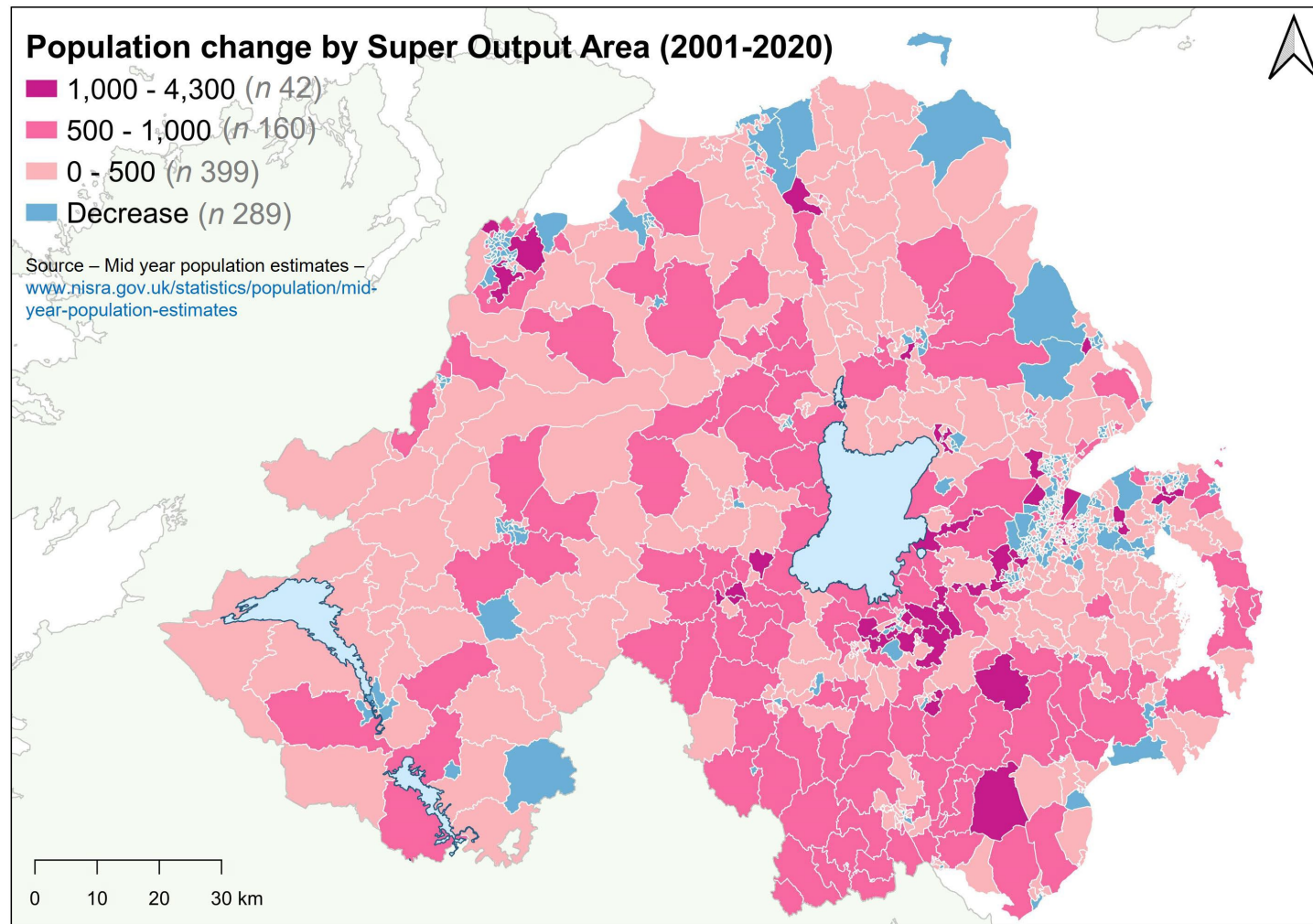
Small Areas(4,537)

Super Output Areas (890)

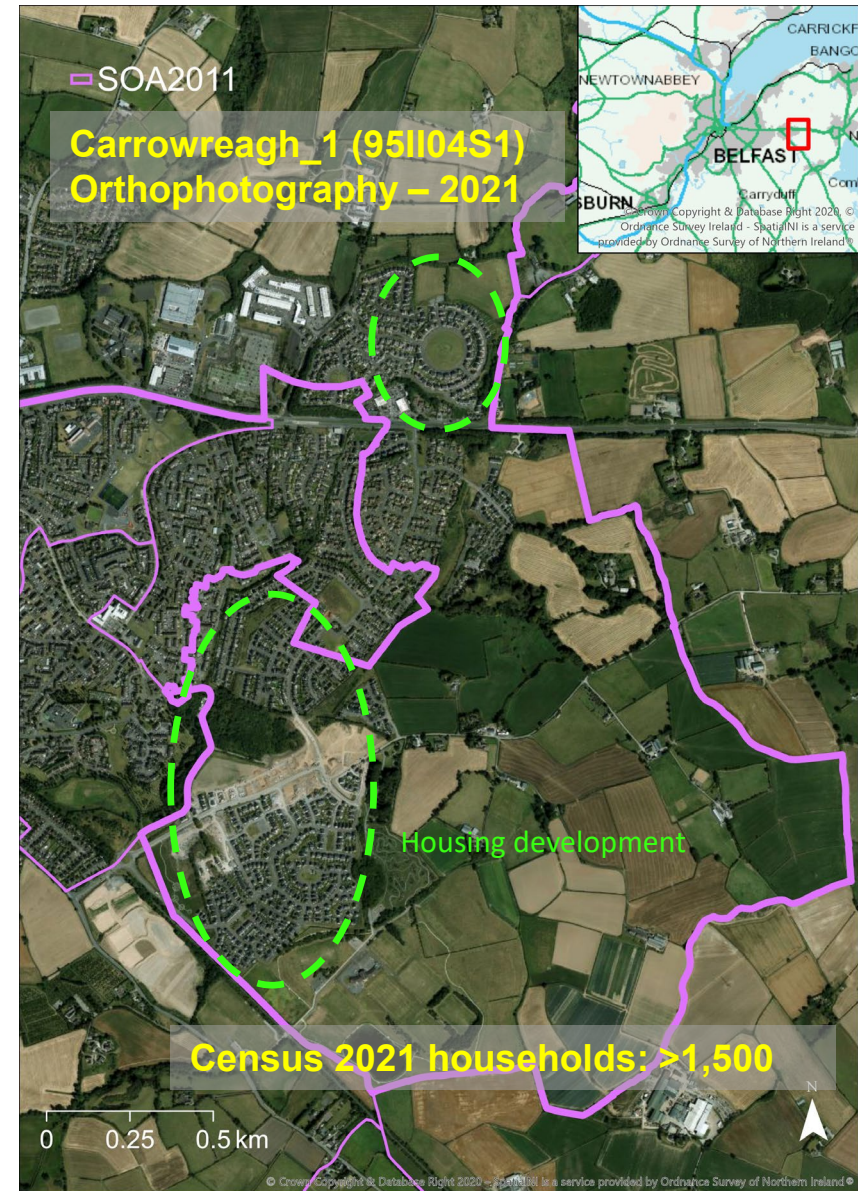
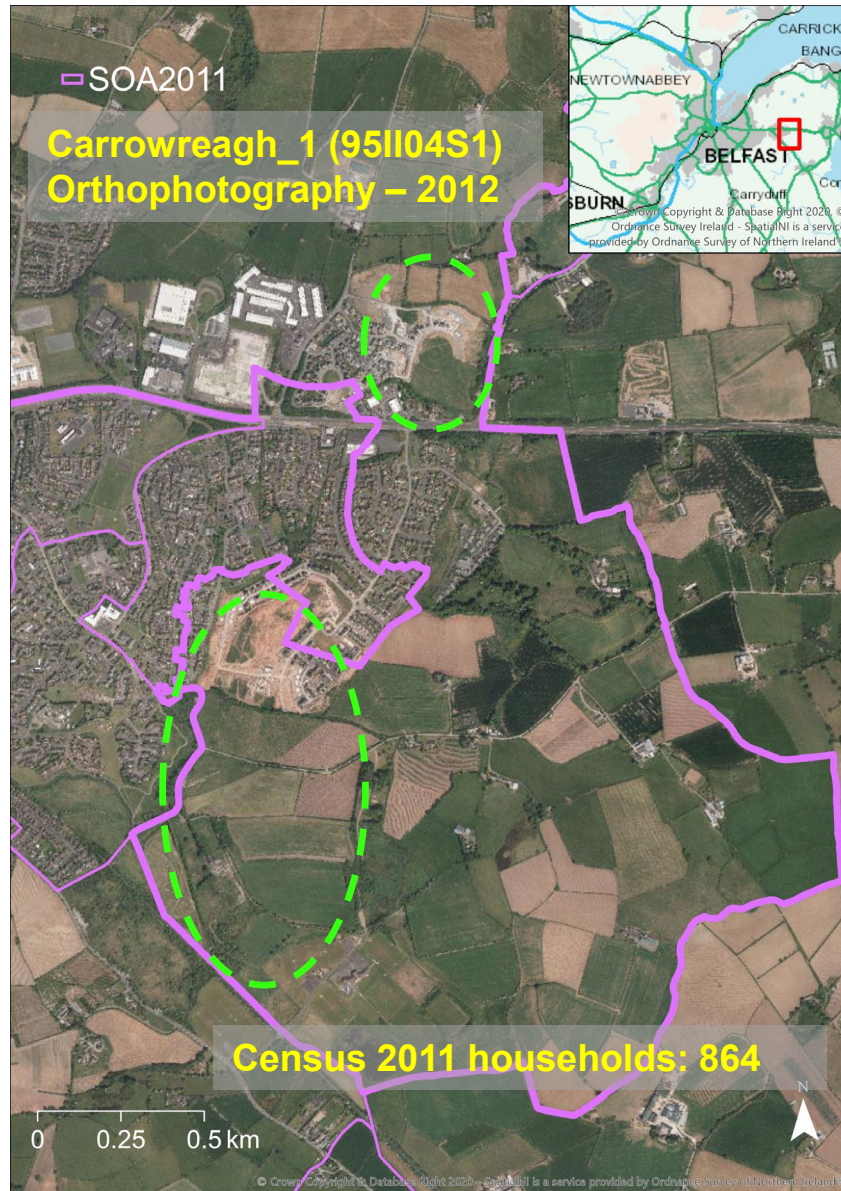
census 2021 Why new geographies were needed

- Areas linked to former local government boundaries
- Super Output Areas and Small Areas created using outdated data
- Population growth and housing development in certain areas
- Particular features of Small Area geography, e.g. irregular shape

Population change since 2001



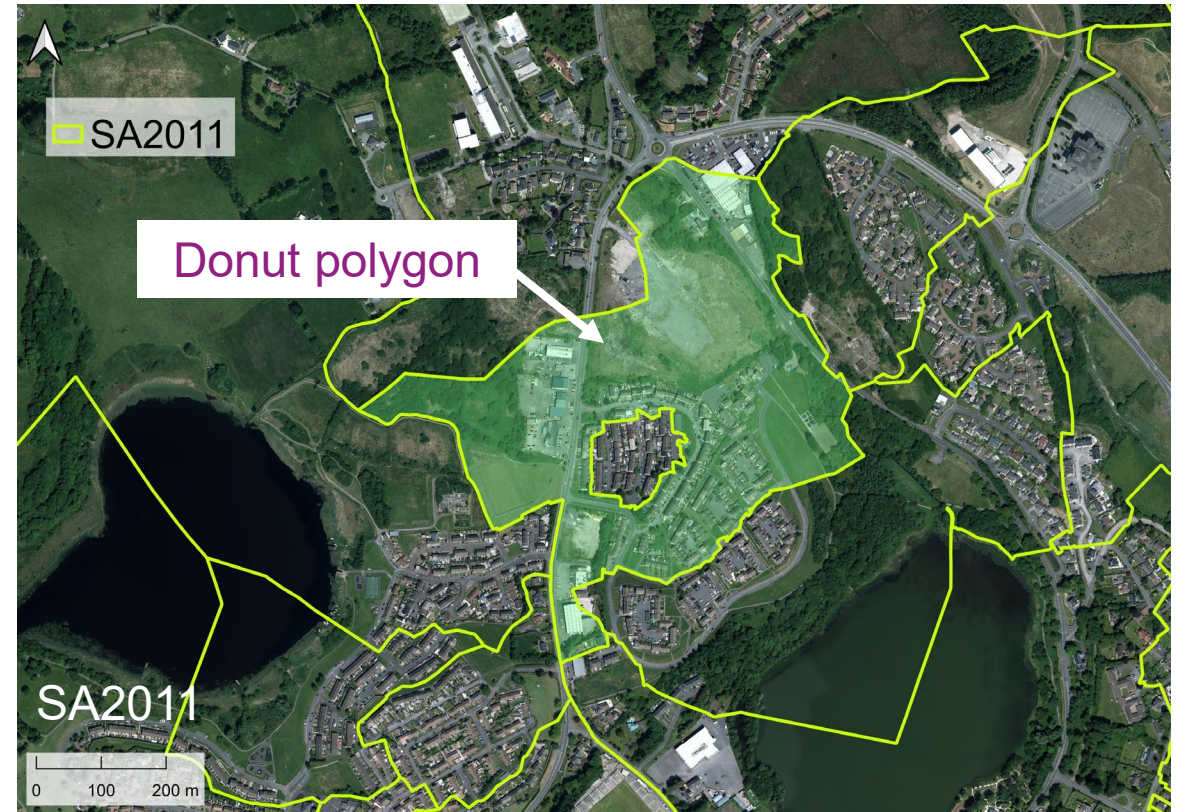
Example of an area that experienced high population growth since 2011



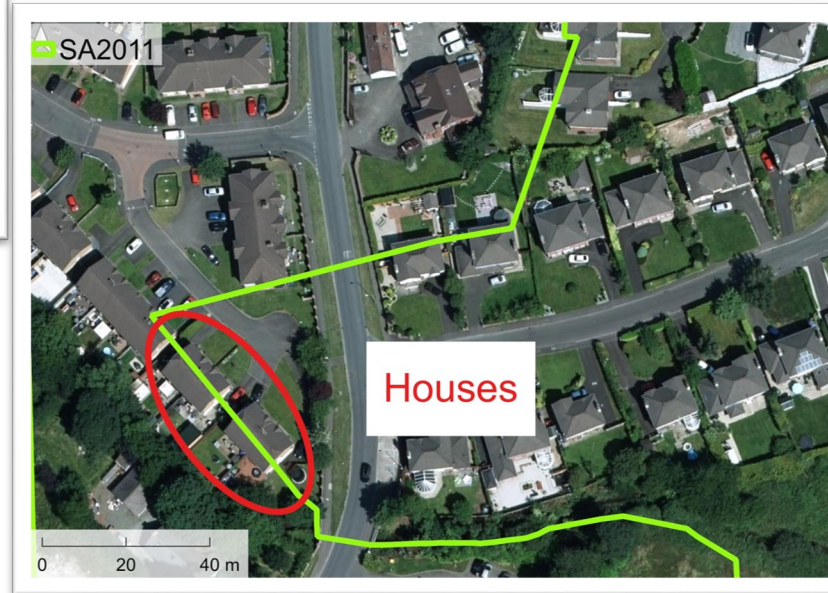
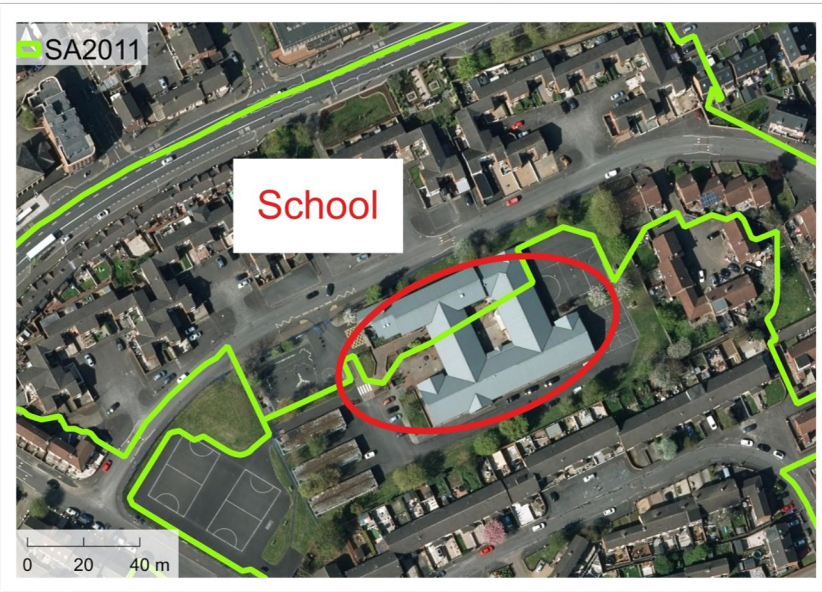
Irregular-shaped areas – example



Irregular-shaped areas – more examples



Small Area boundaries



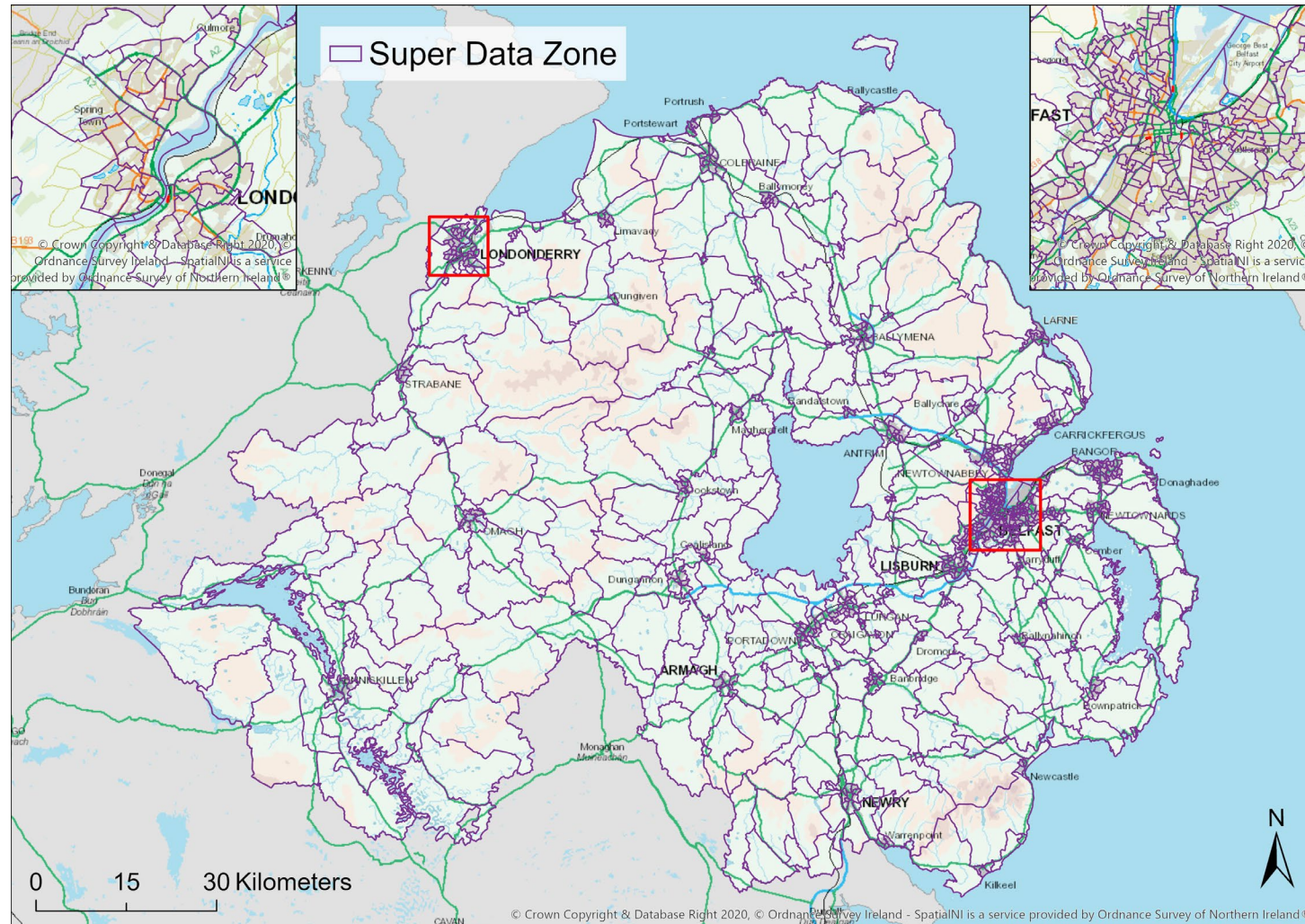
Data Zones

- Lower level
- 3,780 areas

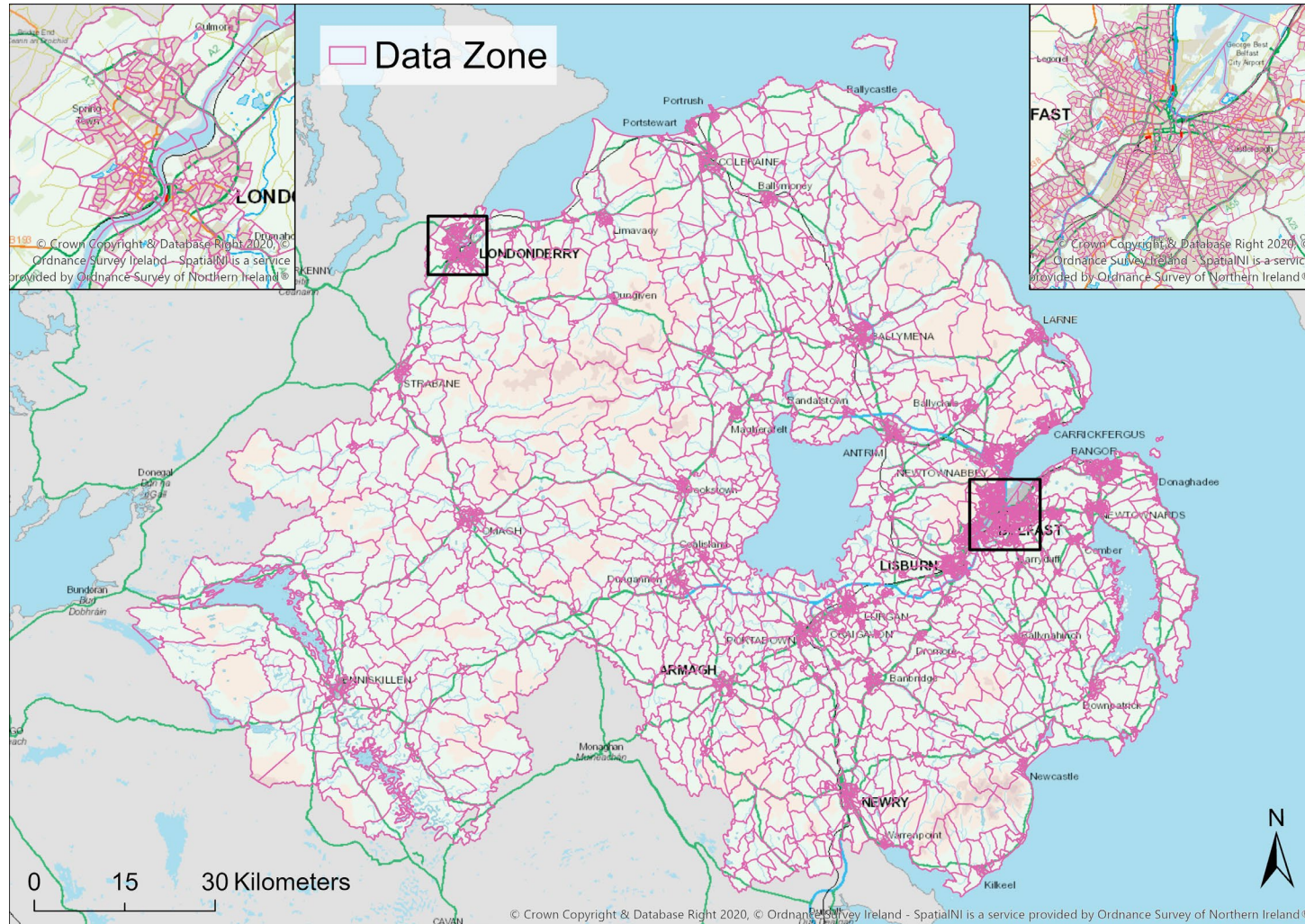
Super Data Zones

- Higher level
- 850 areas

Census 2021 Super Data Zones

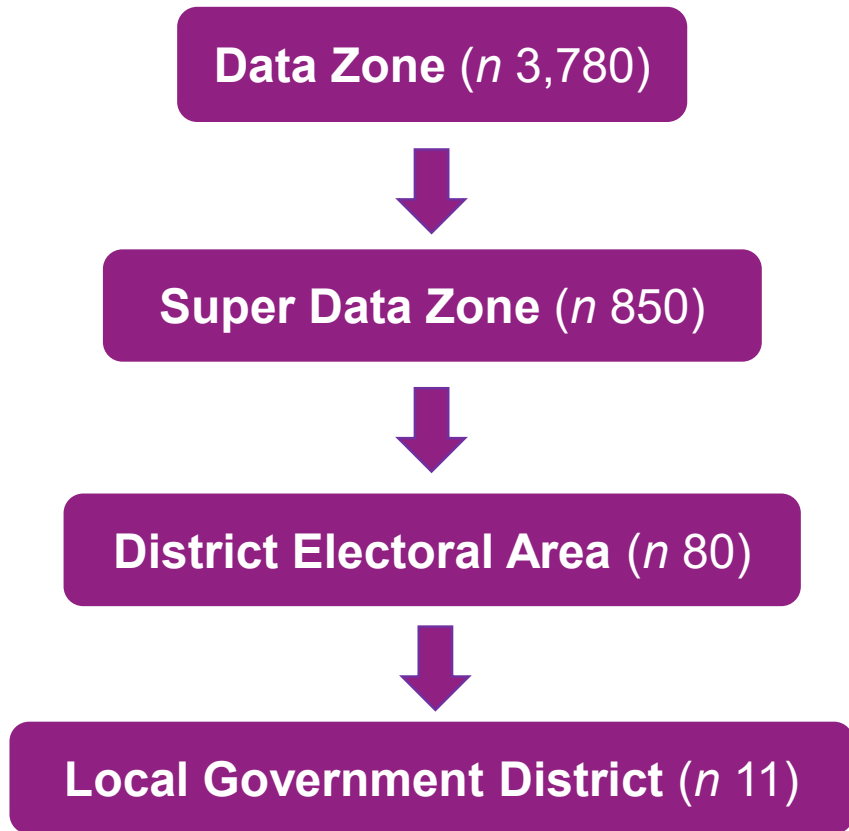


Census 2021 Data Zones

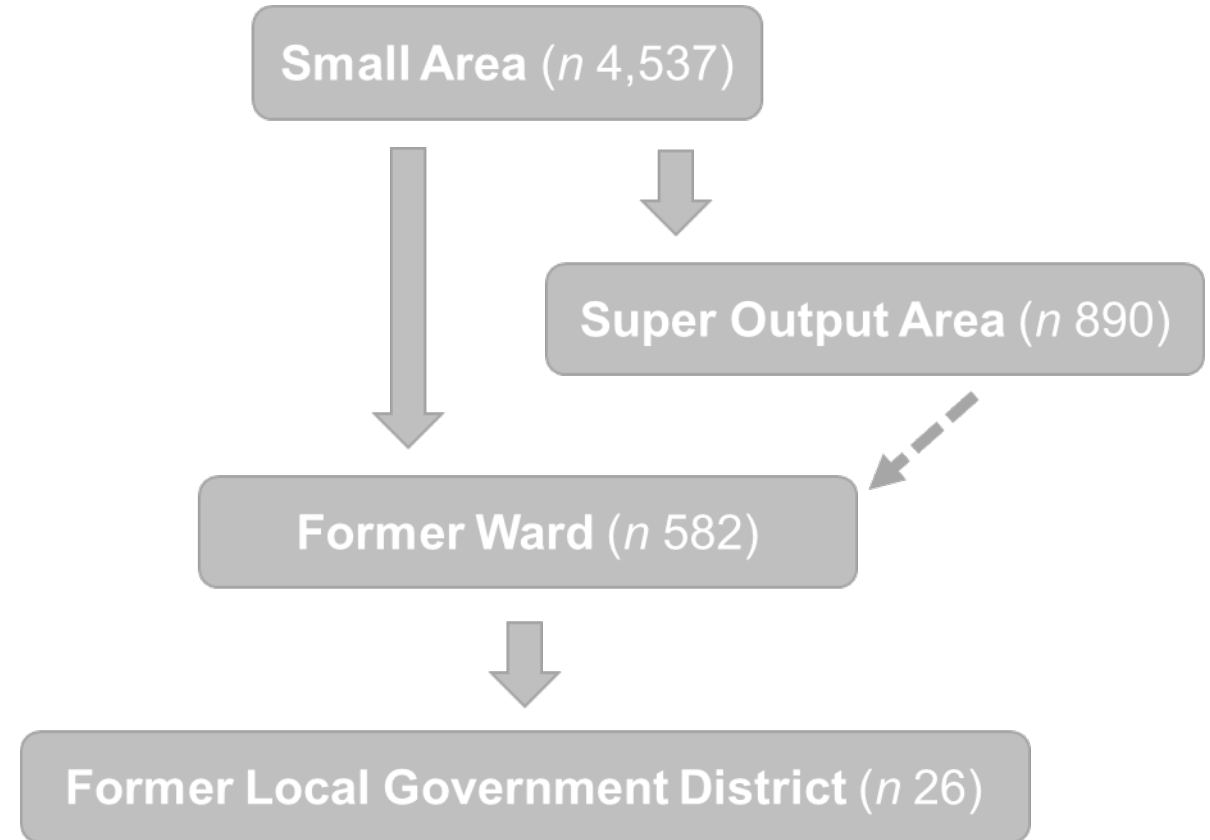


Output geography hierarchy

Census 2021



Census 2021



Code format

Geography identifier –
Super Data Zone

N21000115

Country
identifier – NI

Area identifier –
Lurgan_J

Geography identifier –
Data Zone

N20000510

Country
identifier – NI

Area identifier –
Lurgan_J1

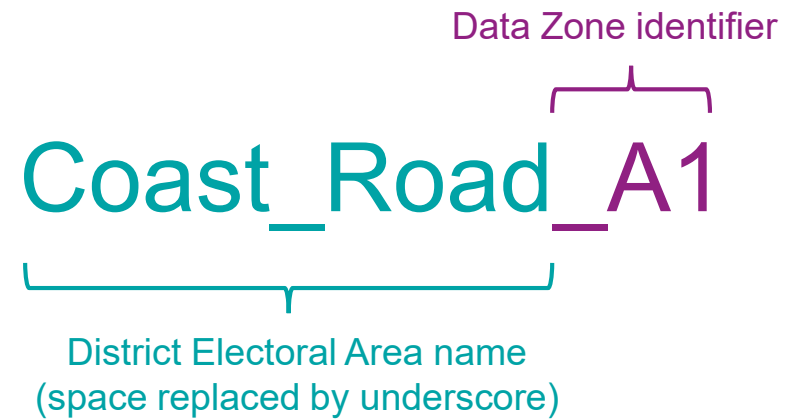
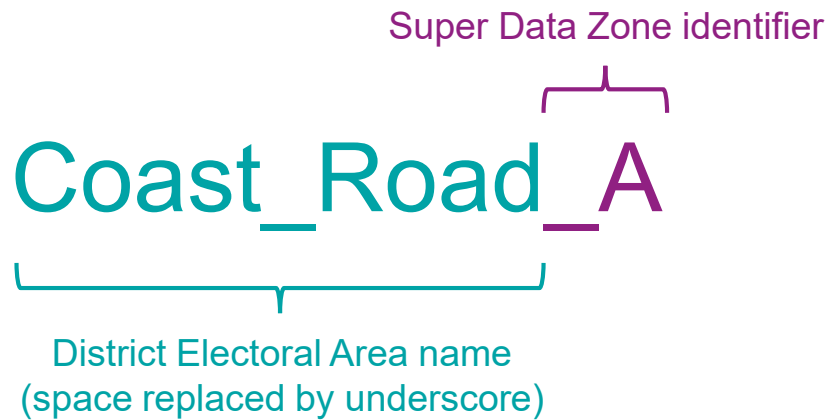
Geography identifier –
Local Government District

N09000009

Country
identifier – NI

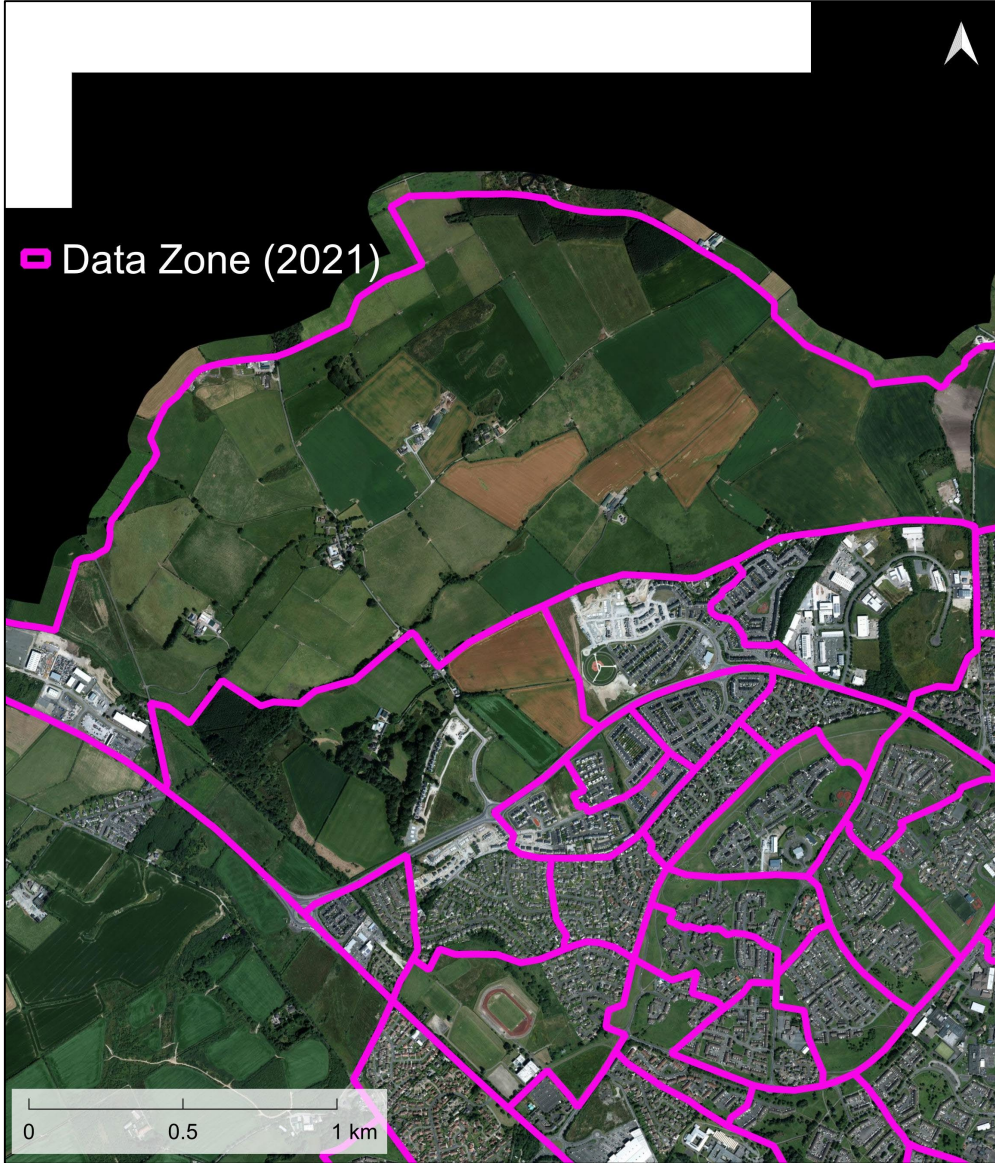
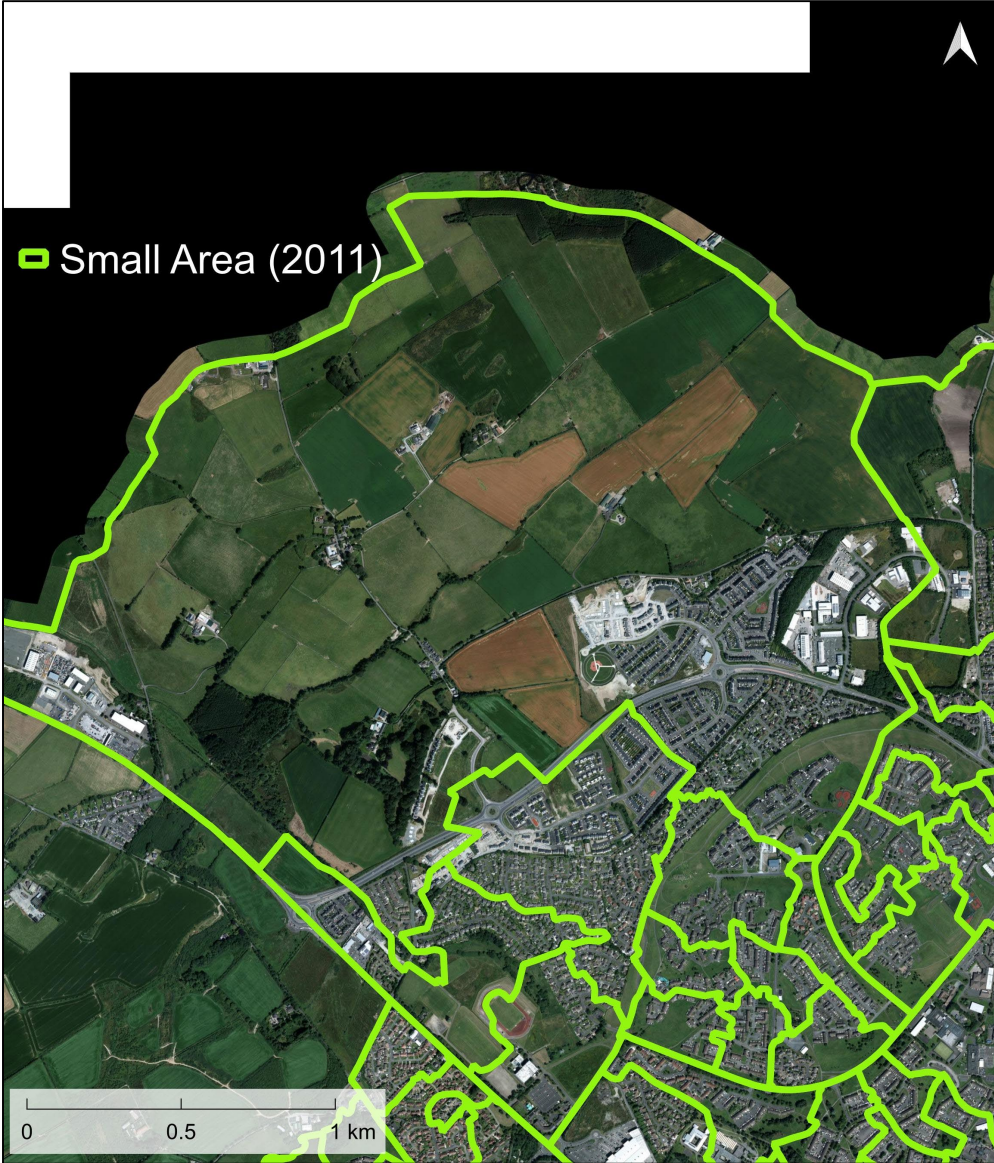
Area identifier –
Mid Ulster

Name format



- More balanced distribution of population across areas
- Readily identifiable boundaries and compact shape
- Internally similar - tenure and accommodation type
- Nesting within DEAs and LGDs
- Alignment with larger settlements

Example of new geography better reflecting the spatial distribution of the population



Ballyclare - comparing geographies



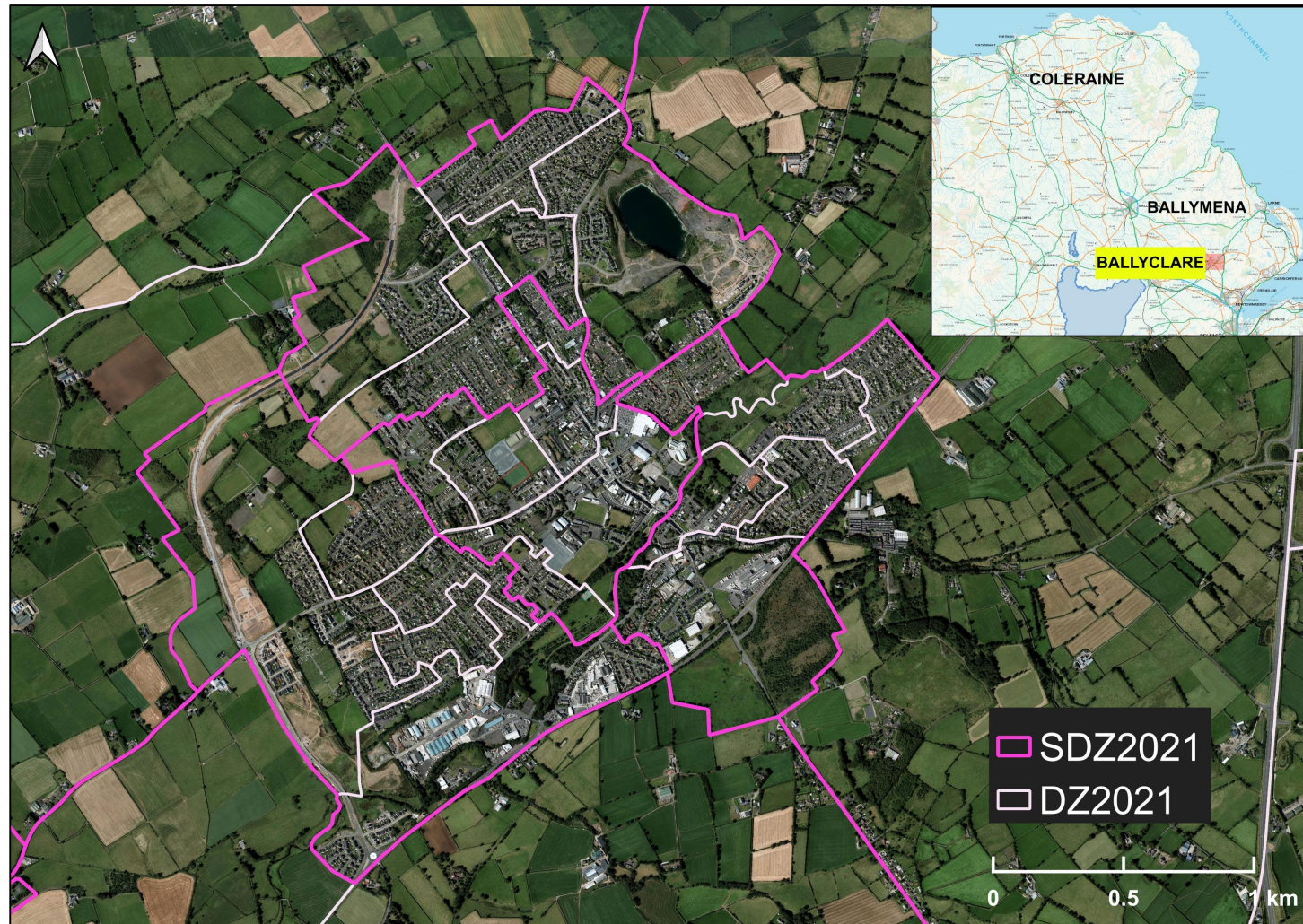
Ballyclare – Census 2011 Small Area boundaries



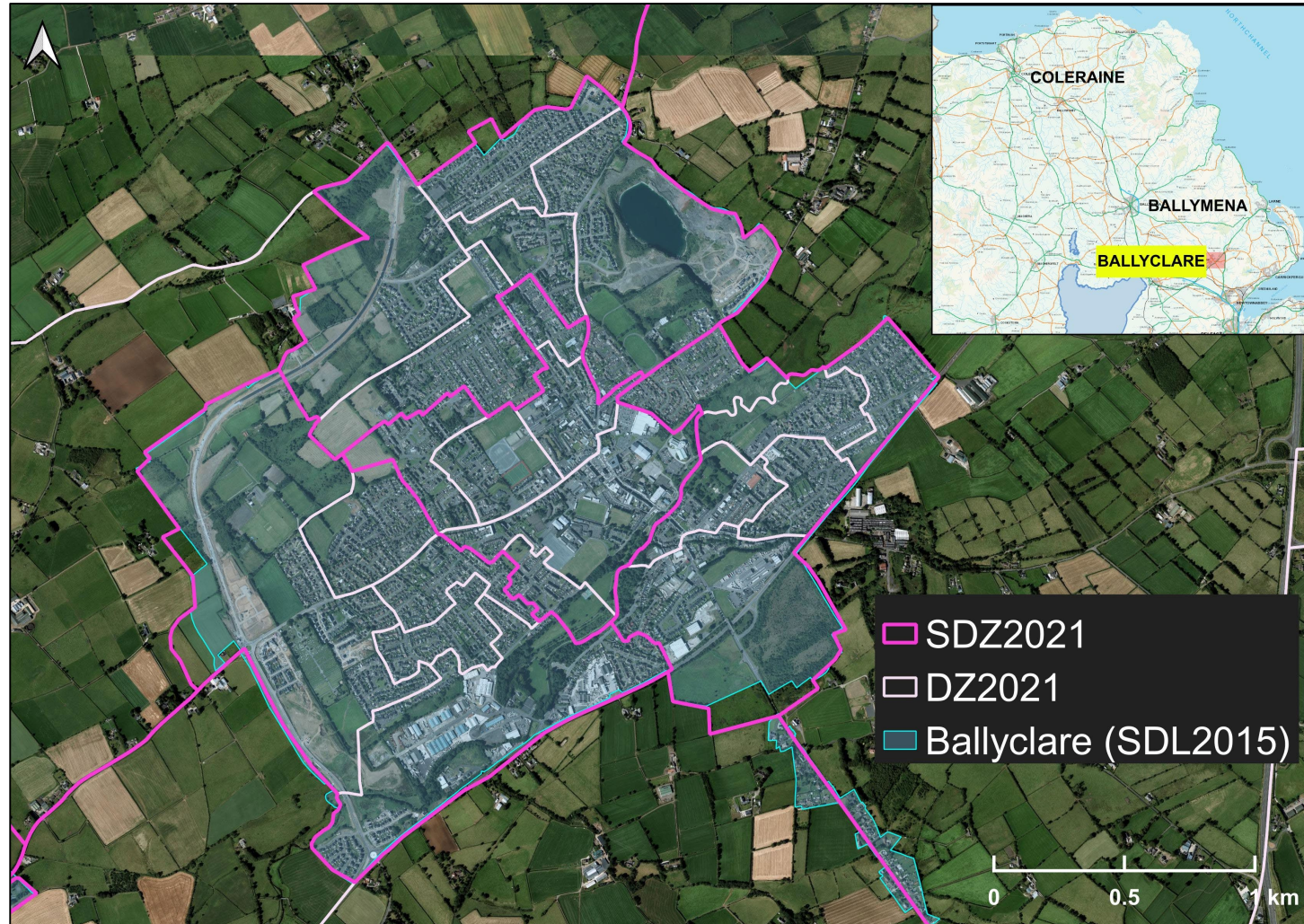
Ballyclare – Census 2021 Data Zone boundaries



Ballyclare Census 2021 Super Data Zone and Data Zone boundaries



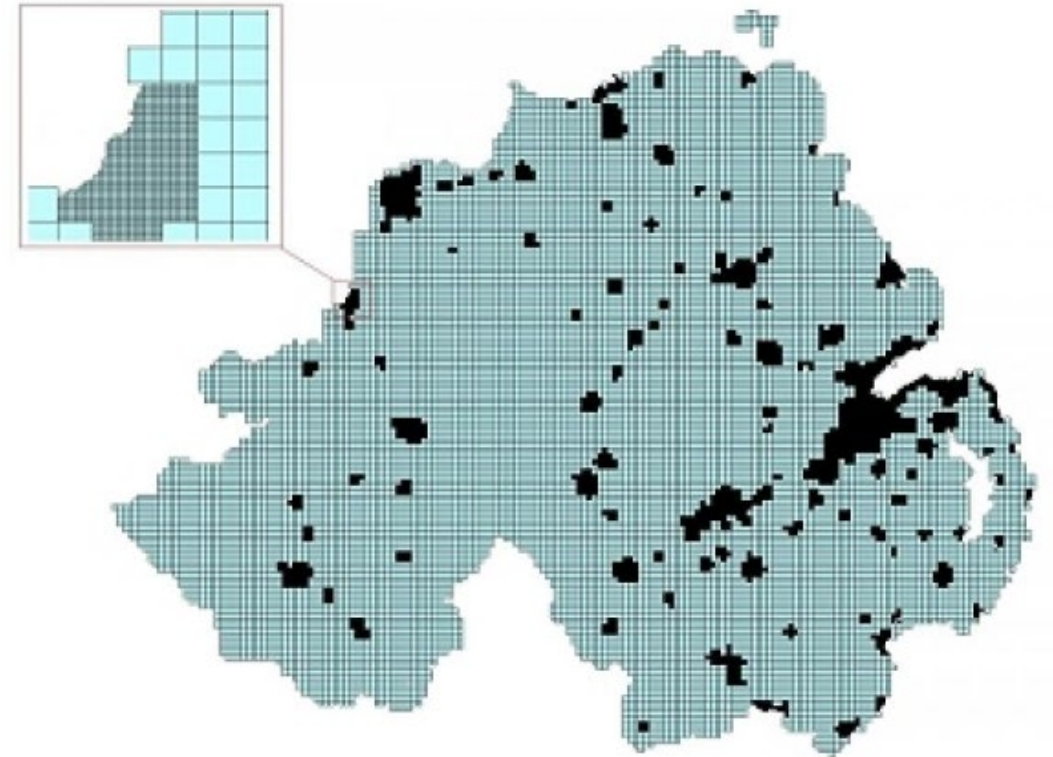
Ballyclare – Census 2021 Super Data Zone, Data Zone and Settlement boundaries



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Census 2021 Statistics for other geographies

- Combined 1km and 100m grid squares
- More restricted range of outputs (typically univariate) to counter increased disclosure risk
- Data suppressed in grid squares with small population → threshold of 30 persons in 10 households used for Census 2011



Building to other geographies



Exact — Data Zones nest within higher geography

Approximated

Aggregated best-fit Data Zones
where approximation within 5%
accuracy threshold

Aggregated best-fit grid squares
where Data Zone approximation
beyond 5% accuracy threshold

Aggregation base – Data Zones

Geography	Areas	Areas within 5% accuracy threshold				Statistics type
		Population		Households		
Local Government District	11	11	100%	11	100%	Exact - Aggregation of nested Data Zones
District Electoral Area	80	80	100%	80	100%	
County	6	6	100%	6	100%	Approximated - Aggregation of Data Zones via best-fit
Health and Social Care Trust	5	5	100%	5	100%	
Local Government District (former)	26	26	100%	26	100%	
Parliamentary Constituency (2008)	18	18	100%	18	100%	
Parliamentary Constituency (2024)	18	18	100%	18	100%	
Settlement (2015)						
Band A - Belfast	1	1	100%	1	100%	
Band B - Derry City	1	1	100%	1	100%	
Band C - Large town	14	14	100%	14	100%	
Band D - Medium town	10	10	100%	10	100%	
Band E - Small town	17	14	82%	17	100%	
Band F - Intermediate settlement	24	20	83%	21	88%	

Aggregation base – Grid squares

- Geographies unsuitable for Data Zone aggregation will be considered for approximation using aggregated best-fit grid squares, for example, current electoral wards, smaller settlements

Note

- More restricted range of outputs for grid squares
- Statistics for grid square-approximated geographies will not be available via the flexible table builder

Finally, resources for users

- Digital boundaries (shapefile, geodatabase, GeoJSON)
- Information papers
- Lookup table – approximating higher-level geographies via aggregation of Data Zones
- Census 2021 population-weighted centroids

www.nisra.gov.uk/statistics/2021-census/results/census-output-geography

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Our self-service products

Census area explorer and Flexible Table Builder

Digital products

To date Census Office has released 2 significant digital products:

- Census Area Explorer
- Flexible Table Builder

Census Area Explorer

Area Explorer allows users to:

- explore the various Census 2021 geographies
- see the main topics from Census 2021
- see area comparisons, with NI and Census 2011

[Demo](#)

Flexible Table Builder

- First time users have been able to build their own tables
- Replaces previous pre-canned table approach
- Flexible Table Builder allows users to:
 - create custom Census 2021 tables,
 - choose the geography,
 - add or remove variables, and
 - filter, view or download the data
- Makes millions of tables available to the user

[Demo](#)

Guidance building tables

Statistical Disclosure Control is applied to Census 2021

The following should be noted when designing tables in the FTB:

- all tables are created with small amounts of "noise"
- zero-value cells are also
- "noise" should balance out across a table
- differences should be small, should not change the conclusions of analysis
- tables are perturbed individually - totals of tables may be different

It is recommended to build table directly from the system, rather than summing cells from a different table.

More information available at [Statistical Disclosure Control Methodology Guidance note \(PDF, 169 KB\)](#)

Resources and Contact

- **NISRA website:** www.nisra.gov.uk
- **Census 2021 results page:** www.nisra.gov.uk/statistics/2021-census/results
- **Census 2021 outputs definitions:** <https://datavis.nisra.gov.uk/census/census-2021-outputs-definitions.html>
- **Census 2021 variables index:** <https://www.nisra.gov.uk/publications/census-2021-variables-index>
- **Frequently Asked Questions (FAQs):** <https://datavis.nisra.gov.uk/census/census-2021-frequently-asked-questions.html>
- **Census 2021 outputs prospectus:** www.nisra.gov.uk/statistics/2021-census/outputs-prospectus/release-plans
- **Census output geography:** www.nisra.gov.uk/statistics/2021-census/results/census-output-geography
- **Census 2021 population-weighted centroids:** <https://www.nisra.gov.uk/publications/census-2021-population-weighted-centroids-data-zones-and-super-data-zones>
- **Flexible table builder:** build.nisra.gov.uk
 - **Flexible table builder help and support page:** <https://www.nisra.gov.uk/ftb-help>
- **Census area explorer:** explore.nisra.gov.uk
- **NISRA Data Portal:** data.nisra.gov.uk

Contact us

- **Email address:** census@nisra.gov.uk

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