Educational attainment and household composition, feasibility research and methodology

Research Outputs of the feasibility study that links the All Education Dataset for England (AEDE) to the 2011 Census. The new de-identified Growing up in England (GUIE) dataset will enable research into the link between family household composition and educational attainment.

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Notice

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Updated to include metadata for the Growing up in England (GUiE) proof of concept report.

6 August 2020

Things you need to know about this release has been amended to accurately reflect partners in relation to the Growing up in England (GUiE) linkage project.

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1 . Disclaimer

These Research Outputs are not official statistics. Rather they are published as outputs from a proof of concept feasibility study exploring the use of administrative data linked to the 2011 Census. These outputs should not be used for policymaking or decision-making. This work uses research datasets that may not exactly reproduce National Statistics aggregates.

It is important that the research presented here be read alongside the quality and methodology information in Section 7 to help interpretation and avoid misunderstanding. These outputs must not be used without this disclaimer and warning note.

This work contains statistical data from the Office for National Statistics (ONS), which is Crown Copyright. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets that may not exactly reproduce National Statistics aggregates.

2 . Main points

- There is currently a need for research to better understand the barriers and gateways to social mobility to inform public policy targeted at disadvantaged children and young people.
- This report contains outcomes of analysis and descriptions of the linkage methodology used.
- This Proof of Concept (PoC) dataset brings together information relating to personal characteristics of children and their family members with their educational attainment; this enables insights to better understand the effect of factors such as personal and familial characteristics, and geography on educational outcomes.
- The analysis of the PoC datasets was conducted on personal characteristics, educational attainment, household characteristics, vulnerable groups and geography.
- Deterministic linking was used to match the 2011 Census and a bespoke extract of the feasibility AEDE to form the Growing Up in England (GUIE) dataset; a high linkage rate of 90% was achieved.
- Prior to linkage, a series of preparatory steps were taken; these are described in further detail in Section 7: Quality and methodology.
- Any limitations and issues identified will be considered in future iterations of the GUIE dataset.

3 . Things you need to know about this release

In our role as the largest producer of independent official statistics in the UK, the Office for National Statistics (ONS) provides the data and analysis that help us understand how people in the UK experience life. This information has traditionally come from surveys or the census, however, these sources often cannot provide enough detail or timeliness. For this reason, we are developing our use of administrative and linked data, and this article presents research into how census-linked educational datasets might be used in the future.

The Growing Up in England (GUIE) dataset was produced in partnership with Administrative Data Research UK (ADR UK) as part of the Data for Children Partnership. The data were accessed for research purposes through the ONS's Secure Research Service (SRS).

This analysis has been produced in collaboration with the ONS Centre for Equalities and Inclusion. The aim of this centre is to work with other researchers to ensure that the right data are available to address the main social and policy questions about fairness and equity in society.

These research outputs are not official statistics, however these new data have the potential to give us far better insight into some of the factors affecting educational attainment. It is important to understand that the Proof of Concept (PoC) dataset created from this innovative linkage project into educational attainment and progression has some limitations and issues. Any disparities between groups in the level and progression of attainment presented in this research may be because of other characteristics rather than the one being directly measured and compared. The outputs are published to demonstrate the type of analysis possible using administrative data and the ADR UK investment. As such, these results should not be used to draw conclusions about educational outcomes of children and their corresponding characteristics, and instead are illustrative of the population sizes we expect to capture within the data.

4 . The Data for Children Partnership

The Data for Children Partnership is a strategic partnership between Administrative Data Research UK (ADR UK), the Office of the Children's Commissioner for England (CCO) and other parties such as academics, charities and government departments. The objectives of the partnership are to:

- ensure policy that concerns children and young people in England is informed by high-quality, relevant data
- unblock barriers to data sharing through ensuring relevant data collection and raising the profile of the importance of sharing and linking data from across the government
- deliver impact through data from contributing to intelligence-led policy and achieving demonstrable outcomes from research

ADR UK is a partnership transforming the way researchers access the UK's wealth of public sector data to enable better informed policy decisions that improve people's lives; it is formed by three national partnerships (ADR Scotland, ADR Wales, and ADR NI), and the ONS. Ultimately, ADR UK is creating a sustainable body of knowledge about how our society and economy function by linking together data held by different parts of the government, and by facilitating safe and secure access for accredited researchers to these newly joined-up data sets. These are tailored to decision makers' needs, to provide answers required to solve policy questions.

We provide a range of services for ADR UK, specifically:

- We acquire permission from data suppliers for their administrative or survey records to be used for research purposes; the legal gateway for suppliers to provide access to their data through the ONS is the Statistics and Registration Service Act (SRSA) 2007 as amended by the Digital Economy Act (DEA) 2017.

- As a data processor we clean, link and de-identify the data according to specifications defined by the researchers prior to the data being made accessible; key words such as data linkage and de-identified are defined in Annex A.

- The SRS gives accredited or approved researchers secure access to de-identified, unpublished data in order to work on research projects for the public good and provides a safe setting, as part of the Five Safes Framework to protect data confidentiality (the framework is a set of principles adopted by a range of secure labs, including the ONS; most datasets are available to access through secure remote access to the SRS and in some instances, the data can only be accessed from an approved safe setting)

The Office of the Children's Commissioner for England (CCO) is responsible for speaking up for children and young people so that policymakers and the people who have an impact on their lives take their views and interests into account when making decisions about them. The CCO is developing a vulnerability database to shine a light on the extent and impact of child vulnerability in England.

The purpose of this report is to present the research outcomes of a feasibility study on a dataset that links a feasibility version of the All Education Dataset for England (AEDE) to the 2011 Census by describing the datasets used for linkage, analysis, linkage methodology, and next steps.

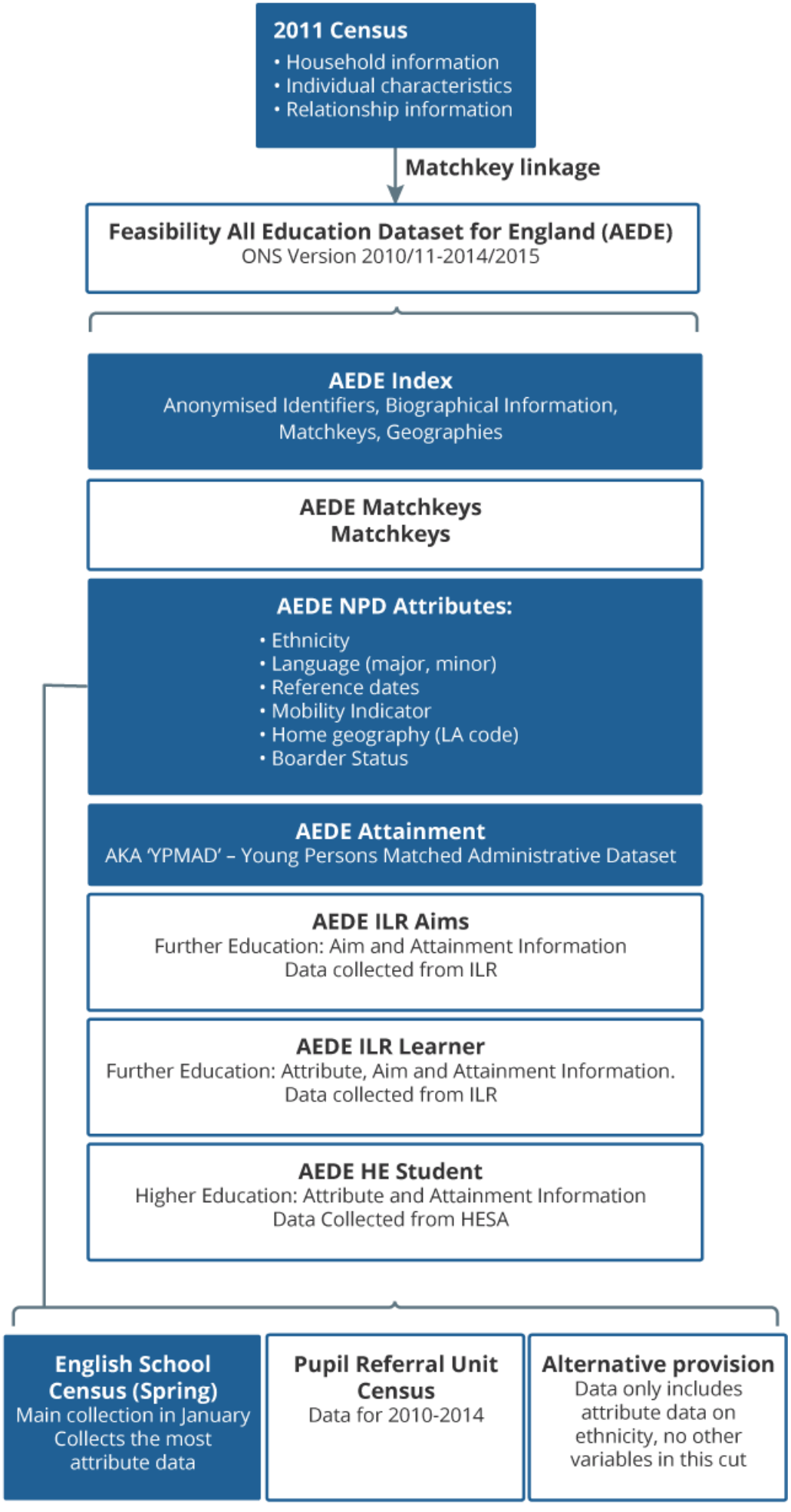
The Proof of Concept (PoC) analysis discussed in this research output was carried out under the third objective of the Data for Children Partnership in collaboration with the Centre for Equalities and Inclusion.

5 . What is included in the Proof of Concept (PoC)

For this Proof of Concept, data from the 2011 Census have been linked to education and attainment information from a bespoke extract of the feasibility All Education Dataset for England (AEDE) data from the Department for Education (DfE). Further information on the feasibility AEDE can be found on the published Feasibility AEDE source overview.

Linking the feasibility AEDE data to the Census brings personal, family and household characteristics together with educational attainment information. This is illustrated in Figure 1 , where the blue boxes highlight the data included in the dataset.

Figure 1: Data included in the GUIE PoC feasibility dataset



Source: Office for National Statistics

Notes:

1. NPD is the National Pupil Database, ILR is Individualised Learner Record (Further Education data) and HE is Higher Education data.

2. Boxes highlighted in blue indicate data included in the GUIE PoC dataset.

All Education Dataset for England (AEDE)

Created by the DfE, the feasibility AEDE is a large longitudinal record-level education dataset that covers government-funded education in England up to the academic year 2014/15. The dataset is created from the National Pupil Database (NPD), Further Education (FE) and Higher Education (HE) data.

- The NPD is an administrative datastore that is held by the DfE and includes English school census and attainment information from the Young Person's Matched Administrative Dataset (YPMAD); students' socio-demographic characteristics are obtained from the termly school census, pupil referral unit and alternative provision censuses – these are linked to attainment data recorded by awarding bodies.

- FE data comprise of Individualised Learner Record (ILR) and include socio-demographic characteristics of individuals in further education and work-based learning in England and attainment information.

- HE data are collected by the Higher Education Statistics Agency (HESA) all government-funded higher education institutes in the UK are required to send data to HESA as well as further education institutes where higher education is delivered; HE data contain information on the socio-demographic characteristics of students and any qualifications obtained.

All personal identifiers in the feasibility AEDE held by the ONS are pseudonymised (made non-identifiable) to ensure confidentiality; the method used ensures identifiable information is not revealed but can be used for data linkage.

For the purposes of this PoC, only data from the NPD have been linked to the 2011 Census. Consequently, the feasibility AEDE extract for this PoC includes only spring English School Census (ESC), Key stage 4 (KS4) and Key stage 5 (KS5) attainment data from the NPD – FE and HE data are not included.

English School Census

The ESC is a collection of pupil- and school-level information. The PoC collection includes:

- secondary
- middle-deemed secondary
- local authority maintained special and non-maintained special schools
- academies including free schools
- studio schools, university technical colleges and city technology colleges in England; service children's education schools may also participate on a voluntary basis

The data are collated by Local Authorities (LAs) into electronic returns and submitted to the DfE via a secure online data transfer system. There is published information on School Census: Data quality and processing, which is collected each term (that is, three times a year), however the data used in PoC relate to the January (Spring term) data collection.

The ESC does not include data from independent schools, and only collects information about individuals attending state-funded schools in England. The information on these individuals includes:

- ethnicity
- mobility
- Pupil Matching Reference(PMR)
- pupil names

} Included in the ESC extract for the PoC

- free school meal eligibility (FSM),
- special educational needs (SEN)
- attendance and exclusions

} Not included inthe ESC extract for the PoC

To summarise, the ESC extract included in the PoC contains information only on ethnicity, language and mobility and it does not include information on FSM, SEN or exclusions.

Attainment data

Attainment data for KS4 and KS5 are submitted to the DfE from approximately 150 awarding bodies; the attainment data are then linked to student data.

For the purpose of this report, the data used for this linkage will be referred to as feasibility AEDE, although noting that it is not the full feasibility AEDE, but the bespoke extract described above.

2011 Census

The census takes place every 10 years and gives the most accurate estimate of all the people and households in England and Wales. It provides a snapshot of family make-up and relationships within households as well as demographic and socio-economic characteristics for almost the entire population.

The 2011 Census holds much valuable information including ethnicity, main language spoken, country of birth, and religion to name just a few. Although the 2011 Census data is nearly 10 years old, the information remains relevant as some personal characteristics (such as country of birth) are generally stable over time. The 2011 Census took place on 27 March 2011, and the population of England and Wales on this day was 56,075,912. There is published information on how ONS processed the information for the 2011 Census.

Proof of Concept (PoC) coverage

The analysis presented in this report focused on the feasibility of using this type of linked data to understand factors associated with educational attainment. The linked PoC dataset contains approximatively 2 million children in 2011 and 8 million household members. The size of the populations used in the analysis were slightly lower than these figures, because of issues identified post-linkage. The analysis section below provides more information on the sample sizes and issues identified.

The size of the longitudinal sample allows for multiple disaggregation which would not be possible using traditional survey data, with a more limited sample size.

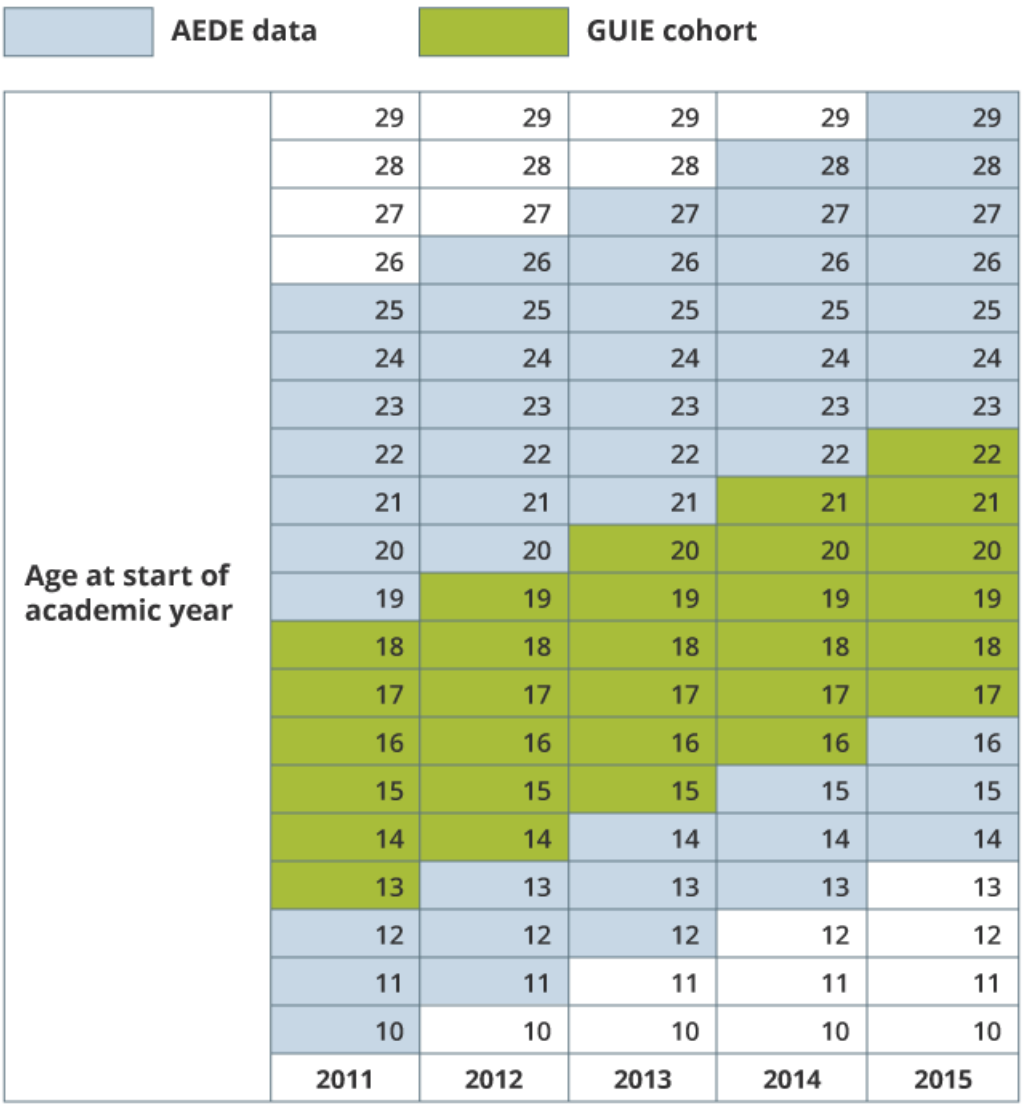
Only pseudonymised data has been used in this analysis and results are shown at an aggregated level, so individuals cannot be identified.

Students are contained in the linked PoC dataset if they were present in the 2011 Census and enrolled in government-funded education in England at any point between the academic years 2010 /11 and 2014/15. For 2011, this creates a cohort of children enrolled in school aged between 13 and 18 years in KS4 or KS5. A representation of the age groups included in the PoC dataset is shown in Figure 2.

Further details on linkage methodology, results and quality can be found in Section 7: Quality and Methodology.

Figure 2: Age cohort contained in the GUIE PoC feasibility dataset at start of academic year

Office for National Statistics



Source: Office for National Statistics

6 . Feasibility analysis of the Proof of Concept (PoC) dataset

A child's socioeconomic background is an important determinant of their chances of future life success. The performance gap between advantaged and disadvantaged children develops at an early age and widens throughout pupils' lives. Research is therefore needed to better understand the barriers and gateways to social mobility to inform public policy targeted at disadvantaged children and young people.

Currently, there are a number of data gaps within the existing evidence base that have prevented research from being conducted into the interaction between characteristics, such as religion and family background, and educational attainment. Where data are available for important characteristics, often sample sizes prevent the ability of researchers to produce robust estimates for the smallest groups within our society, meaning that these groups are not routinely reflected in the statistics produced.

By bringing together information relating to the personal characteristics of children and their family members with their educational attainment, this dataset is uniquely placed to provide insight to better understand the effect of factors such as personal and familial characteristics, and geography on educational outcomes, increasing our understanding of the nuanced interactions between factors that lead to disadvantage throughout the life course. Early research to demonstrate the potential of administrative data to provide information on educational qualification, collected by the census since 1961 was published in October 2019.

The feasibility analysis of this Proof of Concept (PoC) dataset was carried out in collaboration with the Centre for Equalities and Inclusion. The aim of this analysis was to assess whether this new linked dataset added value to the existing evidence base surrounding the educational outcomes of children. To ensure this analysis reflected the requirements of researchers across the field, our analysis was steered by a working group of representatives from across government, academia and third sector organisations. We are grateful to the working group for their input over the course of the analysis.

Because of the limitations of the PoC dataset, the numbers provided in this section are solely illustrative and should only be used to provide researchers intending to conduct analysis on future iterations of the dataset with an estimate of the size of their populations of interest. The results in this section should not be used to make assumptions about the interaction between a child's personal or familial characteristics and their associated educational attainment.

It is important to note that the characteristics of household members are as reported in Census 2011, while educational attainment information is taken from a longitudinal source and could have been attained in any of the academic years between 2010/11 and 2014/15. It is also possible that the characteristics recorded for children were assigned to them by a parent or other household member, rather than by the child self-identifying.

Throughout this section, numbers have been rounded to the nearest multiple of 10 as per the Secure Research Service's (SRS's) standard rules on Statistical Disclosure Control (SDC) to ensure information is not identifiable.

Measuring educational attainment

For this analysis, educational attainment was measured using the levels defined in Table 1.

Table 1: Educational attainment levels with descriptions and associated population counts within the PoC dataset

Level	Description	Number of children
Below Level 1	Equivalent to entry level qualifications or no qualifications	20,830
Level 1	One to four GCSEs (any grade) or equivalent	127,380
Level 2	Five or more GCSEs (grade A* to C) or equivalent (including intermediate apprenticeships)	474,260
Level 3	Two or more A-levels or equivalent	1,040,700
Missing	No attainment identified	79,620

Source: Office for National Statistics - Admin-based data

Initially the scope of the feasibility analysis included level of attainment by Key stage 4 (KS4), Key stage 5 (KS5), and a measure of progress between KS4 and KS5. However, as the attainment variables used are cumulative and do not have an associated key stage indicator, while it would have been possible to use age as a proxy for key stage, it would not have been possible to differentiate between when a qualification of the same level was attained. For example, if a child attained a “Level 3” qualification in KS4, there would be no way to identify whether this same child had attained another “Level 3” qualification in KS5.

In addition, the PoC also does not include attainment for all respondents at KS5, as some children will have completed their education in an educational setting that is not captured in the PoC, for example an independent school or a school outside of England, or may not have gone on to complete KS5.

Given the cumulative nature of the attainment data, it was not possible to tell whether a child had dropped out of the dataset, potentially having achieved higher level qualifications elsewhere, or just had not attained any higher-level qualifications at KS5. For these reasons, the analysis instead covers highest educational attainment within the period the individual is captured within the dataset.

Personal characteristics and educational attainment

Because of the way in which the data were linked, the PoC dataset is not considered representative for those aged 13 years as of 31 August 2011, and so this analysis covers only children aged 14 to 18 years as of 31 August 2011. A number of children also had to be excluded from the analysis because of issues that arose post-linkage, which meant it was not possible to combine their educational attainment information with their corresponding characteristics collected from the Census. This resulted in the total population of cohort children within the PoC dataset falling from approximately 1.9 million to approximately 1.7 million children.

Tables 2 to 10 provide information on the population sizes of children within the PoC dataset broken down by a range of personal characteristics and educational attainment.

Table 2: Number of children by highest level of educational attainment and sex of child
England, academic years 2010/11 to 2014/15

Sex	**Highest level of educational attainment**					
	Below Level 1	**Level 1**	**Level 2**	**Level 3**	**Missing**	**Total**
Male	12,900	77,100	257,930	485,780	49,530	883,240
Female	7,890	50,040	215,460	553,270	29,900	856,550
Invalid	40	240	870	1,660	190	3,000

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Sex sourced from ONS 2011 Census.

Table 3: Number of children by highest level of educational attainment and religion of child
England, academic years 2010/11 to 2014/15

Religion	Highest level of educational attainment					
	Below Level 1	**Level 1**	**Level 2**	**Level 3**	**Missing**	**Total**
No religion	6,680	44,830	148,120	262,500	29,920	492,060
Christian	10,320	64,290	258,280	590,270	37,960	961,120
Buddhist	60	240	1,020	3,510	130	4,960
Hindu	180	500	2,770	18,450	280	22,180
Jewish	40	170	810	3,750	100	4,850
Muslim	1,690	7,900	27,390	73,980	4,880	115,830
Sikh	80	560	2,680	12,190	270	15,780
Other	40	220	910	2,630	130	3,930
Not stated /missing	1,760	8,680	32,290	73,420	5,940	122,090

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Religion sourced from ONS 2011 Census.

Table 4: Number of children by highest level of attainment and country of birth
England, academic years 2010/11 to 2014/15

Country of Birth	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
England	17,880	116,680	435,280	939,860	71,740	1,581,450
Northern Ireland	30	110	380	810	60	1,380
Scotland	130	450	1,610	4,140	310	6,630
Wales	130	460	1,440	3,330	310	5,680
UK (otherwise not specified)	<10	<10	30	80	<10	110
Ireland	20	80	270	640	70	1,070
Other EU: Member countries in March 2001	330	1,020	4,340	12,780	690	19,160
Other EU: Accession countries April 2001 to March 2011	420	1,450	4,880	9,220	1,230	17,200
Other countries	1,280	4,390	17,480	55,360	3,120	81,630
Missing	600	2,730	8,560	14,500	2,080	28,460

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Country of birth sourced from ONS 2011 Census.

Table 5: Number of children by highest level of attainment and main language of child
England, academic years 2010/11 to 2014/15

Main language	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
English	17,230	117,670	441,630	972,600	71,960	1,621,080
Welsh	<10	<10	<10	<10	<10	30
Other UK language	20	10	<10	20	<10	60
French	40	70	360	920	70	1,450
Portuguese	70	310	860	1,320	210	2,770
Spanish	30	70	300	760	70	1,220
Other European language (EU)	450	1,310	4,550	8,610	1,190	16,120
Other European language (non EU)	20	60	270	770	40	1,160
Other European language (non-national)	120	450	1,430	3,110	360	5,480
West/Central Asian language	80	370	1,270	2,600	390	4,710
South Asian language	330	1,700	6,170	18,520	980	27,700
East Asian language	60	180	820	2,540	130	3,740
Oceanic /Australian language	<10	<10	<10	<10	<10	<10
North/South American language	<10	<10	<10	<10	<10	20
Caribbean Creole	<10	<10	<10	<10	<10	<10
African language	150	480	1,880	4,530	420	7,450
Other languages	30	30	90	200	30	370
Sign language	490	60	160	110	130	940
Missing	1,730	4,620	14,450	24,060	3,620	48,480

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Main language of child sourced from ONS 2011 Census.

Table 6: Number of children by highest level of attainment and English language proficiency of child
England, academic years 2010/11 to 2014/15

English language proficiency	**Highest level of educational attainment**					
	Below Level 1	**Level 1**	**Level 2**	**Level 3**	**Missing**	**Total**
Very well	3,390	29,950	113,390	272,670	18,320	437,720
Well	1,250	3,060	8,780	11,040	3,370	27,500
Not well	1,330	290	650	440	870	3,580
Not at all	1,550	30	80	40	90	1,780
Failed multiple ticking rules/missing	13,310	94,050	351,360	756,510	56,970	1,272,210

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. English language proficiency sourced from ONS 2011 Census.

Table 7: Number of children by highest level of attainment by disability status of child
England, academic years 2010/11 to 2014/15

Disability status	**Highest level of educational attainment**					
	Below Level 1	**Level 1**	**Level 2**	**Level 3**	**Missing**	**Total**
Yes, limited a lot	9,330	3,110	6,520	6,170	7,870	33,000
Yes, limited a little	1,930	6,190	15,890	20,620	7,440	52,060
No	8,490	112,430	434,020	983,620	60,060	1,598,630
Failed multiple ticking rules/ missing	1,090	5,640	17,830	30,290	4,240	59,090

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Disability status sourced from ONS 2011 Census.

Table 8: Number of children by highest level of attainment by carer status of child
England, academic years 2010/11 to 2014/15

Carer status	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
No	19,240	117,890	441,040	978,680	73,170	1,630,010
Yes, 1 to 19 hours a week	230	3,330	13,420	28,720	1,830	47,530
Yes, 20 to 49 hours a week	50	560	1,800	2,750	390	5,540
Yes, over 50 hours a week	80	360	1,150	1,870	280	3,740
Failed multiple ticking rules/ missing	1,230	5,250	16,860	28,680	3,950	55,970

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Carer status sourced from ONS 2011 Census.

Table 9: Number of children by highest level of attainment by general health of child
England, academic years 2010/11 to 2014/15

General health	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Very good	7,250	86,570	343,470	822,230	45,170	1,304,680
Good	6,180	32,160	106,720	184,700	23,670	353,430
Fair	3,880	4,770	12,520	15,760	6,300	43,220
Bad	1,540	920	2,210	2,290	1,820	8,780
Very bad	1,290	220	500	550	530	3,080
Failed multiple ticking rules/ missing	690	2,730	8,840	15,180	2,140	29,590

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. General health sourced from ONS 2011 Census.

Table 10: Number of children by highest level of attainment by ethnicity
England, academic years 2010/11 to 2014/15

Ethnicity (Census)	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
English/ Welsh/ Scottish/ Northern Irish/ British	15,110	102,730	384,920	792,800	62,660	1,358,210
Irish	50	240	950	3,930	150	5,320
Gypsy or Irish Traveller	240	280	530	240	400	1,690
Any other White background	20	70	250	600	60	1,000
White and Black Caribbean	390	2,450	8,210	13,450	1,920	26,410
White and Black African	110	480	1,740	4,510	380	7,200
White and Asian	190	850	3,430	11,310	540	16,320
Any other Mixed / Multiple ethnic background	20	90	250	480	60	900
Indian or British Indian	320	1,240	6,170	33,110	620	41,460
Pakistani or British Pakistani	700	3,480	11,830	30,800	2,020	48,830
Bangladeshi, British Bangladeshi	230	1,450	4,790	14,280	740	21,480
Chinese	50	100	700	6,240	80	7,170
Any other Asian background	<10	10	50	180	10	260
Caribbean	230	1,420	5,180	11,330	920	19,090
African	560	1,880	7,660	27,770	1,180	39,050
Any other Black / African / Caribbean background	<10	70	240	520	40	880
Arab	120	330	1,280	3,920	300	5,950
Any other ethnic group	10	10	20	50	10	90
Uncodeable	2,490	10,190	36,070	85,190	7,540	141,470

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Ethnicity sourced from ONS 2011 Census.

Table 11: Number of children by highest level of attainment by ethnicity of child (Ethnicity taken from NPD)
England, academic years 2010/11 to 2014/15

Ethnicity (NPD)	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
British	15,550	105,270	391,670	795,650	64,610	1,372,740
Irish	80	360	1,220	4,200	230	6,080
Gypsy/Roma	220	240	460	150	390	1,450
Traveller of Irish Heritage	80	50	90	50	80	340
Any other white background	910	3,430	12,790	32,600	2,520	52,260
White and Black Caribbean	250	1,780	5,920	10,300	1,380	19,620
Black - African	70	360	1,350	3,810	260	5,840
White and Asian	140	670	2,530	8,960	390	12,700
Any other mixed background	290	1,240	4,850	13,710	840	20,930
Pakistani	710	3,610	12,170	30,800	2,060	49,350
Indian	300	1,250	6,400	34,100	660	42,710
Bangladeshi	220	1,450	4,780	14,110	730	21,290
Chinese	40	110	660	5,910	70	6,780
Any other Asian Background	300	940	4,000	15,710	670	21,620
Caribbean	270	1,640	5,880	12,420	1,080	21,300
African	600	2,070	8,410	29,010	1,410	41,490
Any other Black Background	140	470	1,920	4,730	350	7,600
Any other Ethnic Group	300	1,110	4,430	13,020	900	19,760
Refused	120	730	2,610	6,550	410	10,420
Information not obtained	250	620	2,130	4,930	580	8,500

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Ethnicity sourced from National Pupil Database (NPD).

Intersectionality

Table 12: Number of male children by ethnicity, religion and disability of the child
England, academic years 2010/11 to 2014/15

Male	**Disability = No**								
	No religion	**Christian**	**Buddhist**	**Hindu**	**Jewish**	**Muslim**	**Sikh**	**Other**	**Total**
White British	213,640	379,680	430	70	1,690	1,170	40	870	597,570
Mixed/Multiple Ethnic Groups	8,040	11,450	120	160	40	1,480	100	80	21,460
Asian/Asian British	2,660	2,210	390	7,640	20	33,910	5,850	490	53,160
Black/African/Caribbean/ Black British	1,180	19,040	<10	10	<10	4,850	<10	50	25,140
Other Ethnic Group	50	130	<10	<10	<10	2,570	<10	<10	2,750
	Disability = Yes								
White British	14,950	23,830	40	<10	100	70	<10	120	39,110
Mixed/Multiple Ethnic Groups	540	830	<10	<10	<10	100	<10	<10	1,460
Asian/Asian British	70	60	20	240	<10	1,800	180	10	2,370
Black/African/Caribbean/ Black British	80	880	<10	<10	<10	190	<10	<10	1,140
Other Ethnic Group	<10	<10	<10	<10	<10	130	<10	<10	130

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Does not include missing observations or observations that failed multiple ticking rules.
3. Ethnicity, religion and disability sourced from ONS 2011 Census.

Table 13: Number of female children by ethnicity, religion and disability of the child
England, academic years 2010/11 to 2014/15

Female	**Disability = No**								
	No religion	**Christian**	**Buddhist**	**Hindu**	**Jewish**	**Muslim**	**Sikh**	**Other**	**Total**
White British	198,100	387,560	550	40	1,970	1,090	20	1,150	590,480
Mixed/Multiple Ethnic Groups	7,840	11,990	150	130	40	1,370	80	80	21,670
Asian/Asian British	2,620	2,320	390	7,400	20	34,160	5,530	450	52,880
Black/African/Caribbean/ Black British	1,060	20,560	<10	20	<10	4,710	<10	30	26,380
Other Ethnic Group	40	100	<10	<10	<10	2,440	<10	<10	2,580
	Disability = Yes								
White British	9,260	17,010	50	<10	80	40	<10	110	26,560
Mixed/Multiple Ethnic Groups	370	550	<10	<10	<10	60	<10	<10	970
Asian/Asian British	40	50	<10	160	<10	1,500	150	10	1,920
Black/African/Caribbean/ Black British	50	680	<10	<10	<10	150	<10	<10	880
Other Ethnic Group	<10	<10	<10	<10	<10	100	<10	<10	100

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Does not include missing observations or observations that failed multiple ticking rules.
3. Ethnicity, religion and disability sourced from ONS 2011 Census.

Familial characteristics and educational attainment

The relationship information used to derive household structure for the familial analysis comes from the 2011 Census. Each census form collected information for a maximum of six people, with households of more than six people having to request supplementary form(s) to provide information on remaining household members. Relationship information captured on supplementary forms links only to the first member of the household, meaning that the family structure of households with more than six members cannot be derived completely, and so these households have been excluded from this analysis.

The scope of this analysis included exploring the differential impact of the sex of the parent and their characteristics on the outcomes of the child. The category “mother” was assigned to all female parents and “father” to all male parents. While deriving whether a family member was the child of interest’s mother or father, there were cases where parents had “invalid” recorded as their sex. As such, it was not possible in these cases to assign a category of “mother” or “father” and so these cases have been excluded from the parent analysis in Tables 20 to 27.

For households with multiple mothers or fathers, the parent analysis includes breakdowns for each mother and father, where Mother 1 is the first recorded mother within the household (based on “Person number” from the Census), Mother 2 is the second recorded mother, and so on.

It should be noted that there were a small number of households containing three or more parents. Because of the low number of such households, these have been removed from the analysis.

There were also a number of other dataset limitations that resulted in further decreases in the base population for this analysis. Identification issues that arose in household members post-linkage meant that a complete household structure could not be derived for some households, with these households being dropped before analysis began. These identification issues also meant that in some cases it was not possible to join relationship information with the characteristics of household members. Such cases have been excluded from the corresponding analysis.

No-parent households could not be directly identified for this analysis, instead the following figures refer to cases where the mother and father identities are missing. This could be where the parent’s sex was listed as “invalid” and was therefore excluded from the analysis, or where further identification issues arose.

Summary of exclusions:

- households of more than six members
- parents with “invalid” sex
- where complete household structures could not be derived
- where joining relationship information and characteristics of household member was not possible
- cases where both mother and father identities were missing

Household characteristics

Table 14: Number of children by highest educational attainment by household type
England, academic years 2010/11 to 2014/15

Household type	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Lone parent family - Male parent	720	4,800	14,060	19,550	3,500	42,630
Lone parent family - Female parent	6,990	40,810	131,310	193,550	30,450	403,100
Couple family - Married - No children	190	830	2,340	4,090	640	8,080
Couple family - Married - Non step-family (all children belong to both members of the couple)	7,740	44,990	200,630	590,590	23,280	867,220
Couple family - Married - Step-family	1,380	12,570	44,010	66,440	6,640	131,030
Couple family - Same-sex civil partnership - No children	<10	<10	10	10	<10	20
Couple family - Same-sex civil partnership -Non step-family (all children belong to both members of the couple)	<10	20	40	70	10	140
Couple family - Same-sex civil partnership - Step-family	<10	50	200	280	30	560
Couple family - Cohabiting - No children	120	830	2,730	4,150	510	8,320
Couple family - Cohabiting - Non step-family (all children belong to both members of the couple)	1,270	9,770	34,430	54,340	6,090	105,900
Couple family - Cohabiting - Step-family	840	7,060	22,470	26,020	4,330	60,720
No code required/missing	1,660	6,120	23,590	84,570	4,480	120,410

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Household type sourced from ONS 2011 Census.

Table 15: Number of children by highest educational attainment by household composition of unemployed households
England, academic years 2010/11 to 2014/15

Household type of unemployed households	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Lone parent family - Male parent	<10	70	220	450	30	760
Lone parent family - Female parent	20	400	1,840	4,650	150	7,060
Couple family - Married - No children	<10	<10	20	60	<10	80
Couple family - Married - Non step-family (all children belong to both members of the couple)	10	350	2,610	11,480	120	14,560
Couple family - Married - Step-family	<10	130	730	1,720	40	2,620
Couple family - Same-sex civil partnership - No children	<10	<10	<10	<10	<10	<10
Couple family - Same-sex civil partnership - Non step-family (all children belong to both members of the couple)	<10	<10	<10	<10	<10	<10
Couple family - Same-sex civil partnership - Step-family	<10	<10	<10	<10	<10	<10
Couple family - Cohabiting - No children	<10	10	50	100	<10	160
Couple family - Cohabiting - Non step-family (all children belong to both members of the couple)	<10	80	420	1,100	30	1,630
Couple family - Cohabiting - Step-family	<10	70	390	610	30	1,100
No code required/ Missing	<10	50	380	2,060	30	2,510

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Household type and unemployment of households sourced from ONS 2011 Census.

Table 16: Number of children by highest educational attainment by number of members in the household who have a disability
England, academic years 2010/11 to 2014/15

Number of members in the household who have a disability	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
None	12,450	85,540	339,270	812,100	48,120	1,297,480
One	4,830	25,080	84,170	147,310	18,450	279,830
Two	1,360	5,700	17,880	26,880	4,760	56,580
Three	270	900	2,540	3,350	880	7,940
Four	60	150	390	420	140	1,160
Five	<10	20	40	70	20	160
Missing	1,940	10,460	31,510	53,510	7,570	104,990

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Household members defined as mother, father, grandparent, sibling or other relation.,Disability and household relationships sourced from ONS 2011 Census.

Table 17: Number of children by number of siblings and highest educational attainment
England, academic years 2010/11 to 2014/15

Siblings	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
No Siblings	6,040	33,050	112,920	205,660	22,830	380,490
One Sibling	7,480	48,570	201,780	505,100	27,380	790,300
Two Siblings	4,780	30,470	112,340	246,710	18,570	412,860
Three Siblings	2,240	14,020	44,520	81,210	9,550	151,520
Four Siblings	400	1,720	4,220	4,950	1,620	12,910
Five Siblings	<10	<10	20	20	<10	40

Source: Office for National Statistics - Admin-based data

Notes

1. Total may not sum because of rounding.
2. Household relationships sourced from ONS 2011 Census.

Table 18: Number of children by highest educational attainment and number of siblings aged 16 and under
(Household relationships taken from Census 2011)
England, academic years 2010/11 to 2014/15

Number of siblings aged under 16 years	Highest level of attainment						
	Below Level 1	One	Two	Three	Four	Five	Total
One	3,760	1,250	5,140	3,660	2,770	1,810	107,280
Two	3,680	1,930	4,560	1,670	930	<10	10,110
Three	1,950	740	1,180	450	<10	<10	2,950
Four	360	260	280	<10	<10	<10	750
Five	<10	100	<10	<10	<10	<10	230
Missing	11,160	<10	<10	<10	<10	<10	50

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Household Relationships sourced from ONS 2011 Census.

Table 19: Number of children by number of siblings and number of other relations in households where there are no parents and no grandparents recorded
England, academic years 2010/11 to 2014/15

Number of siblings	Number of other relations in the household						
	No other relations	One other relation	Two other relations	Three other relations	Four other relations	Five other relations	Total
No siblings	92,640	1,250	5,140	3,660	2,770	1,810	107,280
One sibling	1,020	1,930	4,560	1,670	930	<10	10,110
Two siblings	580	740	1,180	450	<10	<10	2,950
Three siblings	210	260	280	<10	<10	<10	750
Four siblings	130	100	<10	<10	<10	<10	230
Five siblings	50	<10	<10	<10	<10	<10	50

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Household relationships sourced from ONS 2011 Census.

Characteristics of mother

Table 20: Number of children by highest educational attainment by carer status of Mother 1
England, academic years 2010/11 to 2014/15

Carer status of Mother 1	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
No	6,530	84,710	334,270	771,170	43,890	1,240,570
Yes, 1 to 19 hours a week	850	8,950	41,180	119,250	4,700	174,930
Yes, 20 to 49 hours a week	1,190	3,720	12,070	19,490	3,560	40,030
Yes, 50 hours and over a week	8,290	8,470	23,260	31,520	11,010	82,550
Failed multiple ticking rules	30	60	160	240	60	550
Missing	3,940	21,480	63,310	99,030	16,410	204,170

Source: Office for National Statistics - Admin-based data

Notes

1. Total may not sum because of rounding.
2. Carer status sourced from ONS 2011 Census.

Table 21: Number of children by highest educational attainment by carer status of Mother 2
England, academic years 2010/11 to 2014/15

Carer status of Mother 2	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
No	30	240	770	1,440	120	2,600
Yes, 1 to 19 hours a week	<10	20	70	180	20	290
Yes, 20 to 49 hours a week	<10	10	30	40	10	100
Yes, 50 hours and over a week	20	30	60	70	30	200
Failed multiple ticking rules/missing	20,780	127,080	473,330	1,038,970	79,430	1,739,590

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum due to rounding.
2. Carer status sourced from ONS 2011 Census.

Table 22: Number of children by highest educational attainment by National Statistics Socio-Economic Classification (NSSEC) of Mother 1
England, academic years 2010/11 to 2014/15

NSSEC of Mother 1	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Higher managerial and professional occupations	550	2,420	13,700	72,330	1,160	90,160
Lower managerial and professional occupations	740	6,580	29,100	72,580	3,120	112,110
Intermediate occupations	2,390	16,920	80,820	226,190	7,710	334,030
Small employers and own account workers	830	6,110	26,830	64,520	2,860	101,140
Lower supervisory and technical occupations	570	5,300	18,900	29,530	2,880	57,180
Semi-routine occupations	3,570	26,610	94,240	142,760	15,870	283,040
Routine occupations	2,380	15,060	48,190	59,960	10,370	135,960
Missing	9,810	48,380	162,480	372,840	35,660	629,170

Source: Office for National Statistics - Admin-based data

Notes

1. Total may not sum because of rounding.
2. NSSEC sourced from ONS 2011 Census.

Table 23: Number of children by highest educational attainment by National Statistics Socio-Economic Classification (NSSEC) of Mother 2
England, academic years 2010/11 to 2014/15

NSSEC of Mother 2	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Higher managerial and professional occupations	<10	<10	50	190	<10	250
Lower managerial and professional occupations	<10	20	60	170	10	270
Intermediate occupations	<10	30	90	180	10	300
Small employers and own account workers	<10	30	120	180	20	350
Lower supervisory and technical occupations	<10	30	60	120	20	220
Semi-routine occupations	10	60	150	210	30	460
Routine occupations	<10	50	130	140	20	350
Missing	10	127,150	473,590	1,039,510	79,500	1,740,540

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. NSSEC sourced from ONS 2011 Census.

Characteristics of father

Table 24: Number of children by highest educational attainment by carer status of Father 1
England, academic years 2010/11 to 2014/15

Carer status of Father 1	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
No	4,790	61,150	256,540	663,460	29,080	1,015,020
Yes, 1 to 19 hours a week	1,250	4,450	21,780	72,190	2,750	102,420
Yes, 20 to 49 hours a week	1,230	1,740	5,770	10,090	1,760	20,590
Yes, 50 hours and over a week	3,540	3,280	9,300	13,650	3,930	33,710
Failed multiple ticking rules	10	30	70	140	20	270
Missing	10,010	56,730	180,800	281,160	42,080	570,790
Total	20,830	127,380	474,260	1,040,700	79,620	1,742,790

Source: Office for National Statistics - Admin-based data

Notes

1. Total may not add because of rounding.
2. Carer status sourced from ONS 2011 Census.

Table 25: Number of children by highest educational attainment by carer status of Father 2
England, academic years 2010/11 to 2014/15

Carer status of Father 2	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
No	<10	80	280	650	40	1060
Yes, 1 to 19 hours a week	<10	<10	30	90	<10	120
Yes, 20 to 49 hours a week	<10	<10	20	20	<10	40
Yes, 50 hours and over a week	<10	<10	20	20	<10	40
Failed multiple ticking rules	<10	<10	<10	<10	<10	<10

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Carer status sourced from ONS 2011 Census.

Table 26: Number of children by highest educational attainment by National Statistics Socio-Economic Classification (NSSEC) of Father 1

NSSEC of Father 1	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Higher managerial and professional occupations	1,380	4,860	28,490	161,960	2,250	198,930
Lower managerial and professional occupations	910	5,820	29,020	96,570	2,450	134,770
Intermediate occupations	500	3,150	15,210	45,130	1,490	65,460
Small employers and own account workers	1,760	14,210	59,460	129,560	6,480	211,460
Lower supervisory and technical occupations	1,110	9,240	38,000	70,470	4,340	123,150
Semi-routine occupations	1,220	8,920	32,740	57,670	5,120	105,680
Routine occupations	1,690	14,120	48,190	66,020	8,420	138,440
Missing	12,290	67,070	223,140	413,320	49,080	764,900

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. NSSEC sourced from ONS 2011 Census.

Table 27: Number of children by highest educational attainment by National Statistics Socio-Economic Classification (NSSEC) of Father 2
England, academic years 2010/11 to 2014/15

NSSEC of Father 2	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Higher managerial and professional occupations	<10	<10	10	50	<10	63
Lower managerial and professional occupations	<10	<10	30	50	<10	80
Intermediate occupations	<10	10	50	140	<10	200
Small employers and own account workers	<10	<10	40	80	<10	120
Lower supervisory and technical occupations	<10	<10	20	40	<10	60
Semi-routine occupations	<10	20	50	90	<10	160
Routine occupations	<10	20	50	70	20	140
Missing	20,830	127,310	474,020	1,040,180	79,580	1,741,920

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. NSSEC sourced from ONS 2011 Census.

Characteristics of parents by educational attainment

Table 28: Highest educational attainment of child by number of parents with a disability
England, academic years 2010/11 to 2014/15

Number of parents with a disability	Highest level of educational attainment					
	No qualifications	Level 1	Level 2	Level 3	Missing	Total
No Parents with a disability	16,170	102,550	391,030	899,760	61,130	1,470,640
One Parent with a disability	4,110	22,220	74,580	127,480	16,390	244,770
Two Parents with a disability	650	3,070	10,180	16,400	2,420	32,720

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Disability status sourced from ONS 2011 Census.

Table 29: Highest educational attainment of child by whether parent of a lone male parent household has a disability
England, academic years 2010/11 to 2014/15

Disability status of parent in a lone male parent household	Highest level of educational attainment					
	No Qualifications	Level 1	Level 2	Level 3	Missing	Total
Parent does not have a disability	550	3,820	11,450	16,840	2,570	35,230
Parent has a disability	180	980	2,610	2,700	9,20	7,390

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Household type and disability status sourced from ONS 2011 Census.

Table 30: Highest educational attainment of child by whether parent of a lone female parent household has a disability
England, academic years 2010/11 to 2014/15

Disability status of parent in a lone female parent household	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Parent does not have a disability	5,360	33,180	109,090	167,190	23,610	338,430
Parent has a disability	1,630	7,630	22,200	26,340	6,830	64,620

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Household type and disability status sourced from ONS 2011 Census.

Table 31: Highest educational attainment of child by country of birth of parents
England, academic years 2010/11 to 2014/15

Country of birth of parents	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
UK-born	14,380	98,740	374,300	771,580	59,520	1,318,510
One parent Non-UK born	2,110	9,300	36,680	117,550	5,570	171,210
Two parents Non-UK born	1,500	5,060	21,920	88,420	3,210	120,120
Missing	2,930	14,750	42,890	66,080	11,640	138,290

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Country of birth sourced from ONS 2011 Census.

Table 32: Highest educational attainment of child by main language of parents
England, academic years 2010/11 to 2014/15

Main language of parents	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
English	11,760	75,300	300,220	728,430	42,510	1,158,210
One parent non-English	390	1,610	6,540	24,140	880	33,560
Two parent's non-English	970	3,700	15,290	52,170	2,400	74,520
Missing	7,810	47,240	153,740	238,900	34,140	481,840

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Parent’s main language sourced from ONS 2011 Census.

Table 33: Highest educational attainment of child by parents’ English language proficiency
England, academic years 2010/11 to 2014/15

Parents English language proficiency	Highest level of educational attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Both well	16,180	102,580	383,120	831,120	63,250	1,396,240
One parent not well	330	1,420	5,520	14,660	920	22,850
Two parents not well	210	900	2,990	6,430	730	11,260
Missing	4,210	22,930	84,160	191,440	15,050	317,790

Source: Office for National Statistics - Admin-based data

Notes

1. Language proficiency is “Well” if recorded as “Well” or “Very well”.
2. and “Not well” if recorded as “Not well” or “Not at all”.,English language proficiency sourced from ONS 2011 Census.

Vulnerable groups and educational attainment

There are a number of characteristics used by the Office of the Children’s Commissioner for England (CCO) to identify vulnerable children. The characteristics of vulnerable children that are captured within the Proof of Concept (PoC) dataset are children from minority ethnic backgrounds, young carers, and lone-parent families.

Table 34: Number of children by household type, ethnicity and carer status
England, academic years 2010/11 to 2014/15

Not Young Carers	Ethnicity					
	White British	Mixed/ Multiple Ethnicity	Asian/ Asian British	Black/ African/ Caribbean	Other	Total
Lone parent family - Male parent	32,150	1,400	1,520	1,400	120	36,600
Lone parent family - Female parent	283,560	18,890	14,730	24,300	1,190	342,670
Couple family - Married - No children	4,460	200	1,420	180	20	6,280
Couple family - Married - Non step-family (all children belong to both members of the couple)	642,630	15,340	79,180	17,300	3,750	758,190
Couple family - Married - Step-family	107,050	3,200	2,970	3,040	190	116,450
Couple family - Same-sex civil partnership - No children	20	<10	<10	<10	<10	20
Couple family - Same-sex civil partnership - Non step-family (all children belong to both members of the couple)	110	<10	<10	<10	<10	110
Couple family - Same-sex civil partnership - Step-family	490	10	<10	<10	<10	500
Couple family - Cohabiting - No children	6,560	230	210	170	10	7,180
Couple family - Cohabiting - Non step-family (all children belong to both members of the couple)	87,760	3,360	1,330	1,940	80	94,460
Couple family - Cohabiting - Step-family	51,330	1,700	390	870	20	54,310
No code required/Missing	80,130	3,190	9,240	5,770	360	98,690

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.

2. Does not include missing observations or observations that failed multiple ticking rules.,Household type, ethnicity and carer status sourced from ONS 2011 Census.

Table 35: Number of children by household type, ethnicity and carer status
England, academic years 2010/11 to 2014/15

Young carers	Ethnicity					
	White British	Mixed/ Multiple Ethnicity	Asian/ Asian British	Black/ African/ Caribbean	Other	Total
Lone parent family - Male parent	1,360	60	100	50	<10	1,560
Lone parent family - Female parent	11,600	890	800	850	60	14,210
Couple family - Married - No children	170	<10	80	<10	<10	250
Couple family - Married - Non step-family (all children belong to both members of the couple)	18,800	480	2,940	430	90	22,720
Couple family - Married - Step-family	3,070	90	110	60	<10	3,330
Couple family - Same-sex civil partnership - No children	<10	<10	<10	<10	<10	.
Couple family - Same-sex civil partnership - Non step-family (all children belong to both members of the couple)	<10	<10	<10	<10	<10	.
Couple family - Same-sex civil partnership - Step-family	30	<10	<10	<10	<10	30
Couple family - Cohabiting - No children	150	<10	10	<10	<10	160
Couple family - Cohabiting - Non step-family (all children belong to both members of the couple)	2,360	100	60	50	<10	2,570
Couple family - Cohabiting - Step-family	1,310	50	10	20	<10	1,390
No code required/Missing	2,470	120	500	150	<10	3,240

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.

2. Does not include missing observations or observations that failed multiple ticking rules.,Household type, ethnicity and carer status sourced from ONS 2011 Census.

Geography and educational attainment

Table 36: Highest educational attainment of child by change in address from previous Spring Census (Mobility indicator taken from NPD)
England, academic years 2010/11 to 2014/15

Mobility indicator (NPD)	Highest Level of Attainment					
	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Postcode unchanged	16,900	112,850	432,030	980,020	65,530	1,607,340
Postcode change between spring School Census	2,100	12,230	36,030	50,750	9,440	110,550
Incomplete address in previous spring school Census	780	1,130	3,930	7,880	1,610	15,330
Incomplete address in current spring school Census	80	340	1,060	1,650	250	3,370
Missing	980	830	1,210	400	2,790	6,200

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Mobility indicator sourced from National Pupil Database (NPD).

Table 37: Highest educational attainment of child by urban and rural geographies
England, academic years 2010/11 to 2014/15

Urban and rural geographies	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Urban: Major Conurbation	7,370	37,340	151,520	353,820	28,370	578,430
Urban: Minor Conurbation	790	5,130	18,240	32,050	3,820	60,030
Urban: City and Town	8,860	59,900	210,680	423,520	35,370	738,320
Urban: City and Town in a Sparse Setting	50	200	1,040	1,410	140	2,830
Rural Town and Fringe	1,470	10,360	38,350	89,290	4,980	144,440
Rural Town and Fringe in a Sparse Setting	70	530	1,780	3,030	210	5,630
Rural Village	800	5,250	19,880	56,240	2,240	84,400
Rural Village in Sparse Setting	50	380	1,470	3,150	170	5,210
Rural Hamlet and isolated dwellings	690	4,160	15,980	46,420	1,760	69,000
Rural Hamlet and isolated dwellings in a Sparse Setting	40	360	1,460	3,370	120	5,360
Missing	650	3,780	13,870	28,410	2,430	49,150

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Geographies sourced from 2011 Census.

7 . Quality and methodology

Dimensions of quality

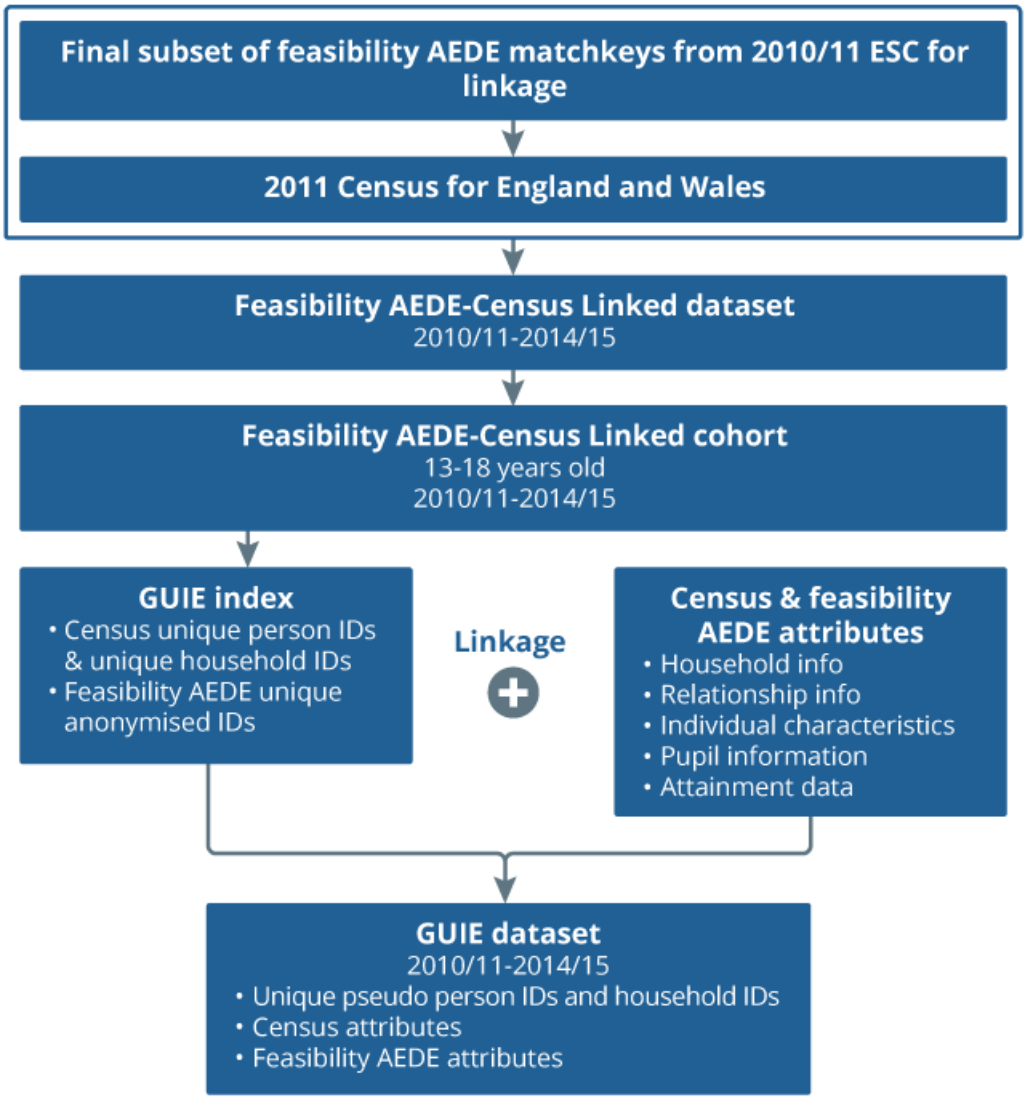
To ensure a broad understanding of our work and quality, within this work, we adhere to the Code of Practice for Official Statistics (PDF, 5.77KB) and use the European Statistical System's Dimensions of Quality to inform users about the quality of the data.

Data preparation of the All Education Dataset for England (AEDE)

Overview

To build the dataset, we have taken a series of preparatory steps which included pre-processing of data and hashing of data (described under data preparation). Before describing the linkage methodology in more detail, Figure 3 provides an overview of the linkage work and the datasets referred to in this article.

Figure 3: Flowchart of each dataset referred to in this article, and used in the feasibility AEDE-Census linkage



Source: Office for National Statistics

Data preparation The pre-processing of data included geo-referencing, variable standardisation and matchkey creation. Geo-referencing involves referencing data to a specific and fixed point, using a geographic classification and a grid of reference. Through variable standardisation, all variables are placed on the same scale to allow for comparisons. For example, if an individual's forename is recorded as Anne-Marie on one dataset, but as Annemarie on the other, the standardisation removes non-alphabet characters and capitalises them, so the name will appear as ANNEMARIE on both datasets and this forename will link post encryption. Standardisation of variables includes cleaning linkage variables on all data sources to improve linkage rates. Additional processing is completed on the linkage variables to build matchkeys.

To protect confidentiality, all personal data used to create the Growing Up in England (GUIE) linked dataset such as names and dates of birth were pseudonymised (made non-identifiable) through a pseudonymisation process. Data pseudonymisation, or hashing, is a one-way, irreversible process where data are pseudonymised by transforming the raw, identifiable data into a unique string of letters and numbers. The nature of the hashing process means that only in cases where two records are identical, where names, dates of birth and addresses are recorded in precisely the same format, will an automatic match be possible on the hashed values. In cases where there are spelling errors or inconsistencies between two records relating to the same individual (for example the names Samantha and Sam or John and Jon), the hash values will not be identifiable as being similar.

Feasibility AEDE data processing

The feasibility AEDE consists of several files of data with information on attainment, pupil attributes and pseudonymised person identifiers all separated. To use the data for linkage, multiple steps were required to pull different aspects of an individual together. The process for building the feasibility AEDE subset for linkage is described next, and illustrated in Figure 4.

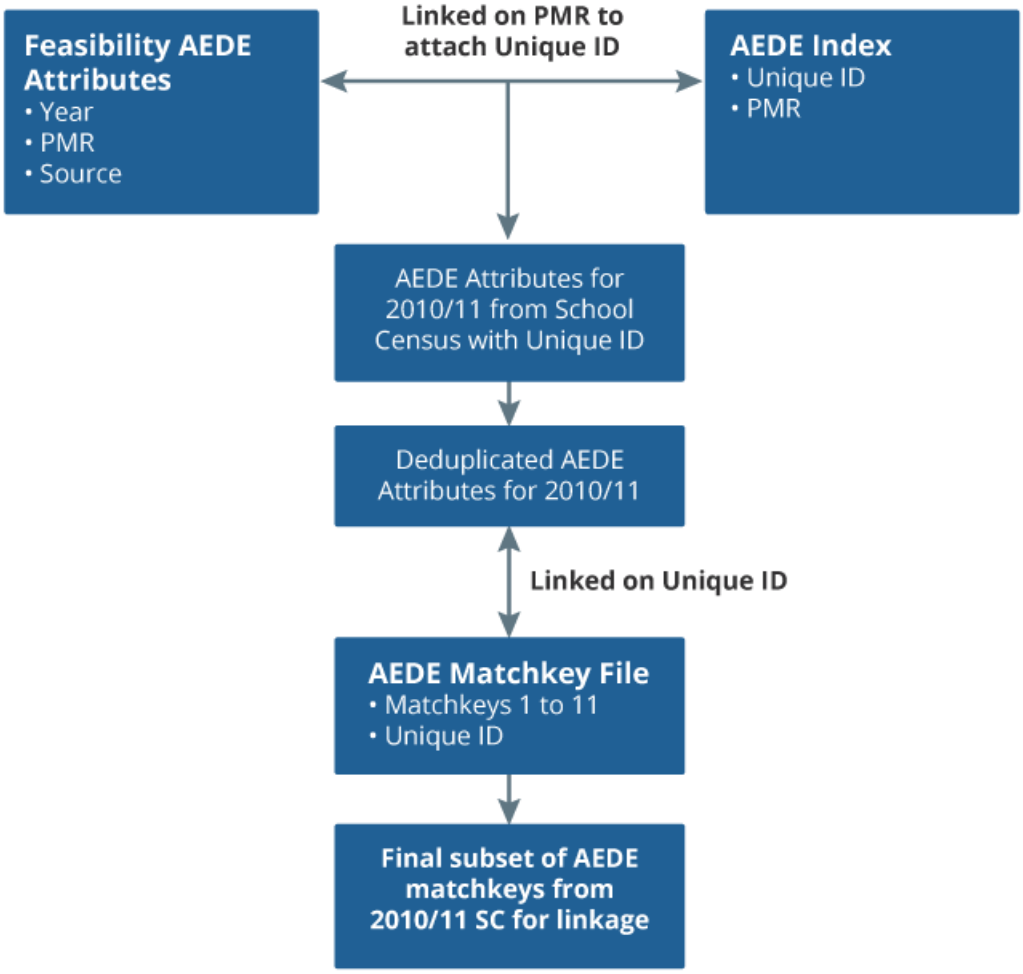
First, the feasibility AEDE attributes containing the source and academic year variables were linked to the AEDE index on the Pupil Matching Reference (PMR) number. The PMR gives each pupil an pseudonymised identifier, which is unique to them and allows matching across datasets without giving away their identity. The purpose of this step was to get the Unique ID from the AEDE index onto the attributes which is needed to link to the matchkey file.

Once the feasibility AEDE attributes had been linked to the AEDE index, the AEDE index was subset into the 2010/11 academic year where School Census was identified as the source dataset. Multiple entries of individual records have been removed; this process is known as de-duplication which was completed on the PMR and using a nodupkey procedure in SAS. The nodupkey procedure retains only the first instance of a record.

Having removed all the duplicated records, the final AEDE subset for linkage contained 2,250,655 individuals. These individuals were then linked to the original matchkey file on the PMR to extract the correct matchkey records for linkage.

The resulting AEDE matchkey file, created for linkage, contained over 161 million records covering the academic years 2000/01 to 2014/15. For the purposes of this AEDE-Census linkage, the file was subset into the School Census records for the 2010/11 academic year, because this was the year closest to 2011 Census. This is important because the information collected in this year is most likely to match that of the Census, in particular a person's address details, and so increasing the number of records which will link.

Figure 4: Preparation of feasibility AEDE



Source: Office for National Statistics

Creating matchkeys

Census data and the feasibility AEDE do not contain a single common identifier that could be used to easily link corresponding records from one dataset to the other, for example a unique number for each individual that is common to both datasets. Therefore, a series of matchkeys containing different combinations of pseudonymised person information, including name, date of birth, gender and postcode, was used to link the AEDE to the Census. For example, forename, surname, date of birth and postcode may be combined and for each member of the population would be expected to retain a high level of uniqueness. As previously mentioned, identifiable data were hashed and used to link records between datasets in the anonymous data research environment.

It is expected that administrative data and survey data will contain some level of error in the capture and quality of the information contained therein. These errors can prevent links being made where they should be (these missed matches are known as false negatives). To help reduce the likelihood of false negatives, nine matchkeys were created and used, some of which allow for small amounts of error within the identifier variables, for instance difference in name spellings or where gender may be missing. Each matchkey is designed to gradually eliminate some of the discrepancies that may otherwise prevent automated matching (Figure 4).

The matchkeys were run in order of strength, by which we mean how able the matchkey is to discern between truly different records. This matchkey ordering differs from the numbering of the matchkeys provided in Table 38. Matchkeys 1 to 11 allow only exact matches on all the selected variables. The standard available matchkeys, developed for use when matching data to the Census, and the information contained within them are shown in Table 38. For more detailed methodology on matchkeys and linking pseudonymised data, see Beyond 2011 data linkage methods (PDF, 319.9KB).

Table 38: Matchkey detailed information used for linkage

Matchkey	Matchkey identifiers
1	FORENAME | SURNAME | DOB | GENDER | POSTCODE
2	FORENAME | SURNAME | DOB | GENDER
3	FORENAME INITIAL | SURNAME INITIAL | DOB | GENDER | POSTCODE DISTRICT
4	FORENAME INITIAL | DOB | GENDER | POSTCODE
5	SURNAME INITIAL | DOB | GENDER | POSTCODE
6	FORENAME | SURNAME | SEX | POSTCODE
7	FORENAME BIGRAM | SURNAME BIGRAM | DOB | SEX | POSTCODE AREA
8	FORENAME | SURNAME | YEAR OF BIRTH | GENDER | POSTCODE DISTRICT
11	FORENAME | SURNAME | DOB | POSTCODE

Source: Office for National Statistics - Admin-based data

Notes

1. In this context the bigram comprises the first two characters of the name.
2. Matchkeys 9 and 10 were not used in this project because Census data did not collect middle name as a separate variable therefore this information was not used to link to AEDE.

Deterministic linking – Census to feasibility AEDE

Table 39 shows the linkage rates for each matchkey for all AEDE-Census records. Out of 2,250,655 records on the AEDE, 2,035,289 records (90%) linked to a corresponding Census record. Two-thirds (66.38%) of the linked AEDE records linked to the Census on the strongest matchkey (1) followed by 19.75%, which linked on matchkey 3.

To link the Census to AEDE, matchkeys from each data source are compared and if they agree, a match is established. Each matchkey is applied to the datasets in an order whereby the amount of error allowed between the datasets is increased gradually. In this way the best quality links are formed earlier. To avoid the possibility of creating false positive links (that is, matching records that should not be matched, for example, two different people) records are only linked on a matchkey if it is unique on both datasets. Where multiple records link on the same key, the link is disregarded and the records are passed on as a residual to the next pass. Matches made in the early stages are given priority over those made on later (weaker) links.

Table 39: Match rates by matchkey for the feasibility AEDE to Census 2011 linkage

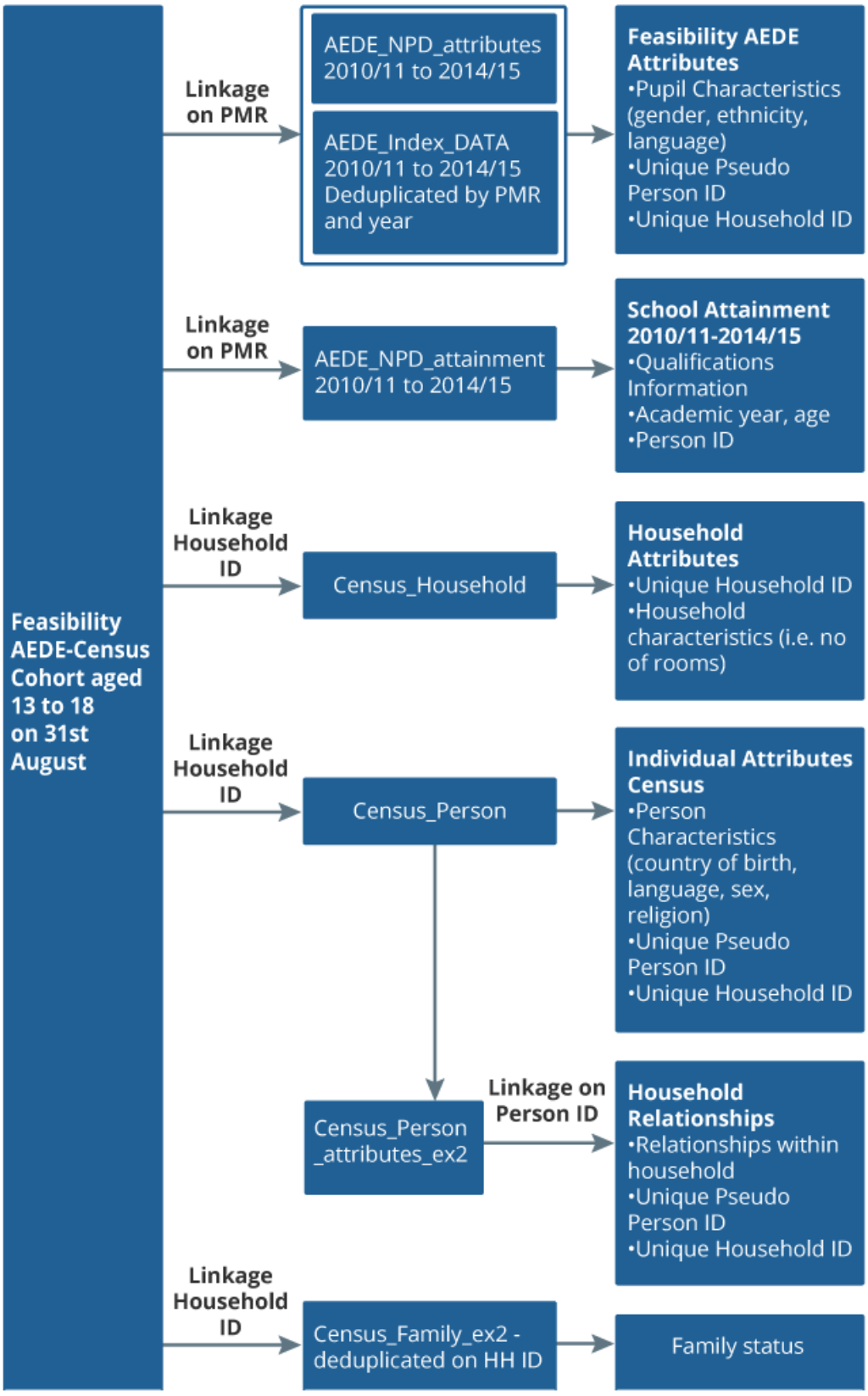
	Census to AEDE	
Matchkey	**Count**	**%**
1	1,350,974	66.38
2	22,282	1.09
3	401,911	19.75
4	95,597	4.7
5	47,070	2.31
6	50,049	2.46
7	59,440	2.92
8	2,326	0.11
11	5,640	0.28
Total	2,035,289	

Source: Office for National Statistics - Admin-based data

Once the AEDE-Census linkage was complete, a cohort of children aged 13 to 18 years on 31 August 2011 in the Census was extracted from this linked dataset to create the initial “index” of 1,920,091 records for the Growing Up in England (GUIE) build. These records were selected as they represent the analytical cohort. This index consists of the unique Census person identifiers and household identifiers, and the unique identifier numbers provided within the feasibility AEDE. The index was used as a base on which to build the Census and feasibility AEDE attributes tables. The unique IDs were replaced with pseudo IDs on all tables provided to researchers to protect the identity of individuals within the datasets.

The next step was to link in other household information collected in the Census, and pupil attributes and attainment from the feasibility AEDE, to the cohort to produce the Census and feasibility AEDE attributes tables for analysis. Figure 5 shows which tables of data were linked and produced.

Figure 5: Tables of data used for initial linkage and final tables for analysis



Source: Office for National Statistics

Notes:

1. The tables on the right-hand side reflect the final tables in GUIE. These are: Feasibility AEDE Attributes, School Attainment between 2010 to 2011 and 2014 to 2015, Household Attributes, Individual Attributes Census, Household Relationships, and Family status.

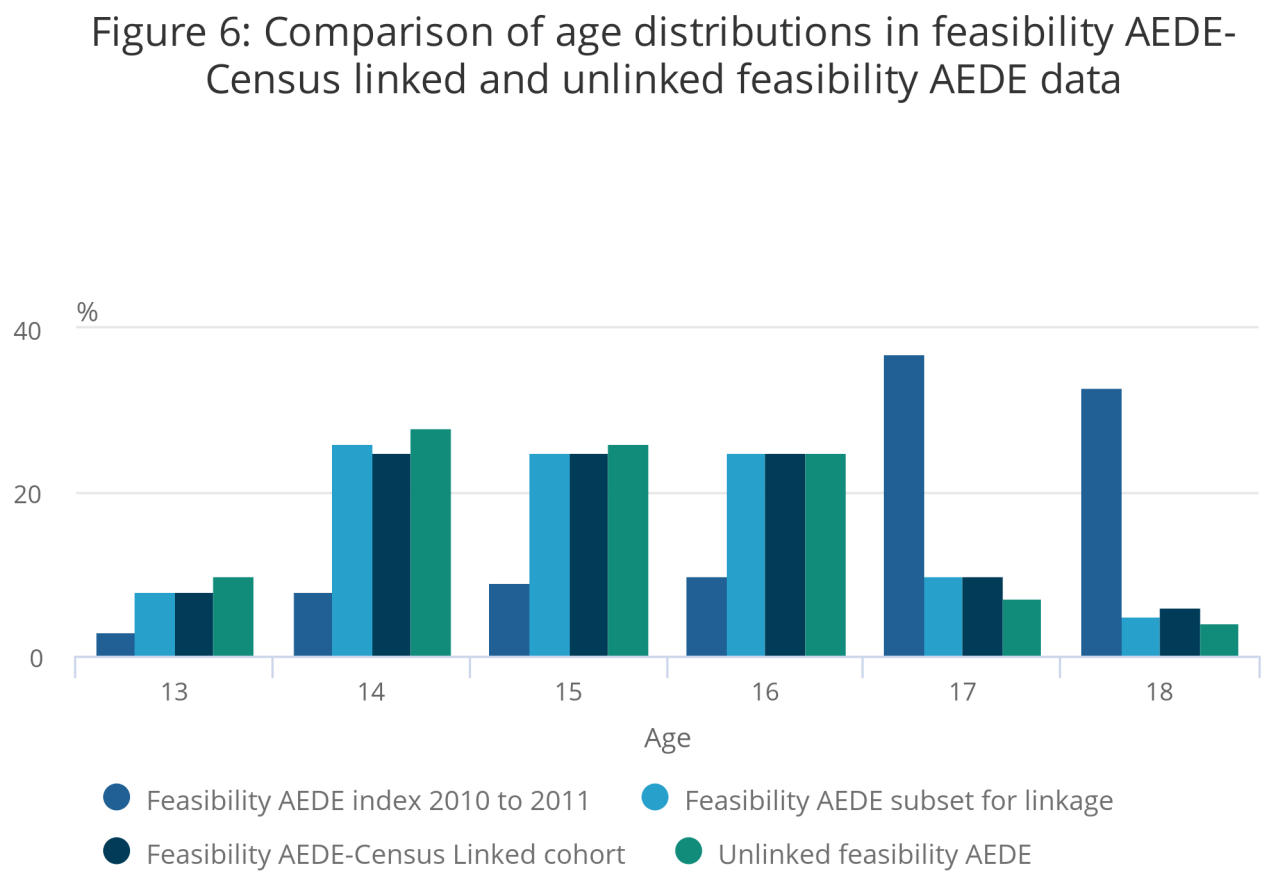
8 . Linkage results

Quality checks

On the creation of the AEDE attainment tables, an anomaly was discovered by which, of the 1,920,091 records in the AEDE-Census linked cohort, only 1,236,071 linked to a record from academic year 2010/11 attainment data. Further investigation revealed that a number of individuals in the AEDE which had linked to the Census were found to be present in AEDE attainment from academic year 2011/12 onwards but were not found to be recorded in the 2010/11 academic year. The reason for this is unclear and may be a quality issue in the AEDE or as a result of lag in the recording of data in the AEDE. This anomaly means that the number of attainment records increases through the years. For the purposes of consistency, only cohort records that linked to an attainment record in academic year 2010/11 were retained in the attainment records for each of the academic years.

To evaluate the quality of the linkage, a series of age distributions was created (Figure 6).

Figure 6: Comparison of age distributions in feasibility AEDE-Census linked and unlinked feasibility AEDE data



Source: Office for National Statistics

Sample sizes: Feasibility AEDE index 2010/11 – 7,143,303
Feasibility AEDE subset for linkage – 2,250,655
Feasibility AEDE-Census Linked cohort – 2,035,212
Unlinked Feasibility AEDE – 215,366

The age distributions show that, aside from the AEDE index 2010/11, there is consistency between the feasibility AEDE subset for linkage, feasibility AEDE-Census linked cohort and the unlinked feasibility AEDE, although the proportion of 14-year-olds in the unlinked AEDE is slightly higher.

The lower numbers of 13-year-olds in the linkage outputs reflect the lower proportion of this age within the AEDE index dataset. However, with regards to the low numbers of 17- and 18-year-olds, although they are consistent within the outputs, it is unclear as to why they would be much lower than those in the AEDE index dataset and may need further investigation going forward. In conclusion, consistency across age distribution indicates that there was no age bias in the linkage.

Unlinked feasibility AEDE records

215,366 AEDE records did not link to a Census record. This is 10% of the total number of records extracted for the linkage. Where we have seen that there are no sizeable differences in the age distributions shown in Figure 6, this suggests that age was not the cause of these records not linking.

Boarders were of particular interest because they may be listed at a different address on feasibility AEDE to their usual address on the Census. Therefore, a check on the numbers of boarders within the unlinked feasibility AEDE was carried out to check for any linkage bias (Table 40). It can be seen that 212,449 records of a total of 215,366 unlinked records (98%) were not boarders. Therefore, this is not solely responsible for records not linking to the Census.

Table 40: Boarder status in unlinked AEDE records

Boarder status	Count
Boarder, six nights or fewer a week	197
Boarder, seven nights a week	69
Boarder, nights per week not specified	964
Not a boarder	212,449
Missing	1,687
Total	215,366

Source: Office for National Statistics - Admin-based data

One of the limitations of linking pseudonymised data is that it is difficult to identify where specific errors in the recording of variables affect the ability for the algorithm to make matches. Without being able to clerically review identifiable record-level data, it is therefore difficult to correct for error in the variables, as well as difficult to calculate false positive and false negative errors (that is, records that should have been matched but were missed and records that did match that should not have).

9 . Lessons learned and next steps

This report showed that a sufficiently high proportion of records linked between these datasets, and the majority of these were made on strong matchkeys, giving confidence that those links are correct; this demonstrates the feasibility of the linkage. It is recommended therefore that research under the Growing Up in England (GUIE) theme should continue and should consider linkage as an important part of that work.

In this specific case, it would be interesting to further investigate the linkage quality using clerical samples as well as to answer outstanding questions such as why 17- and 18-year olds appear differently in age distributions.

Where individuals in the feasibility AEDE attainment data were not found to be in the 2010/11 academic year but appeared in later years, the linked attainment tables were re-run to provide consistency. This involved linking the cohort to the 2010/11 academic year of attainment and only bringing those cohort members into the longitudinal file. This step can be incorporated into the methodology for the future GUIE build going forward into the new linkage environment.

These, together with the issues identified during the analysis stage, will help inform the future iterations of the GUIE dataset. This PoC dataset is a feasibility study on the potential of linked administrative data.

The next steps for the GUIE project include the re-creation of this linked dataset, called GUIE Wave 1, in a new linkage environment at the Office for National Statistics (ONS). This will allow for a better matching exercise, as the quality of matches can be reviewed when linkage is conducted. This opens the potential for creating additional matchkeys that can consider more and different types of error. The GUIE Wave 1 dataset will be made available to accredited researchers with approved projects to use via the Secure Research Service (SRS). The expected delivery of this dataset into the SRS is late 2020.

10 . Annex A: Glossary

Data linkage

The act of bringing two or more datasets from different sources together, creating associations between the data. Data linkage can provide new statistical insights not possible with information from a single source.

Data processing

Data processing is the method applied to convert data into a format that can be interpreted, analysed and used for a variety of purposes.

Data quality

An essential characteristic that determines the reliability of data for making decisions. High-quality data are complete, accurate, available and timely.

De-identified

De-identified data do not contain any personal identifiable information, such as name, address, postcodes etc. The identifiers are removed from the records before de-identified microdata is securely transferred to the Secure Research System (the secure environment where access is controlled).

11 . Annex B: Highest educational attainment of child by Local Authority 2011

Table 41: Highest educational attainment of child by Local Authority
England, academic years 2010/11 to 2014/15

Local Authority 2011	Below Level 1	Level 1	Level 2	Level 3	Missing	Total
Missing	**50**	**110**	**250**	**570**	**40**	**1,020**
Adur	30	190	670	1,020	130	2,040
Allerdale	40	310	1,140	2,090	140	3,720
Amber Valley	50	390	1,360	2,570	210	4,580
Arun	60	400	1,490	2,470	180	4,600
Ashfield	50	620	1,550	1,870	310	4,400
Ashford	50	480	1,380	2,530	270	4,710
Aylesbury Vale	70	420	1,390	4,710	250	6,840
Babergh	30	270	840	1,790	110	3,030
Barking and Dagenham	120	640	2,210	4,040	310	7,320
Barnet	120	500	1,890	7,890	320	10,720
Barnsley	70	740	2,720	3,820	590	7,940
Barrow-in-Furness	50	250	610	1,260	150	2,320
Basildon	80	470	2,030	3,440	390	6,410
Basingstoke and Deane	50	450	1,410	3,160	230	5,300
Bassetlaw	50	330	1,170	2,240	300	4,090
Bath and North East Somerset	50	330	1,460	3,460	230	5,510
Bedford	60	390	1,470	3,570	230	5,720
Bexley	90	600	2,370	5,970	510	9,530
Birmingham	560	2,670	10,750	21,880	2,320	38,180
Blaby	50	340	980	2,210	120	3,690
Blackburn with Darwen	50	480	1,420	3,220	240	5,390
Blackpool	40	410	1,270	2,370	250	4,350
Bolsover	20	310	900	1,350	120	2,710
Bolton	100	590	2,690	5,550	540	9,460
Boston	30	270	580	1,250	90	2,220
Bournemouth	60	470	1,290	2,770	190	4,780
Bracknell Forest	60	320	980	2,380	140	3,880
Bradford	270	1,470	5,620	10,890	1,180	19,440
Braintree	70	570	1,510	2,790	220	5,160
Breckland	60	530	1,390	2,370	180	4,530
Brent	110	490	1,910	6,360	390	9,250
Brentwood	30	120	490	2,020	70	2,730
Brighton and Hove	90	540	1,680	3,590	380	6,270
Bristol, City of	240	930	3,640	5,480	800	11,080
Broadland	40	330	1,280	2,670	90	4,410
Bromley	110	510	2,300	7,740	380	11,040

Bromsgrove	20	190	770	2,430	100	3,500
Broxbourne	40	230	1,080	2,120	160	3,620
Broxtowe	40	280	1,050	2,050	150	3,560
Burnley	50	250	940	1,460	170	2,860
Bury	50	370	1,340	3,760	190	5,710
Calderdale	60	510	2,040	4,690	270	7,570
Cambridge	30	180	500	1,350	140	2,190
Camden	60	300	860	2,400	160	3,780
Cannock Chase	40	370	1,230	1,890	190	3,710
Canterbury	90	350	1,400	2,920	240	5,010
Carlisle	40	340	1,140	1,900	250	3,670
Castle Point	40	200	950	1,830	180	3,190
Central Bedfordshire	110	790	2,520	6,140	370	9,930
Charnwood	70	400	1,470	3,190	190	5,330
Chelmsford	70	410	1,260	4,300	240	6,280
Cheltenham	30	250	690	2,380	160	3,520
Cherwell	70	400	1,320	2,730	230	4,750
Cheshire East	100	770	2,540	8,140	380	11,940
Cheshire West and Chester	120	900	2,680	7,010	480	11,190
Chesterfield	50	380	1,060	2,130	180	3,790
Chichester	50	240	810	1,850	90	3,040
Chiltern	30	150	620	2,920	70	3,780
Chorley	30	160	800	2,150	120	3,270
Christchurch	10	160	350	980	50	1,550
City of London	<10	<10	10	40	<10	50
Colchester	60	570	1,400	3,030	200	5,270
Copeland	30	170	890	1,360	150	2,600
Corby	20	260	960	990	110	2,330
Cornwall	170	1,540	5,060	9,800	590	17,160
Cotswold	20	210	600	1,910	60	2,800
County Durham	160	1,040	5,480	9,680	890	17,250
Coventry	120	920	3,320	6,240	620	11,210
Craven	<10	80	510	1,410	30	2,020
Crawley	40	340	1,190	2,280	190	4,040
Croydon	170	750	2,710	8,090	560	12,280
Dacorum	50	340	1,260	3,480	190	5,310
Darlington	50	190	1,000	1,880	170	3,280
Dartford	40	210	1,060	2,230	200	3,740

Daventry	20	250	750	1,790	70	2,880
Derby	110	720	2,780	4,370	440	8,420
Derbyshire Dales	20	180	500	1,770	60	2,530
Doncaster	140	970	3,450	5,780	800	11,130
Dover	50	370	1,200	2,230	260	4,110
Dudley	90	890	3,070	6,190	480	10,710
Ealing	100	530	1,940	7,390	320	10,280
East Cambridgeshire	40	210	680	1,380	100	2,410
East Devon	30	350	1,210	2,810	150	4,550
East Dorset	30	260	710	2,070	80	3,140
East Hampshire	40	180	930	2,170	120	3,440
East Hertfordshire	60	170	990	4,060	90	5,380
East Lindsey	50	410	1,410	2,610	170	4,650
East Northamptonshire	30	310	910	1,880	130	3,260
East Riding of Yorkshire	90	700	3,190	7,400	320	11,700
East Staffordshire	30	400	1,210	2,460	130	4,230
Eastbourne	50	220	960	1,290	140	2,660
Eastleigh	40	380	1,030	2,400	110	3,960
Eden	30	80	610	1,240	40	2,010
Elmbridge	40	170	520	2,050	100	2,880
Enfield	140	860	2,400	7,660	460	11,520
Epping Forest	30	240	1,040	2,510	130	3,960
Epsom and Ewell	20	100	470	2,020	60	2,670
Erewash	40	340	1,320	2,060	180	3,940
Exeter	30	230	990	1,460	170	2,880
Fareham	20	250	860	2,170	100	3,410
Fenland	40	240	1,180	1,560	190	3,200
Forest Heath	20	120	540	730	60	1,480
Forest of Dean	40	310	810	1,530	140	2,830
Fylde	20	80	530	1,430	50	2,110
Gateshead	80	280	2,290	3,730	310	6,690
Gedling	30	250	1,080	2,410	140	3,910
Gloucester	50	440	1,320	2,620	290	4,720
Gosport	30	250	880	1,410	100	2,660
Gravesham	40	260	1,220	2,400	150	4,060
Great Yarmouth	50	380	1,150	1,390	170	3,150
Greenwich	120	580	2,140	4,670	480	8,000
Guildford	50	230	750	2,420	140	3,590

Hackney	110	410	1,280	3,760	260	5,820
Halton	40	280	1,260	2,420	240	4,240
Hambleton	30	220	680	2,120	70	3,130
Hammersmith and Fulham	40	220	740	1,840	180	3,010
Harborough	20	270	770	2,200	80	3,350
Haringey	110	400	1,430	4,550	300	6,780
Harlow	50	250	760	1,590	260	2,920
Harrogate	30	230	1,160	4,160	190	5,770
Harrow	120	250	1,250	6,100	150	7,870
Hart	30	180	610	1,950	40	2,810
Hartlepool	40	340	970	1,810	170	3,320
Hastings	60	260	1,000	1,290	190	2,790
Havant	50	410	1,270	1,820	180	3,730
Havering	100	790	2,510	5,080	240	8,710
Herefordshire, County of	60	350	1,720	3,080	270	5,480
Hertsmere	30	180	770	2,430	100	3,510
High Peak	30	220	840	2,020	110	3,220
Hillingdon	160	520	2,450	6,590	380	10,090
Hinckley and Bosworth	50	280	1,060	2,120	160	3,660
Horsham	50	210	990	2,850	70	4,170
Hounslow	80	400	1,780	5,350	260	7,870
Huntingdonshire	70	410	1,610	3,940	270	6,300
Hyndburn	20	200	890	1,750	150	3,010
Ipswich	40	450	1,260	2,610	220	4,590
Isle of Wight	70	450	1,440	2,430	300	4,680
Isles of Scilly	<10	<10	20	40	<10	50
Islington	90	360	1,030	2,550	220	4,250
Kensington and Chelsea	30	60	430	1,060	70	1,640
Kettering	40	310	1,010	2,000	150	3,500
King's Lynn and West Norfolk	80	610	1,480	2,300	250	4,720
Kingston upon Hull, City of	100	700	3,200	3,520	640	8,170
Kingston upon Thames	60	180	920	3,350	150	4,670
Kirklees	120	1,070	3,660	8,630	560	14,040
Knowsley	100	460	1,920	2,570	480	5,520
Lambeth	100	380	1,500	3,940	330	6,250
Lancaster	50	240	1,460	2,830	180	4,760
Leeds	290	1,640	7,080	13,800	1,230	24,030
Leicester	200	1,180	3,060	5,540	730	10,710

Lewes	30	230	840	1,480	110	2,680
Lewisham	160	600	1,950	4,830	410	7,950
Lichfield	30	210	940	2,410	110	3,690
Lincoln	50	260	1,070	1,370	210	2,960
Liverpool	230	930	4,790	8,090	1,180	15,220
Luton	110	560	1,820	4,020	340	6,860
Maidstone	70	240	1,740	3,460	220	5,730
Maldon	30	180	650	1,520	100	2,470
Malvern Hills	20	190	580	1,510	70	2,370
Manchester	290	910	3,780	6,810	1,130	12,910
Mansfield	50	440	1,290	1,790	210	3,780
Medway	110	650	3,450	5,720	470	10,400
Melton	20	120	460	1,140	70	1,810
Mendip	50	330	940	2,210	170	3,690
Merton	60	340	1,120	3,630	250	5,400
Mid Devon	30	220	750	1,400	120	2,520
Mid Suffolk	30	250	800	2,430	70	3,580
Mid Sussex	30	310	1,020	2,970	100	4,430
Middlesbrough	100	370	1,560	2,460	270	4,750
Milton Keynes	110	680	2,490	5,890	350	9,520
Mole Valley	20	120	550	1,980	80	2,770
New Forest	50	500	1,430	3,220	200	5,390
Newark and Sherwood	50	360	1,190	2,270	260	4,130
Newcastle upon Tyne	130	420	2,660	4,380	580	8,180
Newcastle-under-Lyme	40	360	1,020	2,270	150	3,830
Newham	130	640	2,180	6,210	450	9,620
North Devon	50	290	920	1,530	130	2,920
North Dorset	20	230	650	1,340	50	2,280
North East Derbyshire	40	250	980	2,080	140	3,490
North East Lincolnshire	70	480	1,850	2,610	400	5,410
North Hertfordshire	30	350	920	3,250	160	4,710
North Kesteven	30	230	1,290	2,690	110	4,340
North Lincolnshire	50	290	1,850	2,920	330	5,430
North Norfolk	50	350	920	1,450	110	2,890
North Somerset	70	330	1,630	4,620	190	6,840
North Tyneside	50	410	1,940	4,170	330	6,910
North Warwickshire	20	210	590	1,250	100	2,180
North West Leicestershire	40	260	950	2,010	90	3,340

Northampton	120	700	2,020	4,040	400	7,260
Northumberland	140	770	3,470	6,620	510	11,520
Norwich	60	470	1,060	1,540	190	3,320
Nottingham	170	740	2,820	3,670	850	8,260
Nuneaton and Bedworth	70	420	1,510	2,050	270	4,320
Oadby and Wigston	20	150	520	1,510	60	2,260
Oldham	70	600	2,180	4,480	470	7,800
Oxford	60	310	740	2,020	240	3,370
Pendle	60	220	820	1,660	120	2,880
Peterborough	100	480	1,960	3,870	400	6,810
Plymouth	90	640	3,450	4,520	410	9,110
Poole	50	350	1,320	2,980	150	4,860
Portsmouth	90	600	1,650	2,530	370	5,250
Preston	80	320	970	2,520	220	4,110
Purbeck	20	200	440	960	60	1,670
Reading	80	420	1,180	2,590	290	4,540
Redbridge	140	430	1,970	8,170	210	10,910
Redcar and Cleveland	70	460	1,450	2,350	270	4,590
Redditch	30	220	1,020	1,740	140	3,140
Reigate and Banstead	40	330	930	2,390	170	3,860
Ribble Valley	20	90	370	1,480	40	2,000
Richmond upon Thames	40	150	510	2,490	110	3,300
Richmondshire	20	130	440	1,090	50	1,730
Rochdale	100	580	1,960	4,300	400	7,330
Rochford	30	180	920	2,120	120	3,360
Rossendale	30	180	740	1,510	70	2,530
Rother	40	200	680	1,590	140	2,640
Rotherham	90	790	2,900	5,180	560	9,520
Rugby	40	290	800	2,260	120	3,500
Runnymede	20	160	490	1,250	120	2,030
Rushcliffe	30	100	760	2,820	70	3,780
Rushmoor	50	330	830	1,580	140	2,930
Rutland	<10	60	250	600	30	930
Ryedale	20	80	480	1,270	40	1,890
Salford	90	530	1,970	3,420	470	6,480
Sandwell	130	880	3,560	5,990	750	11,320
Scarborough	40	260	1,020	1,810	190	3,320
Sedgemoor	40	240	1,230	2,270	160	3,940

Sefton	100	550	2,590	5,800	330	9,360
Selby	20	210	800	1,610	100	2,740
Sevenoaks	30	190	890	2,460	200	3,770
Sheffield	260	1,320	4,450	9,650	920	16,600
Shepway	60	270	1,410	1,960	240	3,940
Shropshire	110	860	2,600	5,330	360	9,260
Slough	70	350	1,240	3,410	220	5,280
Solihull	80	350	2,000	5,040	270	7,730
South Bucks	10	110	400	1,780	60	2,370
South Cambridgeshire	50	240	1,050	3,090	120	4,550
South Derbyshire	40	300	950	2,020	130	3,430
South Gloucestershire	90	840	3,180	5,990	350	10,450
South Hams	30	170	660	2,280	70	3,210
South Holland	20	280	960	1,820	140	3,220
South Kesteven	40	320	1,160	3,370	160	5,050
South Lakeland	40	200	760	2,360	50	3,410
South Norfolk	40	350	1,190	2,730	70	4,370
South Northamptonshire	30	180	820	2,340	60	3,430
South Oxfordshire	40	380	960	2,730	150	4,250
South Ribble	30	220	810	2,330	140	3,530
South Somerset	50	480	1,480	2,830	200	5,040
South Staffordshire	30	240	990	2,530	140	3,920
South Tyneside	60	360	1,640	2,750	310	5,120
Southampton	90	670	1,930	2,830	470	5,980
Southend-on-Sea	90	440	1,590	3,740	360	6,220
Southwark	100	370	1,670	4,070	410	6,610
Spelthorne	40	260	790	1,680	140	2,910
St Albans	40	160	730	4,110	100	5,140
St Edmundsbury	50	240	1,110	2,320	110	3,820
St. Helens	80	370	2,030	3,280	300	6,060
Stafford	50	330	990	2,700	120	4,180
Staffordshire Moorlands	30	210	890	2,200	110	3,440
Stevenage	50	310	940	1,890	170	3,360
Stockport	90	590	2,090	5,400	380	8,550
Stockton-on-Tees	70	630	1,870	3,580	270	6,420
Stoke-on-Trent	110	620	2,700	3,680	630	7,750
Stratford-on-Avon	40	250	790	2,910	110	4,100
Stroud	40	370	930	2,670	130	4,130

Suffolk Coastal	30	390	1,070	2,990	120	4,590
Sunderland	90	630	2,880	4,960	610	9,170
Surrey Heath	30	200	630	2,020	80	2,960
Sutton	90	350	1,770	4,970	230	7,400
Swale	70	280	1,910	2,930	310	5,500
Swindon	80	730	2,240	3,740	300	7,080
Tameside	80	700	2,050	4,170	450	7,450
Tamworth	30	190	970	1,640	180	3,010
Tandridge	30	230	630	1,620	70	2,580
Taunton Deane	50	210	890	1,830	110	3,090
Teignbridge	30	370	1,240	2,600	200	4,430
Telford and Wrekin	70	420	1,750	3,180	480	5,890
Tendring	70	370	1,840	2,330	250	4,860
Test Valley	40	280	920	2,260	120	3,620
Tewkesbury	30	160	710	1,970	110	2,990
Thanet	100	360	1,620	2,600	320	5,000
Three Rivers	40	140	580	2,300	90	3,140
Thurrock	70	360	1,890	2,900	280	5,500
Tonbridge and Malling	50	260	1,280	3,110	170	4,860
Torbay	50	420	1,300	2,390	270	4,430
Torridge	30	200	700	1,000	110	2,040
Tower Hamlets	110	580	1,660	4,220	320	6,900
Trafford	90	340	1,700	5,690	220	8,040
Tunbridge Wells	30	220	840	2,940	140	4,170
Uttlesford	40	180	560	2,180	90	3,040
Vale of White Horse	50	280	1,030	2,400	110	3,860
Wakefield	120	700	3,820	5,860	610	11,100
Walsall	130	750	3,240	5,410	810	10,340
Waltham Forest	160	420	1,890	5,220	250	7,940
Wandsworth	100	280	1,160	3,410	240	5,190
Warrington	70	400	1,820	4,750	190	7,230
Warwick	40	280	890	2,730	130	4,060
Watford	40	170	650	2,220	110	3,190
Waveney	50	410	1,340	1,920	180	3,900
Waverley	30	170	630	1,850	80	2,770
Wealden	40	320	1,300	3,070	150	4,880
Wellingborough	40	230	870	1,530	110	2,780
Welwyn Hatfield	40	200	910	2,250	110	3,500

West Berkshire	70	540	1,220	3,600	170	5,590
West Devon	20	130	520	1,110	70	1,850
West Dorset	30	220	870	2,280	90	3,480
West Lancashire	60	270	970	2,290	120	3,710
West Lindsey	20	210	870	2,190	200	3,500
West Oxfordshire	20	290	860	2,260	100	3,530
West Somerset	10	50	350	580	80	1,070
Westminster	40	220	700	2,080	160	3,200
Weymouth and Portland	20	180	630	1,260	100	2,190
Wigan	100	810	3,230	5,860	460	10,470
Wiltshire	180	1,340	4,040	10,550	620	16,720
Winchester	40	210	600	2,140	100	3,080
Windsor and Maidenhead	50	210	930	3,170	120	4,490
Wirral	120	820	3,370	7,580	550	12,440
Woking	40	160	590	1,830	120	2,740
Wokingham	60	260	1,030	4,380	150	5,880
Wolverhampton	100	590	2,940	4,890	570	9,100
Worcester	20	250	890	1,520	150	2,820
Worthing	40	220	940	1,650	130	2,970
Wychavon	40	360	920	2,600	140	4,070
Wycombe	60	390	1,260	4,440	140	6,290
Wyre	40	180	870	2,060	100	3,250
Wyre Forest	50	220	1,060	1,810	140	3,270
York	60	420	1,360	3,650	150	5,640
Total	20,820	127,370	474,260	1,040,700	79,620	1,742,770

Source: Office for National Statistics - Admin-based data

Notes

1. Totals may not sum because of rounding.
2. Geographies sourced from 2011 Census.