

Access to high performing schools in England

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and Capacity



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Summary

Widening access to high performing schools is crucial if the Government's policy objective of improving social mobility is to be met. In this report, we analyse the density of good secondary school places across England, and compare the spread of good quality places in 2015 with that in 2010.

We find that:

- In **both 2010 and 2015, around one-fifth of local neighbourhoods (as defined by Lower Super Output Areas) had no high performing secondary schools within reasonable travel distance of pupils.** In these areas, pupils cannot easily access a place at a high performing school.
- **In two local authority areas, there was no access at all to places at high performing secondary schools in both 2010 and 2015: these areas were Blackpool and Hartlepool.**
- **Access to high performing secondary schools has become more geographically unequal over the period 2010-2015,** in spite of government policies aimed at improving school performance outside higher performing areas such as London.
- **Access to high performing secondary schools is good in areas such as London and in parts of the South, but is poor in areas such as the North East, Yorkshire and the Humber, and parts of the Midlands.**
- From 2010 to 2015, **local authorities with consistently good access to high performing secondary schools saw the proportion of pupils gaining access to such schools rise from 49 per cent in 2010 to 58 per cent in 2015.** Many of these are in London.
- **But in local authorities with consistently low densities of high performing school places, the proportion of pupils gaining access to such places fell from just 6 per cent in 2010 to 5 per cent in 2015. All these areas were outside London and the South East - and included areas such as Blackpool, Hartlepool, Barnsley, Redcar and Cleveland, Knowsley, and Middlesbrough.**
- Another way of looking at the same challenge is to consider the local authorities with the highest and lowest increases in the density of high performing secondary school places, between 2010-2015. **Of the 20 local authorities with the biggest increases, 16 were in London.** In these areas the proportion of high performing places rose from 36 per cent to 60 per cent from 2010-2015. **Of the 20 local authorities with the largest decreases in high performing places, none of these were in London.** In these areas the proportion of high performing places fell from 31 per cent in 2010 to 20 per cent in 2015.
- The largest riser was Harrow. The biggest faller was Blackburn with Darwen.

Policy implications

There are large areas of the country in which parents and pupils currently have no access to a high performing secondary school. In particular, the **North East has virtually no high performing secondary schools**. Given the wide geographic variation in the density of high performing school places, the **Government's Opportunity Areas initiative seems a positive step towards addressing this challenge**. However, as yet there is no evidence on whether this intervention will be effective and there **is no Opportunity Area in the North East**. There is a **need to ensure that measures are in place to raise the quality of provision available to pupils in this region**.

1. Context

The Department for Education's recently published Social Mobility Action Plan, *Unlocking Talent, Fulfilling Potential* recognises the unequal spread of opportunity across the country. The document has a strong emphasis on 'place' and states that 'where you live will affect where you get to in life – while in some areas opportunity can become self-perpetuating, in other communities, disadvantage can become entrenched'.¹

Demographic pressures are currently driving an urgent need for more school places: the number of primary school pupils is projected to increase by 3.8 per cent between 2016 and 2025 and the number of secondary school pupils by 20.6 per cent over the same period.² As measures are taken to increase the supply of school places available, it will be important for policy makers to consider the ways in which additional places can be created in high quality settings, and access widened to high performing schools.

Existing research demonstrates that, pupils from disadvantaged backgrounds are less likely to attend good schools than are their peers.³ School admissions criteria, the location of high performing schools, parental preferences, and family resources available to navigate the admissions system (financial, social and educational), all appear to play a role in determining this outcome.⁴

This report outlines the geographical distribution of high secondary performing schools across England, and compares changes in this distribution between 2010 and 2015. As the definition of a high performing school used in this analysis is based on a relative measure of performance, comparisons between 2010 and 2015 focus on changes in the distribution of high performing

¹ Department for Education, *Unlocking Talent, Fulfilling Potential*, December 2017 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/667690/Social_Mobility_Action_Plan_-_for_printing.pdf

² Department for Education, 'National pupil projections – future trends in pupil numbers: July 2016', SFR 25/2016, July 2016, p.3, available at: <https://www.gov.uk/government/statistics/national-pupil-projections-july-2016>

³ B. Gadsby, *Impossible? Social mobility and the seemingly unbreakable class ceiling*, TeachFirst, March 2017, pp.17-18, available at: <https://www.teachfirst.org.uk/sites/default/files/Teach-First-Policy-Report-Impossible.pdf>; C. Cullinane, J. Hillary, J. Andrade, and S. McNamara, *Selective Comprehensives 2017: Admissions to high-attaining non-selective schools for disadvantaged pupils*, The Sutton Trust, March 2017, available at: <http://www.suttontrust.com/wp-content/uploads/2017/03/Selective-Comprehensives-2017.pdf>; S. Burgess and A. Briggs, 'School Assignment, School Choice and Social Mobility', The Centre for Market and Public Organisation, Working Paper No. 06/157, November 2006, available at: <http://www.bristol.ac.uk/media-library/sites/cmipo/migrated/documents/wp157.pdf>.

⁴ R. Allen, S. Burgess, and L. McKenna, *School performance and parental choice of school: secondary data analysis*, Department for Education, January 2014, pp.11-28, available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/275938/RR310_-_School_performance_and_parental_choice_of_school.pdf; S. Burgess and A. Briggs, 'School Assignment, School Choice and Social Mobility', The Centre for Market and Public Organisation, Working Paper No. 06/157, November 2006, available at: <http://www.bristol.ac.uk/media-library/sites/cmipo/migrated/documents/wp157.pdf>; R. Allen and M. Parameshwaran, *Caught out*, The Sutton Trust, April 2016, available at: http://www.suttontrust.com/wp-content/uploads/2016/04/Caught-Out_Research-brief_April-16.pdf.

schools and of access to places in these schools, rather than on the extent of any system-level improvement.⁵

2. Methodology

This report calculates the ‘density’ of high-performing school places per pupil. The density of places at high performing schools was calculated for each lower layer super output area (LSOA) in England⁶ by comparing estimates of the demand for, and supply of, places at high performing schools; these estimates were based on information derived from the Key Stage 4 National Pupil Database (NPD), linked to School Census data.

Estimating the demand for school places

Demand was estimated on the basis of the number of pupils at the end of Key Stage 4 in each LSOA; this was averaged over a three-year period (2013-15 and 2008-10) and included breakdowns by gender and prior attainment in order to account for single sex and selective schools when comparing demand with supply. This report estimates demand but does not include actual preferences expressed by pupils or parents during the school admission process.

Estimating the supply of school places

In this report, high performance is defined using a measure of value added. Value added measures attempt to capture the effectiveness of a school by summarising pupil outcomes having controlled for their prior attainment. In this instance we look at the attainment of pupils at the end of secondary school (Key Stage 4) in comparison to pupils with similar attainment at the end of primary school (Key Stage 2). Schools are defined as high performing if they were in the top 40 per cent of all schools in at least three out of four years (2007-2010 in the baseline year and 2012-15 as the latest year). At each time point this captures about 30 per cent of secondary schools.

As we are looking at how the distribution of high performing schools has changed over time we need a measure of performance that is broadly consistent over time. This presents a challenge since there have been significant reforms to measures of school level accountability over the time period we are looking at. Most significantly, reforms in 2014 reduced the number of non-GCSE qualifications that could be included in performance measures, and the value of those that remained was reduced. Therefore we have chosen a measure that looks at GCSE results only as this is the most stable over time. However, even this is affected by the accountability arrangements at the time since schools would have made curriculum and timetabling choices which may have limited take-up of GCSE subjects.

⁵ The proportion of schools achieving the top two Ofsted grades has increased substantially in recent years and includes the vast majority of schools. The measure used to denote high performing schools in this analysis does not demonstrate a large increase in the number of high performing schools between 2010 and 2015 because it is based on value added, which is a relative measure of progress. It covers fewer schools because the focus of the analysis is on access to the best performing schools.

⁶ LSOAs are small geographical areas containing between 400 and 1,200 households and between 1,000 and 3,000 individuals. There are currently a total of 32,844 LSOAs in England. For more information, see: <https://www.ons.gov.uk/methodology/geography/ukgeographies/censusgeography#super-output-area-soa>.

School level performance on this measure was taken from the Department for Education publication 'Multi-academy trust performance measures: 2014 to 2015'. This includes data from 2007 to 2015, meaning that we are able to draw comparisons between 2010 and 2015.

In order to estimate the supply of high performing school places available to each LSOA, the distance between each LSOA and each school in the country was calculated. Reasonable travel distances were estimated by using the NPD to calculate the straight-line distances within which 90 per cent of pupils travel to school in 2015, broken down by pupils living in rural (village/hamlet), rural (town), and urban areas. Further explanation of this method can be found in Annex B.

School capacity data recorded in 2010 and 2015 School Capacity Survey was then used to estimate the cohort size of each high performing school. This was compared with the total demand placed on each school from all LSOAs for which it was within reasonable travel distance, and this in turn was used to estimate the number of places which each high performing school could provide to each LSOA, accounting for selective and single sex schools. The total of all high performing school places available to each LSOA was then calculated. Finally, this total supply was divided by the estimated demand in order to estimate the density of high performing school provision available to the LSOA.

It is of course the case that a school which lies within a reasonable straight line distance for a pupil may not in reality be accessible due to its specific admissions criteria, such as faith-based requirements or use of a catchment area (which is geographically smaller than that defined by the reasonable travel distance measure) or geographic barriers such as major roads and rivers. Therefore use of reasonable travel distances estimates theoretical access to a school. Other analysis has attempted to define more realistic school catchment areas on the basis of the home LSOAs of pupils who actually attend the school.⁷ This excludes pupils who have no realistic access to the school, but it may also exclude pupils who could access the school but choose not to do so. On balance, the reasonable travel distance method is preferred for this analysis.

3. Findings

Given that, around 30 per cent of schools are considered to be high performing, we might expect each LSOA to have access to high quality school places for around 30 per cent of its pupils.

In both 2010 and 2015, around one-fifth of LSOAs had no high performing secondary schools within reasonable travel distance. Pupils in these areas, regardless of their background, are unlikely to have any opportunity to access a high performing secondary school place.

In 2015, 16.5 per cent of LSOAs had high performing schools within reasonable travel distance for more than 60 per cent of pupils. This marks an increase from 9.3 per cent in 2010. There was also a drop of similar magnitude in the percentage of LSOAs with access to places at high performing schools for between 20 and 40 per cent of pupils.

⁷ R. Allen and M. Parameshwaran, *Caught out*, The Sutton Trust, April 2016, available at: http://www.suttontrust.com/wp-content/uploads/2016/04/Caught-Out_Research-brief_April-16.pdf; C. Cullinane, J. Hillary, J. Andrade, and S. McNamara, *Selective Comprehensives 2017: Admissions to high-attaining non-selective schools for disadvantaged pupils*, The Sutton Trust, March 2017, available at: <http://www.suttontrust.com/wp-content/uploads/2017/03/Selective-Comprehensives-2017.pdf>.

Taken together, this suggests that high performing schools have become more geographically concentrated.

Figure 3.1: Variation in density of places at high performing secondary schools across England, 2010 and 2015

Density of places at high performing schools	Percent LSOAs, 2010	Percent LSOAs, 2015
No places at high performing schools available	19.8	21.3
Places at high performing schools available for 0 to 20 per cent of pupils	19.2	17.7
Places at high performing schools available for 20 to 40 per cent of pupils	30.9	24.5
Places at high performing schools available for 40 to 60 per cent of pupils	20.7	19.7
Places at high performing schools available for 60 to 100 per cent of pupils	9.3	16.5
Places at high performing schools available but no demand	0.1	0.2

These categories of LSOA are not evenly distributed across England. As the maps below show, higher densities of high performing school places are evident around London, much of the South, and parts of the North. On the other hand, large parts of the North East and the Midlands have little or no access to high performing school places.

Figure 3.2: Density of high performing secondary school places across England, 2010

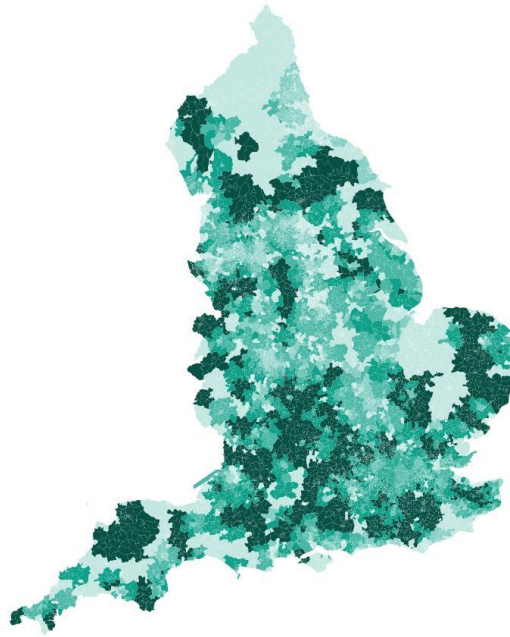
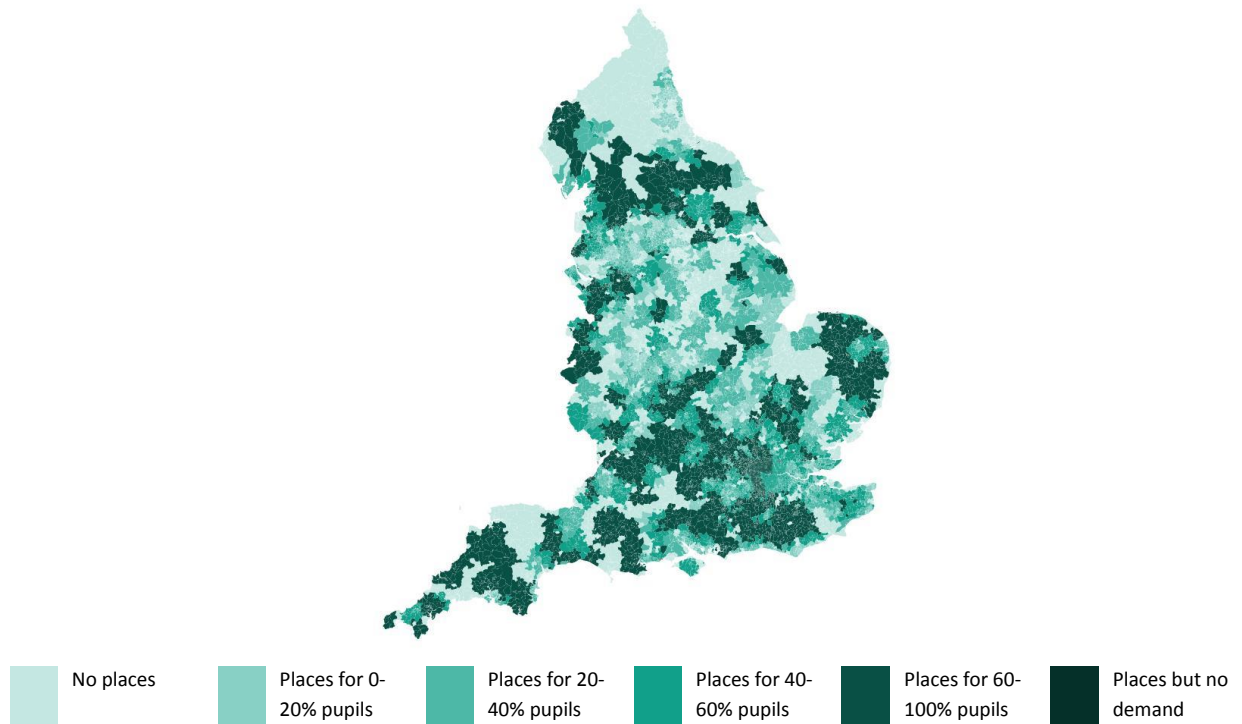


Figure 3.3: Density of high performing secondary school places across England, 2015



Aggregating the figures for demand and supply of high performing school places to local authority level enables us to identify which areas have consistently performed well or poorly on this measure.

Local authorities were considered to have consistently high densities if they had high performing school places available for at least 45 per cent of pupils in both 2010 and 2015. The 14 local authorities which fall into this category are listed below. They are all located in London and the South of England. In these areas, the proportion of pupils with access to a high performing secondary school place increased from 49 per cent to 58 per cent between 2010 and 2015.

Figure 3.4: Local authorities with consistently high densities of high performing secondary school places, 2010 and 2015

Local authority	Proportion FSM pupils, 2015	Density high performing school places, 2010	Density high performing school places, 2015	Change in density 2010-15
Barnet	12.9	0.55	0.76	+0.21
Kingston upon Thames	7.9	0.56	0.67	+0.11
Richmond upon Thames	9.3	0.49	0.66	+0.17
Haringey	29.0	0.45	0.66	+0.20
West Berkshire	5.4	0.57	0.61	+0.04
Sutton	9.9	0.47	0.60	+0.12
Merton	15.3	0.46	0.58	+0.12
Surrey	6.4	0.46	0.57	+0.11
Buckinghamshire	5.6	0.50	0.56	+0.06
Oxfordshire	7.5	0.49	0.55	+0.05
Waltham Forest	16.3	0.45	0.55	+0.10
Wokingham	4.0	0.49	0.52	+0.04
Redbridge	17.8	0.50	0.51	+0.01
Bromley	7.7	0.45	0.47	+0.02
All high density in both years	11.1	0.49	0.58	+0.09

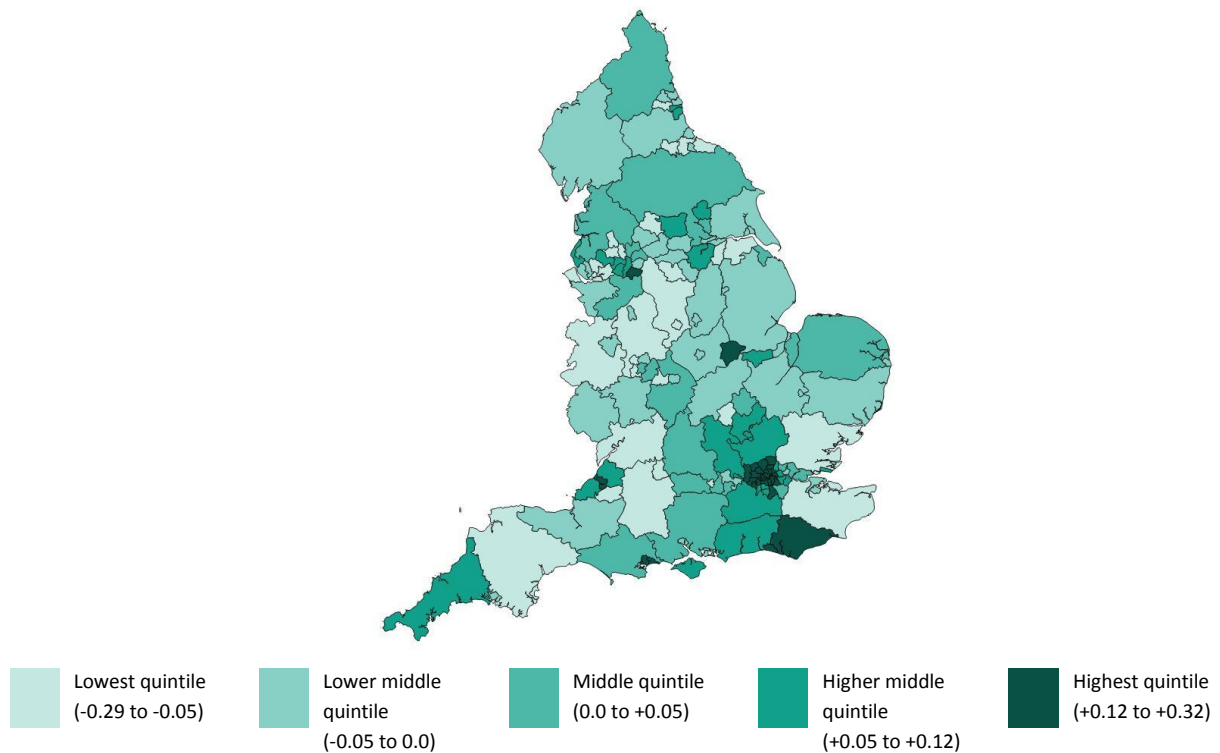
Local authorities were considered to have consistently low densities of high performing school places if they had high performing school places available for 10 per cent or less of pupils in both 2010 and 2015. This covers 12 local authorities, listed below. Virtually all are in the North of England, particularly the North East and Yorkshire and The Humber, and tend to have proportions of FSM pupils which are above the national average of 13.3 per cent. In these areas, the proportion of pupils with access to a high performing secondary school place has decreased from 6 per cent to 5 per cent between 2010 and 2015. Two local authorities had no accessible places at high performing secondary schools in either 2010 or 2015: Blackpool and Hartlepool.

Figure 3.5: Local authorities with consistently low densities of high performing school places, 2010 and 2015

Local authority	Proportion FSM pupils, 2015	Density high performing school places, 2010	Density high performing school places, 2015	Change in density 2010-15
Blackpool	19.5	0.00	0.00	0.00
Hartlepool	19.2	0.00	0.00	0.00
Barnsley	16.3	0.03	0.01	-0.02
Redcar and Cleveland	16.7	0.07	0.01	-0.06
Knowsley	23.7	0.05	0.02	-0.02
Middlesbrough	27.4	0.04	0.04	0.00
Durham	14.8	0.06	0.04	-0.02
Telford and Wrekin	14.5	0.05	0.05	0.00
Wakefield	13.2	0.09	0.05	-0.04
Kingston upon Hull City of	22.5	0.09	0.07	-0.02
Tameside	16.3	0.09	0.09	0.00
Northumberland	10.8	0.06	0.10	+0.04
All low density in both years	20.1	0.06	0.05	-0.01

In addition, there were shifts in the concentrations of high performing places across different parts of England between 2010 and 2015. Most notably, areas which saw the greatest increases in densities of high performing school places are almost entirely concentrated in London. On the other hand, many local authorities in the Midlands experienced decreases in densities of high performing school places.

Figure 3.6: Changes in densities of high performing school places across England, 2010 - 2015



Of the 20 authorities with the highest increases in density of high performing school places between 2010 and 2015, 16 were in London. Many of these have high proportions of pupils eligible for free school meals and already had relatively high densities of high performing school places in 2010, meaning that, in many cases, strong performing areas improved further. Non-London local authorities which appear on this list tend to have much lower proportions of pupils eligible for free school meals and had lower densities of high performing school places at the start of the period.

Overall, in these 20 authorities the density of high performing secondary school places increased between 2010 and 2015 from 36 per cent to 60 per cent.

Figure 3.7: Local authorities with highest increases in density of high performing school places, 2010-15⁸

Local authority	Proportion FSM pupils, 2015	Density high performing school places, 2010	Density high performing school places, 2015	Change in density 2010-15
Harrow	11.6	0.37	0.69	+0.32
Hillingdon	15.0	0.32	0.64	+0.32
Poole	8.8	0.07	0.37	+0.30
Brent	15.4	0.41	0.68	+0.27
Ealing	18.2	0.41	0.65	+0.24
Camden	34.2	0.43	0.66	+0.23
Islington	36.8	0.41	0.64	+0.23
Stockport	11.5	0.23	0.46	+0.23
Tower Hamlets	49.3	0.34	0.56	+0.22
Barnet	12.9	0.55	0.76	+0.21
Westminster	36.6	0.40	0.61	+0.21
Hackney	36.6	0.38	0.58	+0.20
Haringey	29.0	0.45	0.66	+0.20
Rutland	7.3	0.13	0.33	+0.20
Brighton and Hove	12.9	0.11	0.31	+0.19
Hounslow	15.2	0.42	0.61	+0.19
Kensington and Chelsea	24.3	0.39	0.58	+0.19
Southwark	27.8	0.32	0.51	+0.18
Richmond upon Thames	9.3	0.49	0.66	+0.17
Hammersmith and Fulham	26.6	0.42	0.58	+0.16
All largest increases	26.7	0.36	0.60	0.23

⁸ The Isles of Scilly have been excluded from this table on the basis that they have only one school, and this is the only school that is within reasonable travel distance for secondary school pupils living on the islands.

Amongst areas with the largest decreases in the density of high performing school places between 2010 and 2015, most are found in the North and Midlands; the North West is particularly prominent. Most areas have FSM rates which are below or close to the national average 13.3 per cent. In these areas, the proportion of high performing secondary school places fell from 31 per cent in 2010 to 20 per cent in 2015. None of these areas are in London.

Figure 3.8: Local authorities with largest decreases in density of high performing school places, 2010-15

Local authority	Proportion FSM pupils, 2015	Density high performing school places, 2010	Density high performing school places, 2015	Change in density 2010-15
Blackburn with Darwen	15.5	0.33	0.04	-0.29
Derby	15.8	0.23	0.07	-0.16
Wirral	15.4	0.56	0.40	-0.16
Warrington	8.6	0.33	0.18	-0.15
Dudley	13.7	0.30	0.17	-0.13
North Lincolnshire	11.4	0.17	0.04	-0.13
Wiltshire	6.5	0.49	0.37	-0.13
Halton	25.6	0.18	0.06	-0.12
Milton Keynes	9.0	0.25	0.14	-0.11
Solihull	7.5	0.40	0.30	-0.11
St. Helens	14.1	0.13	0.02	-0.11
Staffordshire	8.5	0.21	0.11	-0.11
Shropshire	8.2	0.42	0.32	-0.10
Swindon	9.0	0.33	0.23	-0.10
Bath and North East Somerset	7.9	0.38	0.29	-0.09
Bury	12.7	0.37	0.28	-0.09
Darlington	13.7	0.25	0.16	-0.09
Derbyshire	13.4	0.24	0.15	-0.09
Gateshead	13.9	0.12	0.04	-0.09
Gloucestershire	7.2	0.42	0.35	-0.07
All largest decreases	12.4	0.31	0.20	-0.11

4. Policy implications

There are large areas of the country which currently have no access to a high performing secondary school. Of particular note is the North East, which as a region has virtually no high performing schools. Pupils in these areas face significant barriers in accessing a high performing school. Moreover, local authorities which have experienced the greatest increases in the density of high performing school places between 2010 and 2015 are overwhelmingly concentrated in London, which already had a relatively high density of high performing school places. In contrast, many local authorities in the Midlands and the North of England have experienced a decline in the density of high performing school places available over this period.

Given the wide variation in the density of high performing school places, the Government's opportunity areas initiative may be a positive step towards addressing this challenge. Designed to target places with particularly low levels of social mobility, it involves action tailored to the local area, including local partnerships and support for individuals from the early years to entry into the labour market.⁹ Of the twelve places which have been designated as Opportunity Areas, Blackpool is identified in this analysis as an area in which pupils had no access to high performing school places in either 2010 or 2015, and Derby is identified as experiencing a substantial decrease in the density of high performing school places available over this period. However, there are clearly many other areas in addition to these which have not been selected as Opportunity Areas but in which there are substantial barriers to accessing high performing schools. In addition to Blackpool, eleven other local authorities had high performing school places available for less than 10 per cent of pupils in both 2010 and 2015. Many of these are concentrated in the North East and in Yorkshire and The Humber.

Although there are virtually no high performing schools in the North East, no part of the region has been selected as an Opportunity Area. Using the Government's current methodology for selecting opportunity areas, another three waves of new Opportunity Areas could be announced, before the North East secures an Opportunity Area.¹⁰

⁹ Department for Education, 'Education Secretary announces 6 new opportunity areas', 18 January 2017: <https://www.gov.uk/government/news/education-secretary-announces-6-new-opportunity-areas>.

¹⁰ N.Perera, "Why aren't there any opportunity areas in the North East?", 25th October 2017 https://epi.org.uk/analysis/opportunity_areas_northeast/

Annex A: Density of high performing schools in England by local authority, 2010 – 2015

Local authority	Proportion FSM pupils, 2015	Density high performing school places, 2010	Density high performing school places, 2015	Change in density 2010-15
Harrow	11.6	0.37	0.69	+0.32
Hillingdon	15.0	0.32	0.64	+0.32
Poole	8.8	0.07	0.37	+0.30
Brent	15.4	0.41	0.68	+0.27
Ealing	18.2	0.41	0.65	+0.24
Camden	34.2	0.43	0.66	+0.23
Islington	36.8	0.41	0.64	+0.23
Stockport	11.5	0.23	0.46	+0.23
Tower Hamlets	49.3	0.34	0.56	+0.22
Barnet	12.9	0.55	0.76	+0.21
Westminster	36.6	0.40	0.61	+0.21
Haringey	29.0	0.45	0.66	+0.20
Hackney	36.6	0.38	0.58	+0.20
Rutland	7.3	0.13	0.33	+0.20
Hounslow	15.2	0.42	0.61	+0.19
Kensington and Chelsea	24.3	0.39	0.58	+0.19
Brighton and Hove	12.9	0.11	0.31	+0.19
Southwark	27.8	0.32	0.51	+0.18
Richmond upon Thames	9.3	0.49	0.66	+0.17
Hammersmith and Fulham	26.6	0.42	0.58	+0.16
East Sussex	10.2	0.18	0.33	+0.16
Enfield	19.3	0.44	0.60	+0.15
Bristol City of	19.7	0.15	0.30	+0.15
Lambeth	24.6	0.36	0.50	+0.14
Wandsworth	19.6	0.44	0.57	+0.13
Croydon	15.1	0.40	0.53	+0.13
Bournemouth	12.1	0.31	0.44	+0.13
Lewisham	20.4	0.30	0.44	+0.13
Sutton	9.9	0.47	0.60	+0.12
Merton	15.3	0.46	0.58	+0.12
Greenwich	16.8	0.35	0.47	+0.12
North Somerset	7.5	0.19	0.31	+0.12
Sefton	13.2	0.11	0.22	+0.12
Peterborough	13.0	0.05	0.17	+0.12
Kingston upon Thames	7.9	0.56	0.67	+0.11
Surrey	6.4	0.46	0.57	+0.11
Slough	13.5	0.41	0.52	+0.11
Trafford	10.3	0.35	0.46	+0.11
Manchester	28.8	0.20	0.31	+0.11
Waltham Forest	16.3	0.45	0.55	+0.10
Newham	27.4	0.44	0.54	+0.10
Hertfordshire	7.0	0.42	0.51	+0.10
Southend-on-Sea	12.0	0.32	0.42	+0.10
Luton	18.6	0.30	0.40	+0.10
Cornwall	10.0	0.25	0.35	+0.10
Isle of Wight	12.1	0.06	0.15	+0.10
West Sussex	7.7	0.39	0.48	+0.09
Sunderland	18.9	0.04	0.13	+0.09
Doncaster	14.6	0.02	0.11	+0.09
Salford	18.6	0.15	0.23	+0.08

Local authority	Proportion FSM pupils, 2015	Density high performing school places, 2010	Density high performing school places, 2015	Change in density 2010-15
South Gloucestershire	7.8	0.13	0.21	+0.08
Wigan	12.3	0.17	0.24	+0.07
Leeds	16.5	0.10	0.17	+0.07
Buckinghamshire	5.6	0.50	0.56	+0.06
York	5.6	0.44	0.50	+0.06
Bexley	9.9	0.40	0.46	+0.06
Central Bedfordshire	8.8	0.15	0.22	+0.06
Oxfordshire	7.5	0.49	0.55	+0.05
North Yorkshire	6.5	0.43	0.48	+0.05
Lancashire	11.8	0.30	0.35	+0.05
Bracknell Forest	6.9	0.28	0.33	+0.05
North East Lincolnshire	13.5	0.20	0.26	+0.05
West Berkshire	5.4	0.57	0.61	+0.04
Wokingham	4.0	0.49	0.52	+0.04
Norfolk	11.3	0.36	0.40	+0.04
Thurrock	11.6	0.24	0.27	+0.04
Northumberland	10.8	0.06	0.10	+0.04
Hampshire	7.4	0.35	0.38	+0.03
Cheshire East	7.3	0.32	0.35	+0.03
Dorset	8.7	0.32	0.35	+0.03
Sandwell	20.1	0.13	0.16	+0.03
Bedford	10.7	0.09	0.12	+0.03
Bromley	7.7	0.45	0.47	+0.02
Havering	9.7	0.31	0.34	+0.02
Birmingham	27.8	0.23	0.25	+0.02
Oldham	20.0	0.17	0.19	+0.02
Rochdale	20.6	0.17	0.19	+0.02
Redbridge	17.8	0.50	0.51	+0.01
Warwickshire	7.5	0.37	0.38	+0.01
Coventry	16.0	0.28	0.28	0.00
Northamptonshire	10.7	0.26	0.25	0.00
Lincolnshire	9.5	0.25	0.24	0.00
Portsmouth	18.4	0.21	0.21	0.00
Worcestershire	8.6	0.18	0.18	0.00
North Tyneside	10.5	0.17	0.17	0.00
Tameside	16.3	0.09	0.09	0.00
Telford and Wrekin	14.5	0.05	0.05	0.00
Middlesbrough	27.4	0.04	0.04	0.00
Blackpool	19.5	0.00	0.00	0.00
Hartlepool	19.2	0.00	0.00	0.00
Windsor and Maidenhead	5.3	0.44	0.42	-0.01
East Riding of Yorkshire	8.6	0.30	0.29	-0.01
Kirklees	17.1	0.28	0.27	-0.01
Herefordshire	7.4	0.27	0.26	-0.01
Suffolk	10.3	0.26	0.25	-0.01
Leicester	18.1	0.25	0.24	-0.01
Leicestershire	6.5	0.14	0.13	-0.01
Nottingham	23.3	0.14	0.13	-0.01
Walsall	19.9	0.10	0.09	-0.01
Barking and Dagenham	21.7	0.42	0.40	-0.02

Local authority	Proportion FSM pupils, 2015	Density high performing school places, 2010	Density high performing school places, 2015	Change in density 2010-15
Southampton	17.1	0.26	0.24	-0.02
Rotherham	15.5	0.12	0.10	-0.02
Stoke-on-Trent	18.1	0.10	0.08	-0.02
Kingston upon Hull City of	22.5	0.09	0.07	-0.02
Durham	14.8	0.06	0.04	-0.02
Knowsley	23.7	0.05	0.02	-0.02
Barnsley	16.3	0.03	0.01	-0.02
Cheshire West and Chester	9.6	0.44	0.41	-0.03
Cambridgeshire	8.2	0.36	0.33	-0.03
Medway	12.4	0.30	0.27	-0.03
Somerset	8.4	0.26	0.23	-0.03
Cumbria	9.0	0.25	0.23	-0.03
Calderdale	13.0	0.20	0.17	-0.03
Plymouth	13.2	0.18	0.15	-0.03
Newcastle upon Tyne	20.1	0.13	0.10	-0.03
Liverpool	25.7	0.13	0.09	-0.03
Nottinghamshire	10.4	0.11	0.07	-0.03
South Tyneside	18.6	0.17	0.13	-0.04
Wakefield	13.2	0.09	0.05	-0.04
Reading	14.8	0.43	0.38	-0.05
Essex	8.0	0.34	0.28	-0.05
Kent	10.2	0.32	0.28	-0.05
Sheffield	16.0	0.24	0.19	-0.05
Bradford	19.2	0.20	0.15	-0.05
Stockton-on-Tees	15.5	0.18	0.12	-0.05
Devon	9.6	0.40	0.34	-0.06
Bolton	17.6	0.17	0.12	-0.06
Redcar and Cleveland	16.7	0.07	0.01	-0.06
Gloucestershire	7.2	0.42	0.35	-0.07
Torbay	12.9	0.30	0.24	-0.07
Wolverhampton	19.5	0.16	0.09	-0.07
Bath and North East Somerset	7.9	0.38	0.29	-0.09
Bury	12.7	0.37	0.28	-0.09
Darlington	13.7	0.25	0.16	-0.09
Derbyshire	13.4	0.24	0.15	-0.09
Gateshead	13.9	0.12	0.04	-0.09
Shropshire	8.2	0.42	0.32	-0.10
Swindon	9.0	0.33	0.23	-0.10
Solihull	7.5	0.40	0.30	-0.11
Milton Keynes	9.0	0.25	0.14	-0.11
Staffordshire	8.5	0.21	0.11	-0.11
St. Helens	14.1	0.13	0.02	-0.11
Halton	25.6	0.18	0.06	-0.12
Wiltshire	6.5	0.49	0.37	-0.13
Dudley	13.7	0.30	0.17	-0.13
North Lincolnshire	11.4	0.17	0.04	-0.13
Warrington	8.6	0.33	0.18	-0.15
Wirral	15.4	0.56	0.40	-0.16
Derby	15.8	0.23	0.07	-0.16
Blackburn with Darwen	15.5	0.33	0.04	-0.29

Annex B: Estimating the number of school places in small area geographies

This report estimates the provision of school places in small areas of the country known as lower layer super output areas (LSOAs). There are just over 30,000 such areas in England each having a population between 1,000 and 1,500.

However, data on schools in England is rarely published at this level. Instead it is generally available at either top-tier local authority level, of which there are 152 in England, or at individual institution level. For much of our analysis the top-tier authority is simply too large and even relatively small authorities can have distinct areas within them.

We therefore derive estimates of the number, quality and demand for places in these small areas using a variety of datasets.

Reasonable travel distances

Underpinning the analysis is an estimate of the catchment area of individual schools. There is no comprehensive dataset setting out the catchment area of each school in England, instead we include all LSOAs that are within a 'reasonable travel distance' of the school. This is estimated by calculating the distance currently travelled by pupils to schools across England and finding the distance which captures 90 per cent of pupils (i.e. 90 per cent of pupils travel this distance or less). This is split by school phase and area type. The area type is defined by the location of the school.

These distances are set out in Figure B1.1 and are derived from the National Pupil Database (Key Stage 4 2015).

Figure B1.1: Reasonable travel distances by school phase and location

Category	Reasonable travel distance (miles)
Rural village / hamlet	8.1
Rural town	6.7
Urban	3.5

We consider that this method is preferable to examining the areas from which each school currently draws its pupils because using existing entry patterns would mean 'locking-in' any bias in school intakes – e.g. pupils being drawn from the more affluent areas of a town – rather than the areas that a school *could* be drawing from.

This method is, however, based on straight line travel distances and does not take account of geographic obstacles (e.g. rivers) or transport links (e.g. bus routes). This method may not, for an individual school, fully reflect the areas within reach, but it nevertheless provides a good basis when taken in aggregate. The result of this analysis is, for each school, a list of LSOAs that are within a reasonable travel distance.