Schools Block Dataset Technical Specification: 2014 to 2015

For use in Schools Block allocations

20 June 2013

Contents

Introduction

This document provides a full technical specification for the school-level data that has been made available to local authorities in the prepopulated Schools Block Data sheet of the Authority Proforma Tool (APT), for use in allocating their Schools Block funding to schools. We have updated the 1314 dataset to reflect the changes made to the formula for 1415. These changes are summarised below.

The APT is being initially issued in mid-June 2013. This note accompanies the separate APT User Instructions document which has also been prepared by the EFA.

The data contained in the mid-June APT is based on 2012 Autumn (October) School Census returns, or other existing data collections. The table below outlines what data will be provided, and summarises the source data for each indicator. The indicators and their descriptions were set out in the Operational Instructions. This document now provides more explanation on the construction of the data. It also provides pseudo-code primarily in Annex A, in order to present full details of how the data have been derived.

Data	Breakdown	Data source
School list	LAESTAB, URN, Local Authority, Phase, Primary Year Groups, Secondary Year Groups	Mainstream schools on Autumn 2012 Census URN is matched from Edubase
Academy Type	n/a	Taken from the Departments records – showing status as at October 2012
London Fringe	n/a	District as mapped from the school postcode in the Autumn 2012 Census
Number on roll (NOR)	Primary, Secondary, key stage 3, key stage 4	Autumn 2012 Census
Reception Difference	Difference between on roll in Year R, October 2011 and January 2012	Autumn 2011 and Spring 2012 Census
FSM	Separate Primary/Secondary	Autumn 2012 Census
FSM ever 6	Separate Primary/Secondary	12-13 pupil premium Ever6 Data which was mapped to the Spring 2012 School Census.
IDACI	Split into six different bands, Separate Primary/Secondary	Postcodes mapped from Autumn 2012 Census

EAL	1st, 1st or 2nd, 1st, 2nd or 3rd year in system Primary/Secondary	Autumn 2012 Census for Language Group, Autumn 2009, 2010, 2011, 2012 Censuses Mapping on UPN for on roll records.
Looked-after children	Aggregated information indicating looked-after children (at 31 March)	SSDA903 March 2012 mapped onto the Spring 2012 Census (via NPD)
Primary phase prior attainment	EYFSP score below 78 or score below 73[1]	EYFSP Total score mapped to the Autumn 2012 Census for pupils in Y1,2,3,4 Mapping on UPN only
Secondary phase prior attainment	Level 3 or below in either English or maths at KS2	KS2_Eng_Lev and KS2_Mat_Lev mapped to the Autumn 2012 Census for pupils in Y7-11 Mapping on UPN only
Mobility	Start date in last three academic years, separate Primary/Secondary	Autumn 2012 Census
Sparsity	Primary / Secondary measure	Autumn 2012 Census, Edubase

The 2012 Autumn Census day was 4 October 2012 and therefore the data reflects the status of schools at that date. The final data used is the data in the database at the point of its closure (4pm on 28 November 2012). All data for LA maintained schools will have been first approved by the LA prior to being used by the department.

The pupil level indicators for numbers on roll, IDACI, free school meals (FSM) eligibility and mobility have been calculated from data collected in the Autumn 2012 Census. This data has also been linked, using the UPN collected in the Autumn Census, to data held in the Department's National Pupil Database to create the EAL and prior attainment indicators. This data extract has been prepared prior to the Autumn 2012 Census being formally matched into the NPD. The IDACI indicators are based on the relationship between pupil postcode, Super Output Area and IDACI.

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[1] To be updated in December 2013 with data for pupils assessed under the new EYFSP profile – see prior attainment section of the Schools Block Dataset Technical Specification for further information.

The EFA will re-issue the APT to local authorities in mid-December 2013, with the prepopulated data updated to relate to the October 2013 School Census, and the March 2013 SSDA903 dataset for the looked-after children factor. An updated version of this dataset specification will be published at the same time.

Changes made for the 1415 formula

- Primary and secondary year groups

- Looked-after children

- Prior attainment secondary factor

- Sparsity, or to support, their modelling over the summer and early autumn of different options for their 2014-15 Schools Block funding formulae

For more information about the school census please visit: http://www.education.gov.uk/researchandstatistics/stats/schoolcensus/b00208370/sc2012.

If you have any queries about this specification, please contact the EFA Funding Reform Team at: ReformTeam.FUNDING@education.gsi.gov.uk.

Using the data to allocate school budgets

For each of the pupil led factors there are one or more allowable indicators. The pupil led factors are:

- Age Weighted Pupil Units (AWPU)

- Deprivation

- English as an additional language (EAL)

- Prior attainment

- Mobility

- Looked-after children (LAC)

For AWPU, the indicator to be used is the number on roll (NOR) in total and for primary, key stage 3 (KS3) and key stage 4 (KS4). For the other indicators, schools attract funding through pupil units. These pupil units are calculated as the appropriate NOR weighted by the proportion of pupils that qualify under the indicator. So the pupil units for primary FSM would be given by:

$$NOR_{(primary)} * \frac{\text{Number of Primary Pupils elegible for FSM}}{\text{Number of Primary Pupils with valid FSM response}}$$

Or, from the supplied dataset:

$$NOR_{(primary)} * FSM\_\%\_PRI$$

All the indicator data (except NOR) is presented in the form of a decimal weighting that should be applied to the NOR. This means that if the NOR figures need amending (see the circumstances described on the next page in which adjustments to NOR figures can be made) then the weighting can still be applied to derive the appropriate pupil units. The calculation will always exclude pupils with a NULL value for the required response. This, in combination with the potential to alter the NOR, can result in pupil units which are not whole numbers.

Local adjustments to the supplied data

In some cases it will be necessary to use a local calculation or estimate, based on the technical descriptions given in this document, to ensure the data used is representative. This only applies to individual schools. This section describes when and how this should take place. Adjustments should be recorded via the Input & Adjustment sheet of the APT, and an explanation for the change must be provided in each case.

Schools undergoing change

In the case of a planned amalgamation, the data should be taken from each of the schools as they appear in the Schools Block Data sheet of the APT and then merged using weighted sums for each of the factors. In the example shown in the table below, Old Street primary and Old Street infants are combining to form New Street Primary. The Primary FSM proportion for the new school is calculated as the weighted average of the relevant proportion figures for the former schools. A similar calculation should be done for all the other pupil-led factors.

School	NOR (primary)	Primary FSM proportion
Old Street Primary	300	0.10
Old Street Juniors	100	0.05
New Street Primary	300+100=400	$\frac{(300*0.10)+(100*0.05)}{300+100} = 0.0875$

In the case of a brand new school with no relevant predecessors, or a school converting from the private sector, a local estimate should be used based on similar schools in the local authority for the first year.

We also expect local authorities to request approval to vary the pupil numbers used for specific schools where a school has changed, or is going to change, its age range either by adding or losing year groups

Individual data points that are not representative

For some schools the indicators will not be representative. An example of this is found in the mobility indicator. If a school had opened in April two years ago, then the majority of its pupils will be classed as mobile. In this case, it would be reasonable to use a local estimate for the mobility indicator, using the method outlined in the mobility section below. Making such a change does not require prior EFA approval.

Anomalous primary/secondary pupils

Where a primary school has only one or two secondary phase pupils in the Schools Block Data sheet of the APT, or conversely for a secondary school with a small number of primary phase pupils, this may suggest a school census recording error. The notes column on the data sheet will indicate where this occurs. Local authorities may wish to verify whether these are errors, and if so amend the data accordingly, to avoid incorrect formula allocations. Making such a change does not require prior EFA approval.

Sparsity distances

Local authorities can make exceptional applications for schools that would have had significantly higher distances if road distances had been used instead of crow flies distances.

Similarly exceptional applications can be made for schools that open after the distances have been calculated. An existing school that qualifies for sparsity funding in the data provided will not lose that funding in year if a new school opened nearby. For schools that may qualify for sparsity funding as a result of another school nearby closing, an exceptional application should be agreed with the relevant Schools Forum, and submitted to the EFA for approval.

Schools Block schools and pupils

All mainstream schools that were recorded on the Autumn 2012 Census are included in the Schools Block Data sheet of the APT. Data for non-recoupment academies are also included for information only. Special schools, AP/PRUs, early years providers and other institutions without Schools Block pupils are excluded.

The filters applied to the Census data are:

If Phase not in $('PR', 'SP', 'EY', 'NS')$ and School Type code < 50 then $SchoolBlockS = 1$

The pupil level filter is given below. Only pupils aged 4 or above at the start of the 2012 to 2013 academic year that are in national curriculum year groups R to 11 are counted. Note that pupils are counted as headcount not full time equivalent.

If $AgeAtStartofAcademicYear \geq 4$
and
$NCYearActual$ in $('R', '1', '2', '3', '4', '5', '6', '7', '8', '9', '10', '11')$
and
$OnRoll = 1$
and
$EnrolStatus$ in $('C', 'M')$
then $SchoolBlockP = 1$

The dataset only includes pupils which pass both these filters.
AgeAtStartofAcademicYear denotes Age in years at 31 August 2012.

School information

This section explains how the fields in the dataset which provide information about each school are being obtained. It also describes how the London Fringe, NOR and Reception Difference figures are being produced.

URN

Mapped from Edubase.

School name

LAESTAB
Phase
Number of Primary year groups for middle schools
Number of Secondary year groups for middle schools

These fields are taken from the Autumn 2012 census.

Academy Type

This field contains the value 0 for maintained schools; for academies recoupment status is indicated. This data comes from the department's central record as at October 2012. The valid values for this field are:

> Recoupment Academy
> Non Recoupment Academy
> 0

Partial recoupment academies appear as one school on the dataset, listed as "Recoupment Academy". Funding arrangements for part-recoupment academies in 2014-15 are currently being looked at by the department. Pending further clarification on this, LAs are advised to treat these as entirely recoupment academies in the APT.

London Fringe

For the five local authorities who have some of their schools within the London fringe area (Buckinghamshire, Essex, Hertfordshire, Kent and West Sussex), we have determined an appropriate uplift that should be applied to the affected schools budgets. The uplift was calculated using the specific cost of teaching staff within the different pay band areas and the proportion of school expenditure that goes on teaching staff. Using the national distribution of teaching staff by pay band spine point (School Workforce

Census, 2010) and spine point salary data (School Teachers' Pay and Conditions Document 2011) we calculated the average uplift between the London Fringe and the rest of England teacher pay band areas to be 2.97%.

Analysis of the financial year 2011 to 2012 Section 251 Outturn reporting lines indicated that 55% of school expenditure goes on teaching staff costs. On this basis, the uplift for London Fringe schools was 55% of 2.97% which gives a value of 1.63% to be applied to the school formula funding – excluding factors that should be paid as actual i.e. rates, PFI, split-site and exceptional circumstances.

The districts within the London Fringe are:

- Buckinghamshire: Chiltern, South Bucks

- Essex: Basildon, Brentwood, Epping Forest, Harlow

- Hertfordshire: Broxbourne, Dacorum, East Hertfordshire, Hertsmere, St Albans, Three Rivers, Watford, Welwyn Hatfield

- Kent: Dartford, Sevenoaks

- West Sussex: Crawley

All fringe schools will have the value 1.0163161664734 for this indicator; all other schools will have the value 1.

School number on roll

NOR
NOR Primary
NOR Secondary
NOR KS3
NOR KS4

Pupils have been counted by headcount, irrespective of whether or not they are part time. Pupils recorded as in national curriculum years groups R-Y6 are classed as in the primary phase and those in Y7-Y11 are classed as in the secondary phase. Secondary pupils are additionally split in to key stage groups; KS3 (Y7-Y9) and KS4 (Y10-Y11).

The NOR are calculated as:

$$\text{NOR}_{\text{URNx}} = \text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ then } 1 \text{ else } 0)$$

$$\text{NOR\_Primary}_{\text{URNx}} =$$
$$\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in ('R',' 1',' 2',' 3',' 4',' 5',' 6')}$$

then 1 else 0)

$NOR\_Secondary_{URNx} =$
Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ($'7', '8', '9', '10', '11'$)
then 1 else 0)

$NOR\_KS3_{URNx} =$
Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ($7', '8', '9'$)
then 1 else 0)

$NOR\_KS4_{URNx} =$
Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ($'10', '11'$)
then 1 else 0)

Reception difference

The difference between the number of pupils on roll in Reception (only those pupils aged 4 and over at the start of the academic year) in each school between the October 2011 and January 2012 Censuses is provided in the data. This is calculated by subtracting the total number of year R pupils in October 2011 from the total in January 2012, or given as zero if the result of this calculation would be negative. If there are no year R pupils at the school then the result is 0. This is illustrated in the table below.

URN	Number of pupils in year R (counting rules applied)		(2) − (1)	Reception difference
	October 2011 (1)	January 2012 (2)		
xxxx1	0	0	0	0
xxxx2	62	62	0	0
xxxx3	34	33	-1	0
xxxx4	55	61	6	6

Refer to Annex A for pseudo code for this indicator.

Detailed specification for individual factors

For all the indicators, the NOR filters apply at pupil level (denoted by the phrase SchoolBlockP =1 in the pseudo code). Where a pupil does not have a valid response for the census category, they are excluded from the indicator (i.e. a pupil with no postcode does not count towards the IDACI weighting). Data is taken from the October 2012 Census unless otherwise indicated.

Annex A gives the pseudo code for deriving each of these datasets.

Deprivation

The allowable indicators are IDACI, Free School Meals and Free School Meals (Ever 6).

Free school meals

Primary FSM Proportion
Secondary FSM Proportion

The proportion of pupils eligible for free school meals according to the Autumn 2012 Census has been aggregated to school level, with separate indicators for primary and secondary phase pupils.

Free school meals Ever 6

Primary Ever 6 Proportion
Secondary Ever 6 Proportion

This counts the proportion of pupils on roll on the Spring 2012 Census that were recorded as eligible for FSM in any of the censuses (Autumn, Spring and Summer, including the AP and PRU census) over the previous 6 years. This uses the same data as that used for allocating the pupil premium. A consequence of this is that schools that have opened since the Spring 2012 Census will not have Ever6 FSM data. More information on this indicator and the pupil premium can be found here. Where a school has pupils from both phases, the same indicator will be used as this data is not currently available at phase level.

IDACI

IDACI Primary Proportion Band 0
IDACI Primary Proportion Band 1
IDACI Primary Proportion Band 2
IDACI Primary Proportion Band 3
IDACI Primary Proportion Band 4
IDACI Primary Proportion Band 5
IDACI Primary Proportion Band 6
IDACI Secondary Proportion Band 0

The Income Deprivation Affecting Children Index (IDACI) is a subset of the Indices of Multiple Deprivation (IMD). It is an area-based measure defined at the level of Lower Super Output Area (LSOA) and was last collected in 2010. It takes the form of a score between 0 and 1, which can be interpreted as the proportion of families with children aged under 16 in the LSOA which are income deprived. You can map postcodes to IDACI scores here.

The IDACI score has been matched to pupil records where the pupil's postcode is known, and this has been placed into six bands as shown below. Only pupils with an IDACI score above 0.2 can be assigned deprivation funding through this factor, meaning there are six bands which can be given different unit values each for primary and six for secondary phase pupils.

IDACI Score	IDACI band
x < 0.2	0
0.2 ≤x< 0.25	1
0.25 ≤x< 0.3	2
0.3 ≤x< 0.4	3
0.4 ≤x< 0.5	4
0.5 ≤x< 0.6	5
0.6 ≤x≤ 1	6

The bands have been selected so that each band above band 0 contains a broadly similar number of pupils across the country. For each of the bands, the proportion of pupils on the Autumn 2012 Census with valid IDACI scores has been aggregated to school level, with separate indicators for primary and secondary phase pupils.

English as an additional language (EAL)

There are three allowable indicators for EAL, all based on the Language Code given in the census. Both the short code set and the long code set are grouped so that pupils with an English code (including believed to be English) are "1_ENG", pupils whose language is unknown or undeclared are "3_UNK" and all other pupils are "2_OTH".

Pupils attract EAL funding if they are grouped as "2_OTH" from the Language Code on the Autumn 2012 Census and can be shown to have been in the school system for less than one year, less than two years or less than three years. This is achieved by deriving a pupil level "Years in System" count based on the pupil's presence in the Autumn 2009, Autumn 2010 and Autumn 2011 Censuses. Using the years in system indicator and the current national curriculum year, an estimated national curriculum start year can be derived. This is important as the indicator is offset for pupils who were in Year R, N1 or N2 for any of the interrogation years. This is done because Language does not have to be declared in the Census for pupils aged less than 5, causing the Year R data recorded to be partial and unrepresentative. Also for this reason, pupils in year R are excluded from the measure. Pupils grouped as 3_UNK are also excluded.

Start Year	Current Year											
	R	1	2	3	4	5	6	7	8	9	10	11
R	NULL	EAL_1	EAL_2	EAL_3								
1		EAL_1	EAL_2	EAL_3								
2			EAL_1	EAL_2	EAL_3							
3				EAL_1	EAL_2	EAL_3						
4					EAL_1	EAL_2	EAL_3					
5						EAL_1	EAL_2	EAL_3				
6							EAL_1	EAL_2	EAL_3			
7								EAL_1	EAL_2	EAL_3		
8									EAL_1	EAL_2	EAL_3	
9										EAL_1	EAL_2	EAL_3
10											EAL_1	EAL_2
11												EAL_1

The table above illustrates which EAL category a pupil who is grouped as 2_OTH would map to, given their current year group and their starting year group. The table below illustrates the calculations required to derive the EAL_Flag at pupil level and, as a result of aggregating up, to school level as will be provided in the dataset. The example given is for primary pupils, but would be the same for secondary pupils.

Pupils	NCYearActual	Aut_13 Language_	AUT_13	AUT_12	AUT_11	AUT_10	Years in System	Start_Year	Years in System 2	EAL Flag
				On Roll				Calculations		
P1	R	1_ENG	1	1	1		3	N1	0	NULL
P2	1	2_OTH	1	1	1		3	N2	1	1
P3	1	2_OTH	1	1			2	R	1	1
P4	2	1_ENG	1	1	1		3	R	2	0
P5	2	2_OTH	1		1		3	R	2	2
P6	3	3_UNK	1				1	3	1	NULL
P7	3	2_OTH	1	1	1	1	4	R	3	3
P8	4	2_OTH	1	1			2	3	2	2
P9	5	2_OTH	1	1	1	1	4	2	4	0
P10	6	1_ENG	1				1	6	1	0

EAL indicators for this school	Denominator	Numerator	%
EAL1 (1 Year)	8	2	25%
EAL2 (up to2 years)	8	4	50%
EAL3 (up to 3 years)	8	5	63%

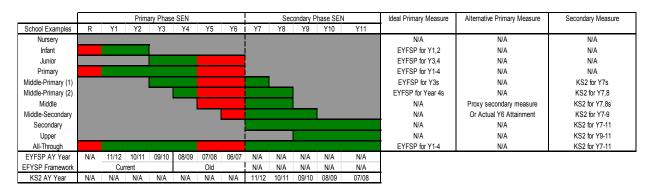# Looked-after children

LAC X Proportion

Details of children looked after by a local authority are returned to the Department on the annual SSDA903 collection. We have produced an extract of the SSDA903 2012 looked-after children data collected from local authorities indicating whether a child has been looked after for one day or more during the year ending 31 March 2012.

The data are matched into the National Pupil Database using the Unique Pupil Number (UPN), and extracts are obtained showing where the children were on roll based on the Spring 2012 Census. The UPN is the main field used for matching purposes but other information about the child is also used such as date of birth, gender, ethnicity and responsible local authority. In 2012, 99% of children of school age who had been looked after continuously for 12 months had a valid UPN; and the remainder had a reason why a UPN does not exist.

The school level weighting for this indicator is given by dividing the number of matched pupils by the NOR in the Spring 2012 Census.

Prior attainment

The early years foundation stage profile (EYFSP) results and key stage 2 (KS2) are allowable indicators for prior attainment. The table below shows which year groups (highlighted in green) are contributing to the prior attainment indicators in a variety of school types. For a very limited number of schools, coverage may be restricted to just one year group.

School Examples	Primary Phase SEN							Secondary Phase SEN					Ideal Primary Measure	Alternative Primary Measure	Secondary Measure
	R	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11			
Nursery													N/A	N/A	N/A
Infant													EYFSP for Y1,2	N/A	N/A
Junior													EYFSP for Y3,4	N/A	N/A
Primary													EYFSP for Y1-4	N/A	N/A
Middle-Primary (1)													EYFSP for Y3s	N/A	KS2 for Y7s
Middle-Primary (2)													EYFSP for Year 4s	N/A	KS2 for Y7,8
Middle													N/A	Proxy secondary measure	KS2 for Y7,8s
Middle-Secondary													N/A	Or Actual Y6 Attainment	KS2 for Y7-9
Secondary													N/A	N/A	KS2 for Y7-11
Upper													N/A	N/A	KS2 for Y9-11
All-Through													EYFSP for Y1-4	N/A	KS2 for Y7-11
EYFSP AY Year	N/A	11/12	10/11	09/10	08/09	07/08	06/07	N/A	N/A	N/A	N/A	N/A			
EFYSP Framework		Current				Old		N/A	N/A	N/A	N/A	N/A			
KS2 AY Year	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11/12	10/11	09/10	08/09	07/08			

Low Attainment Primary Proportion 73
Low Attainment Primary Proportion 78

For primary schools, funding can be targeted at pupils who achieve either fewer than 78 points or fewer than 73 points on the current EYFSP. The total point score is taken and individual categories are not used. EYFSP results are mapped to the Autumn 2012 Census from the department's central record of attainment. Pupils in Year 5 and 6 in the Autumn 2012 Census were not assessed using the current EYFSP and are excluded from the calculations. As shown in the diagram above, if a school has primary pupils but no pupils with valid EYFSP results, then they will be given a KS2 proxy in the dataset, using either the KS2 results of secondary pupils currently in the school or the KS2 results of the most recent cohort to be assessed at the school.

A new EYFSP was published in March 2012 and the first assessments using the new profile will take place in the summer of 2013. When the APT is re-issued to local authorities in December 2013, the primary school prior attainment factor data will incorporate that the Year 1 pupils will have been assessed under the new profile. These changes are detailed in the 2014-15 school funding reform document.

Low Attainment Secondary Proportion

For secondary schools, funding can be targeted at pupils who achieve a Level 3 or below (so pupils scored as 2, 3, B or N) in either English or mathematics at KS2. Pupils with no KS2 results or with results other than those listed are excluded. The results have been mapped from the department's attainment records.

In 2012 the KS2 English assessment methodology was changed and now includes a reading test, a new grammar, punctuation and spelling test and teacher assessed writing. For pupils assessed at KS2 from 2012 onwards, and who have been part of these new arrangements, the English element of the KS2 measure will identify those who do not achieve a level 4 in either the reading or teacher assessed writing elements. For those assessed prior to 2012, the English element will identify those pupils who fail to achieve a level 4 in English.

Only pupils who have undertaken assessment have been considered in calculating the eligible school percentage so pupils marked as absent are excluded from the denominator.

Mobility

Mobility Primary Proportion

Mobility Secondary Proportion

A separate primary and secondary school level percentage will be provided based on the number of pupils whose entry date (start at current school) is within the previous 3 academic years and whose start month was not in August, or September. If the pupil started in Reception then start months August, September or January will not be counted. Pupils who started the school in nursery classes are not mobile.

Start year is calculated by counting backwards from current NC_Year assuming one academic year per NC_Year.

The table below gives examples of determining whether pupils are classed as mobile. The figures in the dataset are the proportion of pupils classed as mobile for primary and secondary phase pupils in each school.

Pupil	NC year actual	Entry date	In previous three academic years?	Entry month	Start year	Mobile
1	R	09/09/2012	No	-	-	0
2	4	01/01/2009	Yes	Jan	R	0
3	6	01/11/2009	Yes	Nov	-	1
4	9	09/09/2010	Yes	Sep	-	0
5	8	NULL	-			0
6	11	09/09/2008	No			0
7	5	09/01/2011	3	Jan	1	1

Funding may be targeted only at those schools experiencing pupil mobility above a 10% threshold, and funding is not provided for the first 10% of mobile pupils.

Sparsity

Primary sparsity av. Distance to 2nd school
Secondary sparsity av. Distance to 2nd school

A sparsity distance will be provided for each school which measures the distance that pupils live from their second nearest school. For each school, those pupils who live

closest to it are identified, and then the mean average distance to the second nearest school for these pupils is calculated. This is the school's sparsity distance which is calculated in miles.

For the purposes of this factor, selective grammar schools are not considered when identifying the second nearest school, but faith schools are included. Reception year pupils have also been removed from the calculations as pupils within this year group can also attend nursery schools that are not included in the Schools Block dataset.

Distances are calculated using the crow flies distance from a pupil's postcode to a school's postcode. Postcode information is taken from the Autumn 2012 Pupil Level Census and Edubase, and the distance between these points is calculated using the following calculation:

$$\text{Distance} = \frac{((\text{Pupil Postcode Easting Coordinate} - \text{School Postcode Easting Coordinate})^2 + (\text{Pupil Postcode Northing Coordinate} - \text{School Postcode Northing Coordinate})^2)^{0.5}}{1609}$$

The process for producing these figures is as follows:

- Using the pupil level Census, eligible pupils attending schools in the Schools Block dataset are identified and broken into year groups, and schools are broken down likewise depending on the age of pupil that they admit. These files contain postcode coordinates for both pupils and schools.

- These coordinates are used to identify the nearest and second nearest school for each pupil, and the distance in miles that they live from both schools. The year group files are then combined to include all pupils together.

- We identify the set of pupils who live nearest to each school.

- For each set of pupils we calculate the mean average distance to the second nearest school. This is the school's sparsity distance.

A school may attract sparsity funding if it is:

- Primary and has fewer than 150 pupils and has an average distance to the second nearest school that is greater than or equal to 2 miles.

- Secondary, middle or all-through and has fewer than 600 pupils and has an average distance to the second nearest school that is greater than or equal to 3 miles.

Local authorities may, if they wish, reduce the pupil numbers and increase the distance criteria (i.e. they may narrow the criteria), but the criteria quoted above may not be widened.

The sparsity averages will be refreshed along with the census datasets in the final version of the APT in December 2013. The calculations will not be updated at any other time as schools open, or existing schools close, but exceptional applications can be made on behalf of affected schools.

Exceptional applications can also be made on behalf of existing schools that do not attract sparsity funding using the above criteria.

Annex A – Pseudo code

Reception uplift

$ReceptionDifference_{URNx} =$
if
$Sum(\text{if } URN_{Jan2012} = x \text{ and } SchoolBlockP_{Jan2012} = 1 \text{ and } NCYearActual_{Jan2012} = 'R' \text{ then } 1 \text{ else } 0)$
$\qquad \neq 0$
OR
$Sum(\text{if } URN_{Oct2011} = x \text{ and } SchoolBlockP_{Oct2011} = 1 \text{ and } NCYearActual_{Oct2011} = 'R' \text{ then } 1 \text{ else } 0)$
$\qquad \neq 0$
then if
$Sum(\text{if } URN_{Jan2012} = x \text{ and } SchoolBlockP_{Jan2012} = 1 \text{ and } NCYearActual_{Jan2012} = 'R' \text{ then } 1 \text{ else } 0) -$
$Sum(\text{if } URN_{Oct2011} = x \text{ and } SchoolBlockP_{Oct2011} = 1 \text{ and } NCYearActual_{Oct2011} = 'R' \text{ then } 1 \text{ else } 0)$
≥ 0
 then $Sum(\text{if } URN_{Jan2012} = x \text{ and } SchoolBlockP_{Jan2012} = 1 \text{ and } NCYearActual_{Jan2012}$
$\qquad = 'R' \text{ then } 1 \text{ else } 0) - Sum(\text{if } URN_{Oct2011}$
$\qquad = x \text{ and } SchoolBlockP_{Oct2011} 1 \text{ and } NCYearActual_{Oct2011} = 'R' \text{ then } 1 \text{ else } 0)$
else 0
end if
else NULL

FSM

$FSM\_Primary_{URNx} =$
$$\frac{Sum(\text{if } URN = x \text{ and } SchoolBlockP = 1 \text{ and } NCYearActual \text{ in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(FSM) \text{and } FSM = 1 \text{ then } 1 \text{ else } 0)}{Sum(\text{if } URN = x \text{ and } SchoolBlockP = 1 \text{ and } NCYearActual \text{ in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(FSM) \text{then } 1 \text{ else } 0)}$$

$FSM\_Secondary_{URNx} =$
$$\frac{Sum(\text{if } URN = x \text{ and } SchoolBlockP = 1 \text{ and } NCYearActual \text{ in } ('7',' 8',' 9',' 10',' 11') \text{ and not isnull}(FSM) \text{and } FSM = 1 \text{ then } 1 \text{ else } 0)}{Sum(\text{if } URN = x \text{ and } SchoolBlockP = 1 \text{ and } NCYearActual \text{ in } ('7',' 8',' 9',' 10',' 11') \text{ and not isnull}(FSM) \text{then } 1 \text{ else } 0)}$$

IDACI

$IDACI\_0\_Primary_{URNx} =$
$$\frac{Sum(\text{if } URN = x \text{ and } SchoolBlockP = 1 \text{ and } NCYearActual \text{ in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI_{Score}) \text{and } IDACI_{Score} < 0.2 \text{ then } 1 \text{ else } 0)}{Sum(\text{if } URN = x \text{ and } SchoolBlockP = 1 \text{ and } NCYearActual \text{ in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI\_Score) \text{then } 1 \text{ else } 0)}$$

$IDACI\_1\_Primary_{URNx} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI_{Score}) \text{and } 0.2 \geq IDACI_{Score} < 0.25 \text{ then 1 else 0})}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI\_Score) \text{then 1 else 0})}$$

$IDACI\_2\_Primary_{URNx} =$
$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI_{Score}) \text{and } 0.25 \geq IDACI_{Score} < 0.3 \text{ then 1 else 0})}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI\_Score) \text{then 1 else 0})}$$

$IDACI\_3\_Primary_{URNx} =$
$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI_{Score}) \text{and } 0.3 \geq IDACI_{Score} < 0.4 \text{ then 1 else 0})}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI\_Score) \text{then 1 else 0})}$$

$IDACI\_4\_Primary_{URNx} =$
$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI_{Score}) \text{and } 0.4 \geq IDACI_{Score} < 0.5 \text{ then 1 else 0})}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI\_Score) \text{then 1 else 0})}$$

$IDACI\_5\_Primary_{URNx} =$
$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI_{Score}) \text{and } 0.5 \geq IDACI_{Score} < 0.6 \text{ then 1 else 0})}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI\_Score) \text{then 1 else 0})}$$

$IDACI\_6\_Primary_{URNx} =$
$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI_{Score}) \text{and } 0.6 \geq IDACI_{Score} < 1 \text{ then 1 else 0})}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('R',' 1',' 2',' 3',' 4',' 5',' 6') \text{ and not isnull}(IDACI\_Score) \text{then 1 else 0})}$$

$IDACI\_0\_Secondary_{URNx} =$
$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('7',' 8',' 9',' 10',' 11') \text{ and not isnull}(IDACI_{Score}) \text{and } IDACI_{Score} < 0.2 \text{ then 1 else 0})}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('7',' 8',' 9',' 10',' 11') \text{ and not isnull}(IDACI\_Score) \text{then 1 else 0})}$$

$IDACI\_1\_Secondary_{URNx} =$
$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('7',' 8',' 9',' 10',' 11') \text{ and not isnull}(IDACI_{Score}) \text{and } 0.2 \geq IDACI_{Score} < 0.25 \text{ then 1 else 0})}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in } ('7',' 8',' 9',' 10',' 11') \text{ and not isnull}(IDACI\_Score) \text{then 1 else 0})}$$

$IDACI\_2\_Secondary_{URNx} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}}{\text{and not isnull(IDACI}_{\text{Score}}) \text{and } 0.25 \geq \text{IDACI}_{\text{Score}} < 0.3 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}} \text{and not isnull(IDACI\_Score)then 1 else 0)}$$

$\text{IDACI\_3\_Secondary}_{\text{URNx}} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}}{\text{and not isnull(IDACI}_{\text{Score}}) \text{and } 0.3 \geq \text{IDACI}_{\text{Score}} < 0.4 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}} \text{and not isnull(IDACI\_Score)then 1 else 0)}$$

$\text{IDACI\_4\_Secondary}_{\text{URNx}} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}}{\text{and not isnull(IDACI}_{\text{Score}}) \text{and } 0.4 \geq \text{IDACI}_{\text{Score}} < 0.5 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}} \text{and not isnull(IDACI\_Score)then 1 else 0)}$$

$\text{IDACI\_5\_Secondary}_{\text{URNx}} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}}{\text{and not isnull(IDACI}_{\text{Score}}) \text{and } 0.5 \geq \text{IDACI}_{\text{Score}} < 0.6 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}} \text{and not isnull(IDACI\_Score)then 1 else 0)}$$

$\text{IDACI\_6\_Secondary}_{\text{URNx}} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}}{\text{and not isnull(IDACI}_{\text{Score}}) \text{and } 0.6 \geq \text{IDACI}_{\text{Score}} < 1 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')}} \text{and not isnull(IDACI\_Score)then 1 else 0)}$$

EAL

Firstly, set pupil level flags:

1. Initialise Flags

If NCYearActual $= 'R'$ then do

SystemYears $=$ NULL

EALFLAG $=$ NULL

Else If LanguagegroupMajor $= 1$ENG then do

SystemYears $=$ NULL

EALFLAG $= 0$

Else if LanguagegroupMajor $= 2$OTH then do

SystemYears $= 0$

EALFLAG $= 0$

Else do

SystemYears $=$ NULL

EALFLAG $=$ NULL

2. Set System Years

If is not NULL SystemYears

then if NCYearActual = 1 do

SystemYears = 1

else if $OnRoll_{Aut10} = 1$ do

SystemYears = 4

else if $OnRoll_{Aut11} = 1$ do

SystemYears = 3

else if $OnRoll_{Aut12} = 1$ do

SystemYears = 2

else if $OnRoll_{Aut13} = 1$ do

SystemYears = 1

3. Correct SystemYears for Offset

If is not NULL SystemYears then do

then if NCYearActual = $'2'$ do

if SystemYears in (3,4) then SystemYears = 2

then if NCYearActual = $'3'$ do

if SystemYears = 4 then SystemYears = 3

4. Then aggregate to school level

$EAL\_1\_Primary_{URNx} =$

$$\frac{\text{Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ('1',' 2',' 3',' 4',' 5',' 6')}}{\text{Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ('1',' 2',' 3',' 4',' 5',' 6')}}$$
$$\frac{\text{and not isnull(EALFLAG)and EAL = 1 then 1 else 0)}}{\text{and not isnull(EALFLAG)then 1 else 0)}}$$

$EAL\_2\_Primary_{URNx} =$

$$\frac{\text{Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ('1',' 2',' 3',' 4',' 5',' 6')}}{\text{Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ('1',' 2',' 3',' 4',' 5',' 6')}}$$
$$\frac{\text{and not isnull(EALFLAG)and EAL in (1,2) then 1 else 0)}}{\text{and not isnull(EALFLAG)then 1 else 0)}}$$

$EAL\_3\_Primary_{URNx} =$

$$\frac{\text{Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ('1',' 2',' 3',' 4',' 5',' 6')}}{\text{Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ('1',' 2',' 3',' 4',' 5',' 6')}}$$
$$\frac{\text{and not isnull(EALFLAG)and EAL in (1,2,3) then 1 else 0)}}{\text{and not isnull(EALFLAG)then 1 else 0)}}$$

$EAL\_1\_Secondary_{URNx} =$

$$\frac{\text{Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ('7',' 8',' 9',' 10',' 11')}}{\text{Sum(if URN = x and SchoolBlockP = 1 and NCYearActual in ('7',' 8',' 9',' 10',' 11')}}$$
$$\frac{\text{and not isnull(EALFLAG)and EAL = 1 then 1 else 0)}}{\text{and not isnull(EALFLAG)then 1 else 0)}}$$

$EAL\_2\_Secondary_{URNx} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('7',' 8',' 9',' 10',' 11')}{\text{and not isnull(EALFLAG)and EAL in (1,2) then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('7',' 8',' 9',' 10',' 11')}{\text{and not isnull(EALFLAG)then 1 else 0)}}$$

$\text{EAL\_3\_Secondary}_{URNx} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('7',' 8',' 9',' 10',' 11')}{\text{and not isnull(EALFLAG)and EAL in (1,2,3) then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('7',' 8',' 9',' 10',' 11')}{\text{and not isnull(EALFLAG)then 1 else 0)}}$$

Primary prior attainment

$\text{LowAtt\_Pri78}_{URNx} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('1',' 2',' 3',' 4')}{\text{and not EYFSP in (NULL, 'N')and EYFSP} < 78 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('1',' 2',' 3',' 4')}{\text{and not EYFSP in (NULL, 'N') then 1 else 0)}}$$

$\text{LowAtt\_Pri73}_{URNx} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('1',' 2',' 3',' 4')}{\text{and not EYFSP in (NULL, 'N')and EYFSP} < 73 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('1',' 2',' 3',' 4')}{\text{and not EYFSP in (NULL, 'N') then 1 else 0)}}$$

Secondary prior attainment

Firstly set pupil level flag:

If NCYearActual in $(8',' 9',' 10',' 11')$

then if KS2MatLevel in $('4',' 5',' 6')$ **and** KS2EngLevel in $('4',' 5',' 6')$then

SecLowAtt $= 0$

else if KS2MatLevel in $('2' '3',' B',' N')$ **or** KS2EngLevel in $('2' '3',' B',' N')$ then

SecLowAtt $= 1$

else SecLowAtt $=$ NULL

If NCYearActual in $('7')$

then if KS2MatLevel in $('4',' 5',' 6')$ **and** KS2WritTALevel in $('4',' 5',' 6')$ and KS2ReadLevel in $('4',' 5',' 6')$

then SecLowAtt $= 0$

else if KS2MatLevel in $('2' '3',' B',' N')$ **or** KS2WritTALevel in $('2' '3',' B',' N')$ **or** KS2ReadLevel in $('2' '3',' B',' N')$ then SecLowAtt $= 1$

else SecLowAtt $=$ NULL

Then aggregate to school level:

LowAtt_Sec_{URNx}

$$= \frac{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('7','8','9','10','11') \text{ and not isnull(SecLowAtt) and SecLowAtt} = 1 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP} = 1 \text{ and NCYearActual in } ('7','8','9','10','11') \text{ and not isnull(SecLowAtt) then 1 else 0)}}$$

Looked-after children

$\text{LAC\_X\_Mar12}_{URNx} =$

$$\frac{\text{Sum(if URN}_{\text{Jan 2012(SSDA903Mapping)}} = x \text{ and SSDA903}_{LACX} = 1 \text{ then 1 else 0)}}{\text{Sum(if URN}_{\text{Jan 2012}} = x \text{ and SchoolBlockP}_{\text{Jan2012}} = 1 \text{ and NCYearActual in } ('R','1','2','3','4','5','6','7','8','9','10','11') \text{ then 1 else 0)}}$$

Mobility

Firstly set pupil level flag:

1. Set RStart

If Entry_Date between 01/09/2011 and 31/08/2012 then RStart = NC_Year_actual -1
If Entry_Date between 01/09/2010 and 31/08/2011 then RStart = NC_Year_actual -2
If Entry_Date between 01/09/2009 and 31/08/2010 then RStart = NC_Year_actual -3
Else RStart is NULL

If RStart= 0 then RStart= R else Rstart = NULL

2. Initialise Flags

If Entry_Date is NULL then
Mobile = NULL
else if Entry_Date not between 01/09/2009 and 31/08/2012 then
Mobile = 0
Else if
Month(Entry_Date) in (Aug, Sept) then
mobile = 0
Else if
Month(Entry_Date) = (Jan) and RStart = R then
mobile = 0
Else Mobile = 1

Then aggregate to school level:

$\text{Mobility\_Secondary}_{URNx} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')} \text{ and Mobile} = 1 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('7',' 8',' 9',' 10',' 11')} \text{ and not isnull(Mobile)then 1 else 0)}}$$

$\text{Mobility\_Primary}_{URNx} =$

$$\frac{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('R',' 1',' 2',' 3',' 4',' 5',' 6')} \text{ and Mobile} = 1 \text{ then 1 else 0)}}{\text{Sum(if URN} = x \text{ and SchoolBlockP } = 1 \text{ and NCYearActual in ('R',' 1',' 2',' 3',' 4',' 5',' 6')} \text{ and not isnull(Mobile)then 1 else 0)}}$$

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