

## Appendix 1-FORECASTING METHODOLOGY

The Local Authority uses data on births and early years population figures to inform the forecasting of early years and primary school pupil rolls. Secondary school and post-16 education needs are calculated from primary school rolls and transfer rates to secondary schools. SEND projections are based on population data and historic SEND numbers. Migration in and out of different parts of Havering and housing developments are taken into account.

### **Early Years Projections**

The early years projections project the expected demand for funded two, three and four year old early years places in Havering. The two year old projections are produced separately, while the three and four year old projections are combined to reflect the different funded offers.

The early years projections are produced by calculating the historic number of Havering resident children on roll at Havering early years settings, as a proportion of the projected population. This is done for each ward in Havering separately. Once the past trend has been calculated, an average is established and applied to the Havering population projections for each ward to generate the expected take up of early years places at ward level for future years.

Children who live outside of Havering but access a funded early years place at a Havering setting are projected separately. The historic number of children living outside of Havering accessing a funded early years place in Havering is calculated as a proportion of the total number of children accessing a Havering funded early years place. This is done for each ward in Havering separately. Once the past trend has been calculated, an average is established and applied to the projected number of Havering residents expected to take up a funded early years place at a Havering setting, in order to project the number of children living outside of Havering expected to access a Havering funded early years place in each ward for future years.

The projected number of Havering residents and non-Havering residents expected to access a funded early years place is added together for each ward. The early years projection for each ward is aggregated to provide a borough total. Separately the expected demand for funded two, three and four year old early years places in Havering is projected at borough level- this provides a check to ensure that the aggregated ward projections total look realistic when compared to the borough projection.

## **Year Reception and primary**

The following information is used to calculate school roll projections in Havering:

- Birth data received from the ONS.
- Population projections produced by the GLA
- Historic pupil data obtained from the school census
- Housing development data obtained from our planning department.

There are seven primary planning areas (see map at the end of this section), which were revised in 2014. The primary planning areas previously used were not made up of existing ward boundaries and many of the old planning areas only partially cover some wards. As birth and population data is often received at ward level, this then involves an assumption being made as to what proportion of the ward level birth/population data sits under which planning area.

The authority calculates independently a projection of pupil numbers for each of the seven primary planning areas. Once projections have been made at planning area level, individual school projections are made for all schools in that planning area. Data on parental preferences for schools is used when projecting numbers at school level. The accuracy of the individual planning area projections is the starting point when updating the projections.

The main method used to project school rolls in Havering is the cohort survival method. The base information used for forecasting the number of children entering Reception in each primary planning area in Havering is the number of births within each planning area and the number of children in Reception classes in each planning area (obtained from the school census and summer count for previous years).

The birth data is provided by the ONS at ward level. This birth data allows the historical uptake factor to be calculated between the number of births in a planning area and the number of children entering a reception class in the same planning area five years later. This represents the number of children born in the planning area that will go on to attend a primary school in the planning area five years later. The past trend of reception intake to total birth rate for the corresponding year is calculated, an average established and then applied to the birth rate for future years to calculate the projected reception intake for each of the seven planning areas.

When actual live birth data is not available from the ONS, projected birth data from the GLA is used. Havering is a net importer of pupils, that is more pupils are expected to attend primary school here than were actually born in Havering five years previously. This has been the trend for a number of years and is not expected to change.

Once the number for Reception has been projected for each planning area, the past trend of cohort movement through the primary phase year on year from reception to year 6 is calculated, an average established and applied to each age cohort as they move through the system.

The projections for each planning area are added together to produce a primary projection for the whole of Havering. The method of projecting each primary planning area individually is to make sure that the primary projections produced for Havering are more sensitive to localised changes in the population at planning area level, such as one-off dips in the birth rate within a particular planning area.

Under the new planning area projection method, any changes in the birth rate for that area would be picked up and incorporated into the projections; a sudden dip in the birth rate would result in a lower expected reception intake in the area five years later, the impact of which may well have been hidden under the previous method of projecting a reception intake for the whole borough which is then split across the planning areas.

Another change to the projection methodology is that we no longer incorporated an additional 5% factor on top of the projected rolls. Previously an additional 5% was added to the projected reception intake for the Harold Hill, Romford and Rainham and South Hornchurch primary planning areas.

The 5% element was initially introduced as these primary planning areas experienced high levels of new housing as well as high mobility, leading to school place applications being received from these areas throughout the year. The additional 5% was implemented in order to ensure that we have sufficient primary school places available to accommodate school place demand from families living in these areas throughout the year.

A comprehensive strategy of primary school expansion to meet school place demand and a reduction in the number of in-year primary applications has meant that we no longer need to factor in an additional 5% to the projections in these areas in order to ensure enough places are available.

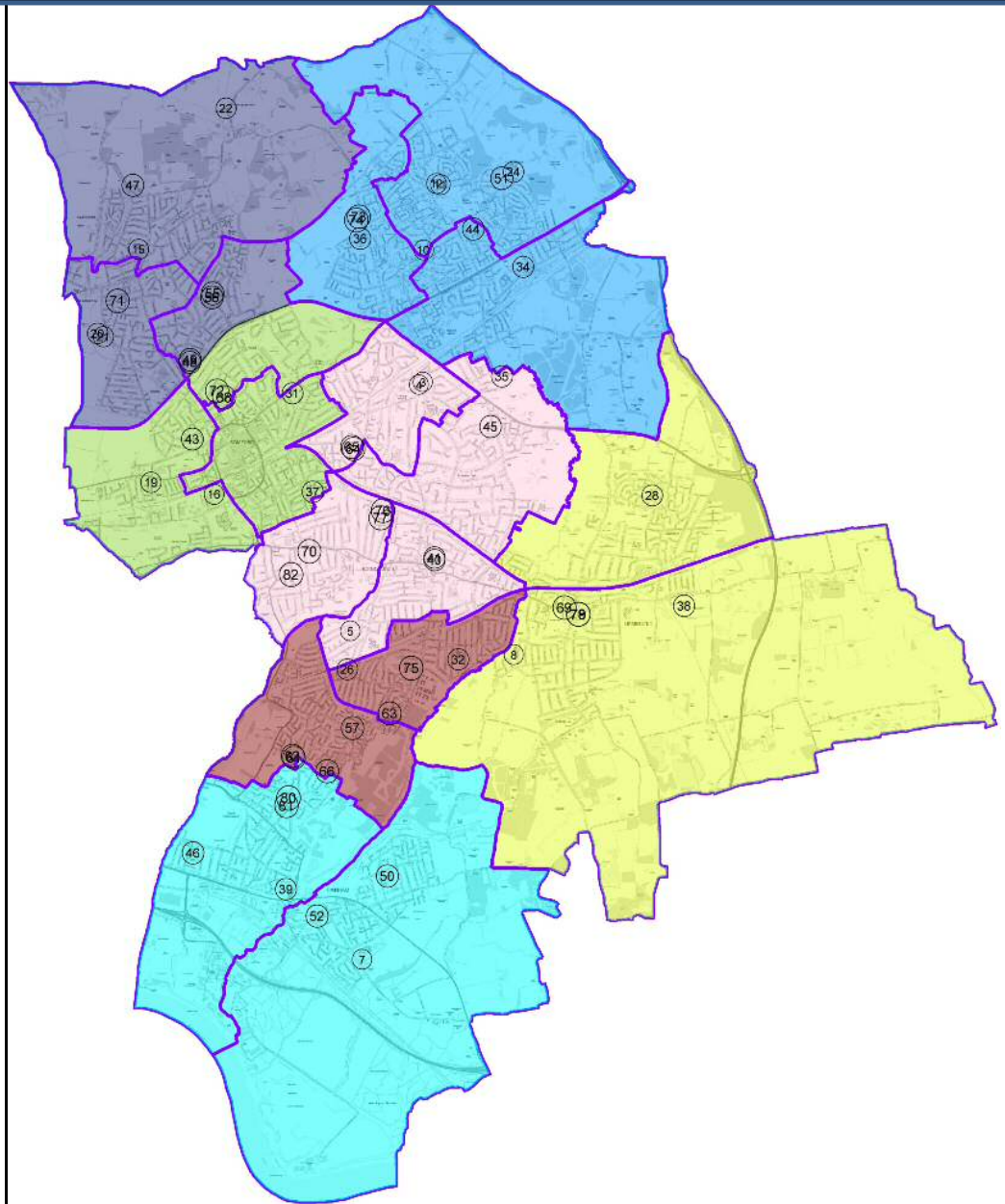
# Primary Planning Areas Map

Havering\_All\_Schools\_Oct\_2012

- 3 Ardleigh Green Infants
- 4 Ardleigh Green Juniors
- 5 Benhurst Primary
- 7 Brady Primary
- 8 Branfill
- 10 Broadford Primary
- 11 Drapers' Brookside Infants
- 12 Drapers' Brookside Juniors
- 15 Clockhouse Primary
- 16 Concordia Academy
- 19 Crowlands Primary
- 20 Crownfield Infants
- 21 Crownfield Juniors
- 22 Dame Tipping Primary
- 24 Drapers Maylands Primary
- 26 Elm Park Primary
- 28 Engayne Primary
- 31 Gidea Park Primary
- 32 Hadon Primary
- 34 Harold Court Primary
- 35 Harold Wood Primary
- 36 Hilldene Primary
- 37 Hylands Primary
- 38 James Ogletthorpe Primary
- 39 La Salette Primary
- 40 Langtons Infants
- 41 Langtons Juniors
- 43 Mawney Foundation
- 44 Mead Primary
- 45 Nelmes Primary
- 46 Newtons Primary
- 47 Oasis Academy - Pinewood Primary
- 48 Parklands Infants
- 49 Parklands Juniors
- 50 Personage Farm Primary
- 51 Pyrgo Priory Primary
- 52 Rainham Village Primary
- 55 Rise Park Infants
- 56 Rise Park Juniors
- 57 R J Mitchell Primary
- 61 Scargill Infants
- 62 Scargill Juniors
- 63 Scotts Primary
- 64 Squirrels Heath Infants
- 65 Squirrels Heath Juniors
- 66 St Alban's Catholic Primary
- 68 St Edward's CE Primary
- 69 St Joseph's Catholic Primary
- 70 St Mary's Catholic Primary
- 71 St Patrick's Catholic Primary
- 72 St Peter's Catholic Primary
- 73 St Ursula's Catholic Infants
- 74 St Ursula's Catholic Juniors
- 75 Sullons Primary
- 76 Towers Infants
- 77 Towers Juniors
- 78 Upminster Infants
- 79 Upminster Juniors
- 80 Whybridge Infants
- 81 Whybridge Juniors
- 82 Harrow Lodge Primary

Revised\_Planning\_Areas\_201314

- Harold Hill
- Collier Row
- Elm Park
- Hornchurch
- Rainham & South Hornchurch
- Romford
- Upminster & Cranham



| Key | Primary Planning Area      |
|-----|----------------------------|
|     | COLLIER ROW                |
|     | ELM PARK                   |
|     | HAROLD HILL                |
|     | HORNCHURCH                 |
|     | RAINHAM & SOUTH HORNCHURCH |
|     | ROMFORD                    |
|     | UPMINSTER & CRANHAM        |

## **Year 7 and secondary**

Havering introduced secondary planning areas in 2014 in order to produce projections (see map at the end of this section). Projecting secondary demand through secondary planning areas allows localised trends and patterns of movement around secondary school attendance to be captured and reflected accurately in the projections. The introduction of secondary planning areas helps identify areas of need earlier, as a shortage of places in a particular area will be highlighted at planning area level that may well be hidden at borough level. There are five secondary planning areas that are made up by aggregating existing ward boundaries.

The authority calculates independently a projection of pupil numbers for each of the five secondary planning areas. Once projections have been made at planning area level, individual school projections are made for all schools in that planning area. Data on parental preferences for schools is used when projecting numbers at school level. The accuracy of the individual planning area projections is the starting point when updating the projections.

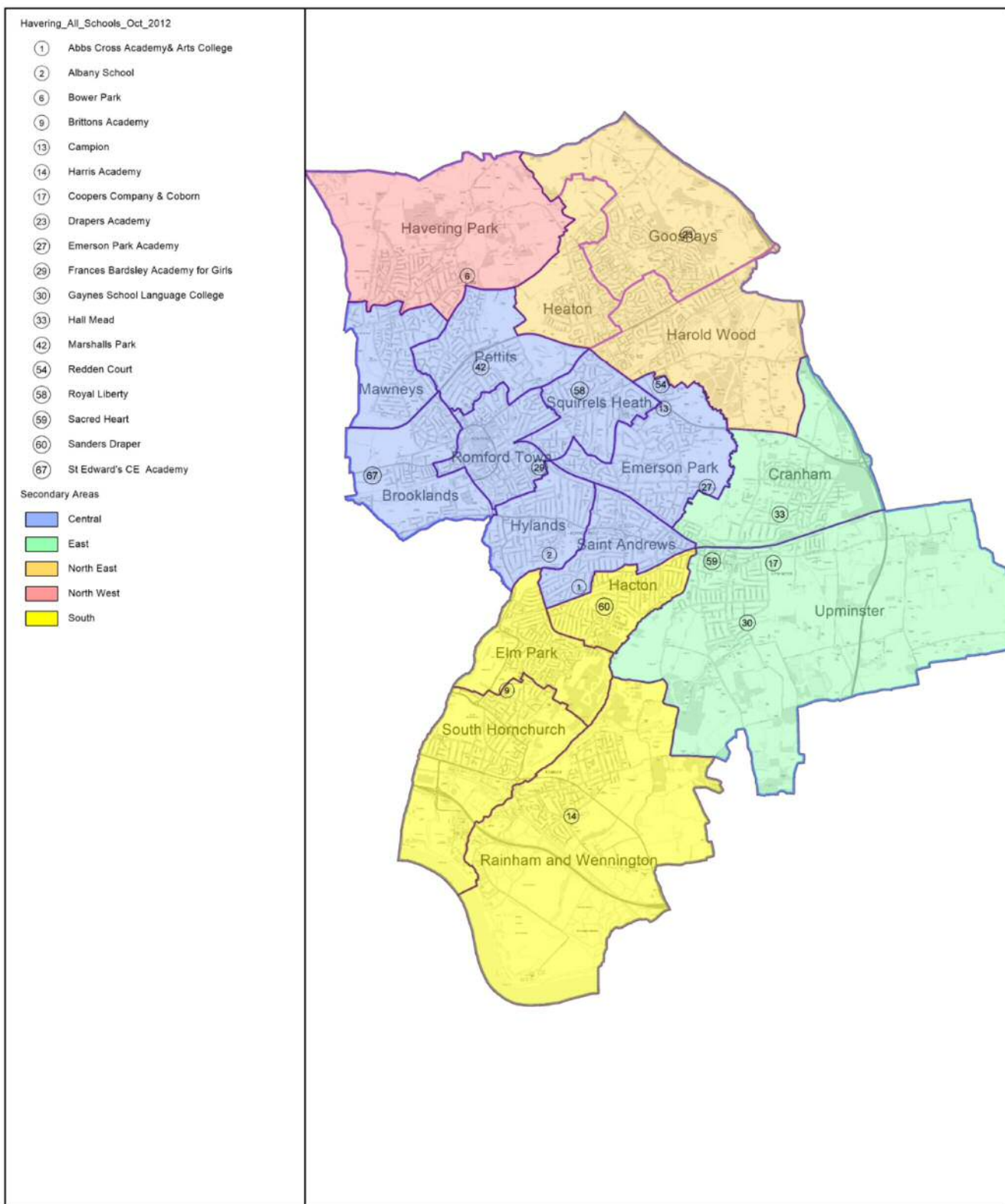
To generate the secondary projections, historical data is used to calculate the transfer rate from year 6 to year 7 for each secondary planning area. The year 6 roll data allows the historical uptake factor to be calculated between the year 6 roll in a primary planning area and the number of children entering a year 7 class in the corresponding secondary planning area the following year. This represents the number of children attending year 6 in the primary planning area that will go on to attend a secondary school in the corresponding secondary planning area the following year.

For those primary schools where the year 6 roll feeds into secondary schools in different planning areas, the year 6 roll is proportioned accordingly so that the year 6 roll feeds into the separate secondary planning areas.

Once the number for year 7 has been projected for each planning area, the past trend of cohort movement through the secondary phase year on year from year 7 to year 11 is calculated, an average established and applied to each age cohort as they move through the system.

The projections for each planning area are added together to produce a secondary projection for the whole of Havering. The method of projecting each secondary planning area individually is to make sure that the secondary projections produced for Havering are more sensitive to localised changes in the population at planning area level, such as one-off dips in the year 6 roll within a particular planning area.

# Secondary Planning Areas Map



Havering Secondary Schools



Scale: 1:65000  
Date: 12 July 2018

0 1000 2000 3000 metres



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Ordnance Survey 100024327

## **Housing**

We receive data from the planning team detailing housing completions in Havering. This allows us to calculate the child yield expected as a result of these housing completions.

In addition we also factor into the projections the child yield from future major housing developments as detailed in the housing trajectory that forms part of the Local Plan evidence base and as set out by regeneration colleagues.

The child yield from each housing scheme is staggered over a five or three-year period to reflect the fact that housing developments are not all occupied immediately, nor generate child yield immediately. All the planning areas have the child yield weighted. For the primary phase an assumption is made that the child yield is highest in the first year of occupancy. A 40% weighting has been used to calculate child yield for the first year, followed by 30% each in the second and third year. For the secondary phase the child yield is phased evenly over a five-year period, with 20% added each year.

The child yield is aggregated from ward level to planning area level and then split out by year group. In primary the child yield is split out by weighting the yield at 30% in reception, 15% each in years 1 and 2 and then 10% each across years 3-6. The effect of splitting out the child yield this way instead of evenly splitting across all year groups (as with secondary) is subtle, but weights the child yield slightly in the earlier year groups, thus ensuring that additional capacity required to meet the demand arising from new housing is implemented in time.

Currently an average of 0.2 is used as the child yield multiplier for secondary (including post 16) and an average of 0.3 used as the child yield multiplier for primary. These have been calculated by assessing the average child yield produced by 1/2/3/4 bed units.

Child yield from housing developments is factored into the primary, secondary and Havering school sixth form projections.

## **Additional factors**

The accuracy of previous projections is reviewed as a starting point for the production of a new series of projections. In this way inconsistencies or problems with the previous projections can be identified and corrected before the new set of projections is produced. Significant school organisation changes planned have been taken into consideration in working out projections.

Cohort survival rates are reviewed each year. They are used to determine whether changes are occurring in pupil flows and methodology for borough and planning area

level and school -level projections, with the projections adapted accordingly. Parental preferences for schools are used when projecting numbers at school level.

We consult schools regarding the individual school roll projections for their school and a projection for the planning area they are in. All the adjustments raised by schools on their individual projections will be considered and revised in the projections where appropriate.

### **Accuracy of Forecasts**

Havering like every Local Authority, submits updated projections to the ESFA on an annual basis. The ESFA closely monitors the projections submitted each year and will query with the Local Authority any aspect of the projections that it feels warrant further attention. We also maintain a close relationship with our neighbouring boroughs in order to monitor issues that may impact cross border movement of students. Our projections are reviewed on an annual basis and adjustments are made to reflect the most recent trends regarding school attendance.

Information regarding the accuracy of the Havering forecasts can be accessed via the [Local Authority school place scorecards 2017](#) excel tool published by the ESFA.

### **GLA School roll projections**

In addition to the in-house school roll projection model that we run in order to inform us of future school place demand in Havering, we also buy into the GLA School Roll Projection service that also provides us with school roll projections for Havering. Although we receive school roll projections from the GLA, we still use our in-house projections as our definitive set of roll projections. The reason for this is because we are able to make adjustments to our in-house projections that reflect local trends and patterns of movement that may not be captured by the GLA. By being able incorporate our local knowledge of demographic changes in Havering in our school roll projections; we are able to produce a more robust set of projections that better reflect what is happening on the ground.

### **Post 16 Projections**

#### **Havering School Sixth Forms**

Projections for Havering school sixth form are made by using staying on rates calculated by comparing historic year 12 numbers with the year 11 numbers the previous year. Similarly, the historic trend of year 13 numbers compared to year 12 pupil numbers the previous year is calculated. Once the past trend of cohort movement year on year from year 11 to year 12 and year 12 to year 13 has been calculated, an average is established and applied to the year 11 projection to provide Havering school sixth form projections for future years.

## Full time and part time education provision

Projections for Havering 16-19 year olds in full time or part time education are produced by calculating the past trend of Havering 16-19 year olds in full time or part time education as a proportion of the projected population for 16-19 year olds in Havering. An average is then established which is then used to project forward the number of Havering 16-19 year olds expected to participate in full time or part time education for future years. This projection is produced for those expected to participate in education in Havering and non-Havering provision.

A separate projection also calculates the number of non-Havering residents expected to study at Havering Sixth Form College and Havering FE College for future years. This is produced by looking at the historical number of non-Havering residents studying at these colleges as a proportion of the total number at the colleges. This proportion is then used to project ahead the number of non-Havering residents expected to study at the colleges in future.

## **SEND**

The SEND projections project the number of Havering residents with an Education Health Care plan or statement of SEND by the four main categories of need. The following data is used to produce the SEND projections:

- Population projections produced by the GLA:
  - Primary age 3 -10
  - Secondary age 11 -15
  - Special school age 3 -15
  - Post 16 age 16 – 25
- Historic actual pupil numbers on roll regarding Havering residents with an Education Health Care plan or statement, attending Havering primary and secondary schools (including pupils on roll at alternate resource provision), Havering special schools and Havering residents attending out borough provision.

The past trend of actual numbers of Havering residents with an Education Health Care plan or statement of SEND is calculated as a proportion of the population projection over several years- this is done independently for each of the four main SEND need types.

Once the past trend as a proportion of the population has been calculated, an average is established for each of the four main SEND need types which is then applied to the population projection to produce the projected demand expected for each of the SEND types.

The sum of the four separate projections for each of the four main SEND need types is the total projected number of Havering residents expected with an Education Health Care plan or statement of SEND.