Forecast Methodology

Since local authorities use different methods to forecast pupil numbers and take different factors into account, regulations require local authorities to provide a statement to accompany the forecast pupil numbers explaining the method by which the forecast is made.

This information can be provided by email (to SCAP.PPP@education.gov.uk), or as shown in the template below.

Data sources

Please confirm what data sources you have used in your forecasts

Actual numbers for pupil data are obtained from the January School Census. The schools produce this information from their Management Information Systems, using guidance provided by DfE with support from the LA.

Pupil Forecasting uses:

- Small Area Population Forecasts (SAPF) provided by Hampshire County Council Research and Intelligence group in the early spring each year. The SAPF model produces forecasts of the usually resident population by age and sex in each Census Output Area (OA) in the City and is based on Census, birth and child health data and dwelling supply information. These Output areas can then be assigned to school catchment and planning areas to provide forecasts for the number of normally resident pupils in each area.
- Live Birth data from the Office for National Statistics (ONS) which is produced on an annual basis by Local Authority area.
- Publicly available GP registration data provided by our Public Health Team.
- Dwelling supply information from the Local Planning Authority.
- In addition, NOMIS population projections, and HMRC child benefit data is considered.

Data processing

Please describe how the raw data are processed to arrive at final figures. You may wish to mention how you arrive at pupil numbers for each Reception cohort, how you model pupil movement through the school system (e.g. retention rates at primary/secondary transfer), how you account for parental preference and the effect of any changes to school and planning area structures

Methodology Forecasting at the primary and secondary aggregate level is based on a cohort survival methodology which assumes that pupil numbers will roll forward from one year group to the next at the end of each academic year. The expected year on year changes that occur as a cohort progresses through a school (which may be influenced by such factors as migration, turbulence, demographic and building changes) are accounted for by calculating and applying transition rates.

Primary Forecasts:

The expected number of reception pupils is derived from the forecast number of 4 year olds from SAPF, live birth numbers for the school intake and the number of Portsmouth resident children registered at GPs surgeries. As not all resident pupils take up places in Portsmouth mainstream pupils, a participation rate is calculated for each of the last 5 years for each factor. The level of participation (as a percentage) is then used to project forward using the highest value of the last 5 years. The Calculated Year R intake for the next September is compared with starting school data from admissions to check that assumptions are valid.

The total expected Year R population is assigned to planning areas based on an average percentage of overall mainstream primary school pupils attending schools in each of the planning areas. This takes into account the usual patterns of cross planning area movement. Admissions data is then used as a cross check. Where necessary, raw numbers are adjusted for changes to patterns or migration, the impact of large developments and expected changes in the patterns of movement of pupils between planning areas.

School Years 1 to 6 are forecast using the cohort survival model which assumes that pupils from Year R will generally attend schools in the same planning area in Year 1, Year 1 pupils will generally roll forward to Year 2 and so on. Transition rates are calculated for each year on year progression and calculated for each planning area. Applying these transitional rates to forecast future cohorts accounts for general levels of turbulence. Where necessary the raw numbers for each school year are adjusted for changes to patterns of migration, the impact of large developments and expected changes in the patterns of movement of pupils between planning areas.

The expected numbers of 7 year olds transferring into Junior schools assumes that pupils will progress from feeder schools.

Secondary Forecasts:

At the aggregate level, secondary pupil forecasts are based on the highest value of the last 5 years of participation rates based on actual (School Census) and forecast numbers from the primary sector. Currently, Year 7 cohorts are approximately 92% of their Year 6 total in the previous academic year.

Planning area forecasts are derived from the number of Year 6 pupils on roll at feeder schools adjusted by transfer rates. Where necessary, the raw numbers for each school year are adjusted for changes to patterns of migration, the impact of large developments, and expected changes in the patterns of movement of pupils between planning areas.

Years 7 to 11 are calculated using the same cohort survival methodology as primary forecasts. Where necessary the raw numbers for each school year are adjusted for changes to patterns of migration, the impact of large developments and expected changes in the patterns of movement of pupils between planning areas. At year 10, this includes the impact of

Portsmouth UTC which takes 50% of pupils from outside - leading the City to an increase in the migration of pupils into the City as the school fills at Year 10.

Migration and housing developments

How have you factored any migration assumptions and new housing developments into your forecasts? Please provide information on pupil yield (including specific figures if possible). Please confirm all housing developments included in your submitted forecasts are in the Five Year Housing Land Supply.

The participation and transfer rates used to forecast the number of pupils take account of the usual levels of migration and housing development. However, known significant changes to usual patterns or one-off events need to be adjusted for separately.

Housing Development

Housing development in Portsmouth has historically consisted of smaller developments spread throughout the City with little impact on specific planning areas. There are now a number of major developments planned for the next 10 to 15 years. The pupil place planning team have sought detailed information in respect of all potential developments of over 100 dwellings within the city boundaries, including timeframe and type of housing. Local knowledge has been used to assign an assumed migration percentage to these large developments as a proportion of the housing will be taken up by existing Portsmouth families moving within the City. The potential pupil yield for developments has been calculated and the additional yield arising from families moving into the City has been factored into the pupil forecasts.

The first of these developments, which are included in the five year housing land supply, is expected to be completed within the next 12 to 18 months, with a total expected yield of 10 pupils per year group in 2021/22 rising to 16 pupils per year group by the end of the forecast period.

Migration

General rates of migration to and from Portsmouth remain stable and no changes to the current migration rates have been factored in to pupil forecasts.

Cross border movement

Please describe how you account for cross border movement between local authorities. Have you checked your assumptions with neighbouring local authorities?

Portsmouth is only bordered by one other Local Authority (Hampshire County Council). The Portsmouth pupil place planning team regularly liaises with HCC colleagues.

A significant number of Portsmouth children are educated in Hampshire schools whilst very few pupils from other Local Authorities attend Portsmouth schools. The usual patterns of cross border movement are accounted for in the calculated participation and transfer rates that are used to forecast pupils.

Patterns of cross border movement will change if developments in Hampshire increase pupil numbers sufficiently to displace Portsmouth pupils or where changes to Portsmouth schools make them more attractive to Portsmouth families. There are a number of major developments close to the border with Portsmouth that could impact future forecasts, although most of this impact is expected beyond the current forecast period.

Where known developments are expected to have an impact forecasts are adjusted based on assumptions that are discussed and agreed with HCC colleagues

Changes made

Please summarise any significant changes you have made to your forecasting model since last year, if relevant. You may wish to include information on why these changes have been made.

The have been no significant changes to the Portsmouth forecasting model since last year. The methodology continues to produce accurate forecasts.

Quality assurance

What quality assurance checks have been carried out on your forecasts? This may include checks on input data, year on year comparisons, assessments of previous forecasting accuracy and so on.

Quality assurance begins before final SCAP data is submitted with Year R, Year 3 and Year 7 forecasts for 2019/20 being compared with admissions data for September 2019.

Pupil forecasts are compared with actual NOR from October School Census data once the census data is available.

Year on year variations in forecasts are investigated to identify the reason for them and to check whether changes need to be made to future modelling.