

Appendix C – Review of demographic forecasts and assessment of future demand for secondary education provision in Cambridge City

Executive Summary

In considering the future demand for secondary school provision across Cambridge there are a wide range of factors which need to be considered. As well as considering the likely impact of increasing demand from within the City, there is a need to consider the impact of major housing developments and the introduction of additional capacity through the delivery of new schools.

There has been a clear increase in the demand for education provision as a result of demographic changes. This is reflected by actions taken by the Council to secure additional primary school provision across the City. This has come in the form of expansion of existing primary schools across a number of years, as well as opening two new primary schools solely to meet the increased in demand within existing communities.

Beyond this, there has been a significant level of planned housing development identified as major urban extensions for Cambridge. In response to these emerging sites, in 2007 the Council undertook a review of provision and identified the need for additional secondary schools to be secured to meet the additional demand arising from these major developments.

In the period since the release of these urban extension sites from the Green Belt there have been a number of significant changes to the proposed pattern of housing development. This is particularly linked to the timescales for sites being brought forward for development, in part linked to changes in the economic and market conditions. The consequences of these changes mean that the responses identified in the 2007 Review may not be delivered in the way it was initially envisaged.

Reviewing the impact of these changes, demographic and development, show that there is likely to be a shortfall in the number of secondary school places. This shortfall is projected to be City-wide, with the demand from places within each of the six secondary school catchment areas across the City exceeding the capacity of the respective schools.

When patterns of parental preference, and the capacity at St Bede's is factored into analysis of future demand, analysis of the forecast demand suggests that there will still be a shortfall in capacity. This shortfall will, in part, be met through the opening of new schools, in the northwest fringe and east of Cambridge. However, these schools are predicated on the progression of housing developments.

The sites with which these schools are associated are not yet under construction. In the case of the east of Cambridge, the site is not formally allocated with a policy requirement to secure a school and pre-application

discussions are at an early stage. Therefore, there must remain a degree of uncertainty about the timescales for delivery of these new schools.

Even accounting for these new schools, the demographic projections suggest that there will be limited surplus capacity for year 7 pupils throughout the next decade. Depending on future patterns of birth rate and inward migration there could even be a further shortfall in provision. This could pose challenges to the Council in meeting the demand for places from mid-phases admissions arising from the major housing developments.

It is clear, therefore, from the analysis of the current demographic information that there is not sufficient capacity within the existing schools in the City to meet the growth in demand for secondary school places. There is a pressing need to secure additional capacity from the start of the next decade, 2020 onwards. This is needed to:

- meet the existing demand for places;
- respond to changes in birth rate and inward migration; and
- secure the flexibility required to address the impact of inward migration and housing development on mid-phase admissions.

1.0 PURPOSE

- 1.1 To provide a detailed overview of the demand for secondary school provision in Cambridge. Including providing details of the methodology, assumptions made in developing the forecasting model.

2.0 BACKGROUND

- 2.1 Since 2008, demographic changes within Cambridge have necessitated the expansion of primary education provision across the City. Following reviews of provision in both the north and south of the City in 2009/10, the Council has secured an additional 9.5 forms of entry (FE), or round 2,000 additional primary school places, solely to mitigate the impact of demographic changes. This has been achieved through the expansion of existing schools as well as opening two new schools, Chesterton Primary and Queen Emma Primary.
- 2.2 As well as the significant demographic changes, Cambridge has long been identified as an area for extensive housing developments. The '2005 Cambridgeshire and Peterborough Structure Plan' released significant amounts of land from the Cambridge Green Belt to facilitate the delivery of major urban extensions around the City. As well as significant levels of housing development, these sites are planned to secure additional primary and secondary education provision.
- 2.3 Since 2008, economic challenges have seen a slowdown in the pace of delivery of these sites. To date meaningful progress has been made on the delivery of sites in the Cambridge Southern Fringe. Associated with these sites, the Council has expanded Fawcett Primary School and opened Trumpington Meadows Primary. A third primary, Trumpington Park, is scheduled to open in September 2017. Ultimately these three schools will provide 7FE of primary school provision. Trumpington Community College, the new secondary school serving these sites opened in September 2015. The school opened with reduced pupil numbers, but will ultimately offer 750 places, 5FE.
- 2.4 The combination of these pressures, demographic and development, and the scale of additional primary education provision which has been secured has led the Council to examine the demand for secondary school provision. Since 2013, the Council has undertaken, and commissioned independent assessment of future demand as part of developing a response to meeting this demand. This paper provides an overview of the outcomes of the detailed pupil forecasting work which has been undertaken.

3.0 DEMOGRAPHIC FORECASTING METHODOLOGY

- 3.1 The Council has its own research service, the Research Group. This team undertakes research and analysis of population data, including birth data supplied by the NHS, school census data and the Government's ten year

census. From this data, a range of population and school place forecasts are produced.

3.2 Pupil forecasts for existing communities

3.2.1 This section sets out the different datasets and forecasts that are used to plan future education provision.

3.3 Statutory School Age Forecasts

3.3.1 District and county level forecasts are produced once a year. These show the number of pupils forecast to attend schools within each district council area. The key inputs to the forecasting model are the latest data on actual school rolls (taken from the annual January school census counts) and NHS GP Registration data, showing the number of 0-4 year olds in each district. The forecasts are based on the assumption that recent trends - generally those in the past three years - will continue over the next ten years. In detail, the assumptions used are as follows:

- 4 year-old pupils: Intake of 4 year-olds into reception classes the following year is projected on the basis of the relationship over the last three years between the numbers of children aged 4 arriving at school and the numbers of births five years earlier – currently an average arrival rate of 99% across Cambridgeshire; however, this varies greatly across districts, as shown in table 1 below.

Table 1: Arrival rate of birth: 4 year olds*

District	Arrival Rate
Cambridge City	83%
East Cambridgeshire	106%
Fenland	100%
Huntingdon	103%
South Cambridgeshire	101%
Cambridgeshire	99%

Source: CRG Jan 2016 based LEA forecasts

*Note that this table conceals the complexity about the relationship between residents and schools attended.

- 5-10 year-old pupils: Projected on the basis of the average change in the size of year-groups over the last three years.
- 11 year-old pupils: Projected on the basis of the average proportion transferring from the top primary year-group to secondary school over the last three years – currently a transfer rate of 95% averaged across the county. The net loss on transfer mainly represents moves into the private sector.
- 12-15 year-old pupils: Projected on the basis of the average change in the size of year-groups over the last three years.

3.3.2 While the district and county level forecasts of pupil numbers are the most robust for planning future provision at a strategic level, they do not give sufficient geographical detail to enable planning at a local level or to assist individual schools with their plans. Therefore, two other kinds of pupil forecasts for existing schools and communities are produced, these are:

- future pupil numbers, determined by the school they are forecast to attend (**trend based**);
- future pupil numbers, determined by catchment areas (**catchment based**).

3.3.3 **Individual (trend based) school forecasts** are produced once a year. These forecasts apply recent trends of parental preference, as well as taking current catchment numbers into account. These forecasts are primarily used to support individual schools' budgetary and organisational planning.

3.3.4 For strategic planning purposes, **catchment area forecasts** are produced. These forecasts take full account of all pupils living within each primary school catchment area, and are not limited by the capacity at any school. These forecasts make no assumptions about which school pupils will go to; therefore they do not attempt to model the impact of parental preference. Experience has shown that parental preference can change dramatically over relatively short periods of time. The catchment forecasts also follow a trend-based approach, specifically:

- Numbers of 4 year olds living in each catchment and attending a school are forecast on the basis of the relationship between the numbers of children recorded as living in the catchment in the NHS GP Registration data and the numbers attending maintained schools and living in each area (as shown by the January school census) over the previous three years.
- Year-groups are assumed to progress through the school phases, within the same catchment area, adjusted for the average net gains and losses experienced within those areas over the past three years.

3.3.5 This approach provides a sound basis for ensuring that the over-riding statutory duty to provide a school place for all pupils who want one is met. It is particularly effective when considering not just capacity and demand for places at individual schools, but those within geographical areas, enabling effective utilisation of resources. Using this approach and not looking specifically at demand and capacity of individual schools also means it is possible to make allowances for parental preference.

3.3.6 The County Council is able, through data gathered during the admissions process to collate data about parental preference. This information, in combination with other information gathered, provides a means of assessing patterns of parental preference. A range of information is available through

the [Cambridgeshire Atlas](#) web tool, which can also be used to show where children are not attending their catchment school. Although patterns of parental preference, can and often do, change on a regular basis, it is important that due consideration is given to promoting choice during reviews of education provision.

- 3.3.7 Whilst accepting the rights of parents to express a preference for a school place, this is considered to be secondary to the council's duty to secure sufficient school places. This is especially important in terms of making efficient use of limited capital resources. However, where pressures are identified, due consideration is given to parental preference in determining solutions to providing additional capacity.

3.4 **Exceptions**

- 3.4.1 There are a limited number of instances where schools have shared or overlapping catchment areas. In these cases, the numbers of pupils in the catchment area are shared equally between both schools to ensure that demand for places are not double-counted where possible. Where the catchment area is shared across a number of schools, for example, Queen Emma primary school, in the south of Cambridge, to avoid generating discrepancies within the forecasts no pupils are allocated to the school. However, the capacity available at the school is accounted for in determining whether pressure on school places exists.
- 3.4.2 There are three church schools, St Alban's Catholic Primary, St Laurence Catholic Primary and St Bede's Inter-church Secondary School which do not have defined catchment areas. For these schools the approach outlined above for catchment areas shared with a number of schools is adopted. This ensures that the capacity of these schools is accounted for, but that pupils are not double counted.

3.5 **Demographic Changes**

- 3.5.1 One of the major sources of demographic pressures is from new housing developments. The scale and likely impact of housing growth within the County is assessed from each district council's¹ development plans, and specifically their Core Strategies and Site Specific Development Plans. It is important to emphasise that these Plans do not provide assurance that this level of development will occur, as housing development is driven by economic conditions and market forces. Likewise, these strategies do not preclude additional 'speculative' development being proposed. However, they provide the best information available on which to base planning of future education provision in relation to proposed development.

¹ Each district council is also the Local Planning Authority, overseeing the planning process for their geographical area.

- 3.5.2 Housing developments range in size from major development sites, often of 100+ homes, to smaller windfall developments which can be as small as 1-2 dwellings.²
- 3.5.3 Whilst windfall developments are not identified within them, most Core Strategies will include references to areas and circumstances under which such development may be welcomed.
- 3.5.4 As the scale of development is lower on windfall sites, the impact on demographic pressures from these sites is less than from major developments and can be incorporated within general forecasts. In contrast, major developments require specific forecasts, and often require additional provision to be made. However, as this can be over extended periods, it is important to understand the likely short and long-term impact of these developments to support strategic planning of future provision.
- 3.5.5 The scale and pace of development is assessed by the County Council's Strategic Planning Research and Monitoring Team, who prepare and publish an annual [development survey](#) of housing development across the county.

3.6 New Community Forecasts

- 3.6.1 All forecasting is an inexact process, heightened by the number of unknowns that exist in relation to future developments. While some key variables - such as dwelling size and tenure mix - can be identified, many – for example, the impact of place and design influencing the desirability of a development – cannot. Added to this is the need for infrastructure to evolve to meet the needs of the population as the development settles and matures.
- 3.6.2 To aid its forecasting for new housing developments, in 2009, the council adopted assumptions for the numbers and age-range of children likely to live in different types of housing. These assumptions are known as multipliers, the current figures are listed below as approved by the Children and Young Peoples Committee in September 2015:
- 20-30 pre-school aged pupils per 100 dwellings
 - 25-35 primary children per 100 dwellings
 - 18-25 secondary pupils per 100 dwellings

² Windfall housing is any residential development that is granted consent on land or buildings not specifically allocated for residential development within a Core Strategy or Local Plan. Typical examples of a windfall development include:

- Infill plots in settlements;
- Development on unexpected brownfield sites such as at a factory which suddenly closes down;
- Properties in people's gardens or the intensification of sites by demolishing one property and replacing it with several new ones; and
- Conversions of rural buildings to residential properties.

- 3.6.3 Underpinning the 'general multipliers' are detailed multipliers for different tenures and dwellings sizes. The full details of this methodology are outlined in a paper discussed and approved by the Children and Young Peoples Committee in September 2015:

<http://cambridgeshireinsight.org.uk/education/pupil-projections/child-yield-multipliers-new-developments>

- 3.6.4 The general multipliers, together with projections of the pace of housing delivery, enable the build-up of demand for school places to be modelled and planned at an early stage. As development proposals progress, the forecasts continue to evolve, as details of housing and tenure mix and pace of development become confirmed. These forecasts will be monitored alongside pupil numbers obtained from school census data and NHS GP Registrations, and revised forecasts are produced.

4.0 APPLYING THE FORECASTS

- 4.1 For the purposes of assessing the future demand for secondary education provision in the City, the modelling work referred to in this paper is underpinned by the **catchment area forecast**. As referred to in paragraph 3.3.4, these are considered to be the most appropriate forecasts for the purposes of strategic planning.
- 4.2 Using the catchment area forecasts provide the most appropriate recognition of the fact that historic trends do not necessarily provide the best predictor of future trends. This is especially true in the context of parental preference and pupil movement, where it would be expected that changes in Ofsted rating and outcomes, specifically exam performance, would have an impact over the period of these forecasts.
- 4.3 The catchment forecasts are provided for a 10 year period, up to 2025/6. For the period beyond 2025/6, to allow the model to cover the period of the emerging Local Plans, the average of the period 2020/21 – 2025/6 has been used to formulate a forecast. It is recognised that taking this approach makes these forecasts significantly less robust than those produced by the Council's Research Group. In particular, this approach assumes that the recent patterns of increased birth rate, migration and cohort change will continue.
- 4.4 It is the view of officers, that the changes in circumstances, specifically the:
- Level of infill / windfall housing development projected within the Local Plan period beyond the scope of the forecasts; and
 - Aspirations for continue housing development underpinned by both the City Deal and emerging Devolution agenda.

make this a reasonable assumption for the basis of identifying future demand. Making this assumption does reinforce the need to consider that these projections are forecasts.

4.5 Adopting the catchment area forecasts as the main data input for the modelling work does not discount the need to consider how patterns of parental preference influence the growth in pressure on existing school places. For example:

- St Bede's does not operate a catchment area, attracting pupils from a wider area than Cambridge City. Whilst there may be a reduction in the number of pupils who secure a place at the school from outside the City, it is unlikely that this will cease.
- Impington Village College currently admits a large number of pupils from outside its catchment area. Primarily from the north of Cambridge. This reflects a low level of demand from within its catchment as well as historic parental perceptions of other schools. There is a need to consider how far, if at all, this pattern of parental preference may be sustainable in the future, especially in the context of the demographic changes experienced since 2002.

5.0 INCLUSIONS AND EXCLUSIONS

5.1 Through lengthy discussions with a range of stakeholders a number of potential variables which need to be considered within the modelling of future demand. These variables include:

- The impact of new models of education provision across the City, notably an increase in Key Stage 4 provision at the University Training College (UTC) and Cambridge Regional College (CRC);
- The impact of infill housing development across the City, as proposed within the City Council's emerging Local Plan;
- Changing patterns and pace of development across the major urban extensions around the City;
- The impact of the opening of new secondary schools planned as part of these urban extensions;
- Changes in birth rate and migration patterns;

5.2 Consideration has been given to how to best reflect these variables within the assessment of future demand. The approach identified in each case is summarised in the table 2 below:

6.0 FORECASTING FUTURE DEMAND

6.1 For the purpose of forecasting demand for school places, the Council's main focus is on ensuring that there are sufficient places to meet demand in year 7. This is to ensure that the Council is in a position where it can meet its statutory duty to secure sufficient school places.

6.2 It is accepted that some schools, especially in the short-term, may have additional capacity as a result of smaller cohorts in some year groups. However, in the medium-to-long term, as this analysis shows, this would

cease to be the case. Likewise, some schools may find that they have additional capacity as a result of the increase in KS4 provision linked to the CRC and UTC provision. Reliance on this capacity as a means of securing additional places in KS3 would be risky for the Council as there can be no assurances that this provision would become available, or that it would be in the right place to meet demand.

- 6.3 The baseline considered for analysing the impact of growing demand against the current capacity of existing schools. The assumed capacity of each school is set out below:

Table 2: Current School Admission numbers for baseline modelling

School	PAN	Capacity (assumed as 5 x PAN)
Chesterton	210 ³	1050
Coleridge	120 ⁴	600
Netherhall	180	900
North Cambridge Academy	150 ⁵	750
Parkside	120	600
Trumpington	150	750
St Bede's	180	900

6.4 Current demand

- 6.4.1 These forecasts provide the basis for assessing the demand for future secondary education provision in Cambridge. Taking the catchment level data and comparing this with the identified capacity of each catchment school provides an overview of future demand. The charts in section 9 provide an indication of how a simple analysis of in-catchment demand would look across the City.
- 6.4.2 Looking at the whole City in this way does give an indication of overall pressures. However, considering demand for a specific school(s) in isolation is a challenging proposition as it ignores the inter-relationships and dependencies across the City.
- 6.4.3 Simply relying on the catchment level data is, therefore, provides for a blunt analysis of what should be considered a rather nuanced set of data. Specifically, this analysis does not allow for the impact of capacity and parental preference for other schools to be taken into account. This is

³ It is recognised that Chesterton's PAN is currently published as 180. However, in a number of recent discussions with officers, the Headteacher and Chair of Governors have indicated that they envisage continuing to offer 210 places in Year 7.

⁴ Recent capital work at the school has created capacity for an additional 1FE. This increase has not yet been implemented, but the potential for this is noted in the analysis of the forecast pressures.

⁵ The school's PAN is currently published as 132. However, as part of the recent redevelopment the school was built to have capacity for 750 pupils.

especially important in considering the impact of the places available at St Bede's.

- 6.4.4 In developing this analysis into a more robust model of how patterns of demand may change, consideration needs to be given to the inter-relationships between schools, including patterns of parental preference. This can be achieved through undertaking a more detailed analysis of the catchment level forecasts and the individual school PLASC returns, to identify a trend of demand for places at each school. This work allows for trends ranging from 1-5 years to be identified.
- 6.4.5 Officers consider that using a five-year trend could mis-represent patterns of demand. This reflects in large part the potential distortion of a number of key drivers of parental preference, including:
- The expansion of Acadamisation of schools and changes to school sponsors;
 - Changes of school Ofsted ratings; and
 - Variations in exam result performance.
- 6.4.6 At the same time, reliance on a single year of data would be expected to have the same outcome of distorting the data. It is, therefore, the view of officers that using a three-year trend for analysing future patterns of demand represents a suitable compromise. This does mean that, as with any forecast model, there is a need to consider the outcomes, not in absolute terms, but as a best estimate based on the assumptions made.
- 6.4.7 The one exception to taking this assumption is in analysing the demand for Trumpington Community College. This school, which serves the Cambridge Southern Fringe developments only opened in September 2015. This means that within the model, it is only possible to provide any analysis of demand for the school based on a single year trend.
- 6.4.8 Taking a different period to analysing the demand for places at Trumpington to other schools will inevitably have an impact on the overall conclusions. However, with the historic patterns of parental preference from Trumpington having been overwhelmingly for Sawston Village College, the impact of this approach is considered to be minimal, allowing this to be considered a reasonable approach for assessing demand for the new school.

6.5 Impact of major housing developments

- 6.5.1 The other aspect of forecasting the future demand for secondary school places is an assessment of the major housing developments planned around the City.
- 6.5.2 With the level of uncertainty and change which, has occurred, and remains around some of these developments, a range of scenarios have been identified to help reflect the potential impact of these developments. In all

cases these reflect the housing trajectories, provided by developers within the City and South Cambridgeshire Annual Monitoring Reports 2015-16 (AMR).

- 6.5.3 By grouping these developments into quadrants, officers have identified scenarios for each quadrant, section 10, table 5, for projecting the additional demand for secondary school places. These scenarios provide for a range of increased demand, which allows for the potential impact of development to be accounted for across the City. The inter-relationship between housing development sites and the ability to secure new school sites are reflected in the variations identified for opening new schools, shown in section 10, table 6.

6.6 **Assessment of likely development scenarios**

- 6.6.1 Officers have identified the most likely mix of development scenarios for inclusion within the modelling work from those set out in the tables in section 10. This assumption is based on experience of housing developments, the status of the different development sites and proposals and information garnered through discussions with developers and planners.

6.7 **Northwest Fringe Assumptions**

- 6.7.1 In terms of the northwest fringe developments officers consider that scenario 2 in table 5 represents the most appropriate assumption for housing delivery. This is based on:
- The development of the Northwest Cambridge site is underway, with the first 700 new homes expected to be released in mid-2017. With the site already under construction there is no basis for assuming an alternative development timescale from that set out in the AMR.
 - Darwin Green 1 has outline planning consent, with full approval for the main infrastructure works, local centre and first phase of residential development. Although the planning consent has yet to be implemented, the level of progress suggests that it is not unreasonable for there to be occupations from 2019, as indicated in the AMR.
 - There is no planning application for the development of the Darwin Green 2 site. Additionally, it has been a number of years since the developers and local authorities engaged in pre-application discussions. It is the view of officers that, in the absence of a planning application, let alone a consent, the prospect of development in line with the AMR timescales is not realistic. Given the lack of detailed discussions, it is the view of officers that a realistic expectation for this site would be for a significant delay in the delivery of this development.

6.7.2 In line with the assumed pattern of housing delivery, it is considered reasonable to assume that the new school could be opened by 2023 and would open as a 900 place (6FE) school, scenario 1 in table 6. This assumes:

- a two year construction period once the site has become available. Whilst there may be potential for the site to be secured at an earlier point, there is no certainty this could be achieved. Therefore, for the purposes of planning provision, the triggers secured within the S106 agreement represent the most realistic timescales
- assumed that, in the interests of minimising disruption and securing best value, the Council will opt to forward fund elements of the project. This would allow the school to be built as a 900 place (6FE) school from the outset. This would need to be approved separately by Members as part of a future review of the Council's Capital Programme.

6.7.3 In reaching this conclusion, officers are mindful of the large numbers of false starts which have been indicated in relation to development of the Darwin Green 1 development. This could lead to there being further delays in the implementation of the development. If this were to occur, whilst there would be no additional demand generated, the Council would not be in a position to secure the site identified for the new secondary school.

6.7.4 The lack of certainty available, combined with the fact development on the Northwest site is underway does highlight the need to secure flexibility to respond to any future delays in the delivery of the new school.

6.8 **East of Cambridge**

6.8.1 In terms of the east of Cambridge developments officers consider that scenario 4 in table 5 represents the most appropriate assumption for housing delivery. This is based on:

- Recent discussions with the Wing master developer who have indicated that the final programme for delivery has yet to be determined. Any decisions and clarity about the programme will depend on the choice of housing developer. Whilst there remains the possibility that the site could be underway and deliver homes by 2019, as set out in the AMR, the current uncertainty makes this timetable increasingly challenging. On this basis, officers consider that assuming a delay of up to two years is appropriate.
- Pre-application discussions on both the North of Cherry Hinton and Wort's Causeway sites is at an early stage. A planning application has yet to be submitted on either site. There also may remain challenges in terms of securing the allocation through the Local

Plan allocation. There may also be delays arising from securing a planning consent and undertaking key infrastructure works. Considering these factors, it is the view of officers that assuming a delay of up to 5-years from the AMR housing trajectories is reasonable.

6.9.2 In line with the assumptions for the housing development, it is the view of officers that the earliest that a new secondary school could be delivered on the North of Cherry Hinton site would be 2023. For the purposes of modelling demand and capacity, this is scenario 4 in table 6. This assumes:

- That the North of Cherry Hinton site is allocated through the Local Plan and that the development master plan and infrastructure enables early delivery of the school.
- That the Council undertakes delivery of the new school in a single construction phase. This would require Basic Need funding to be allocated alongside forward funding of S106 contributions secured against the major housing development sites.

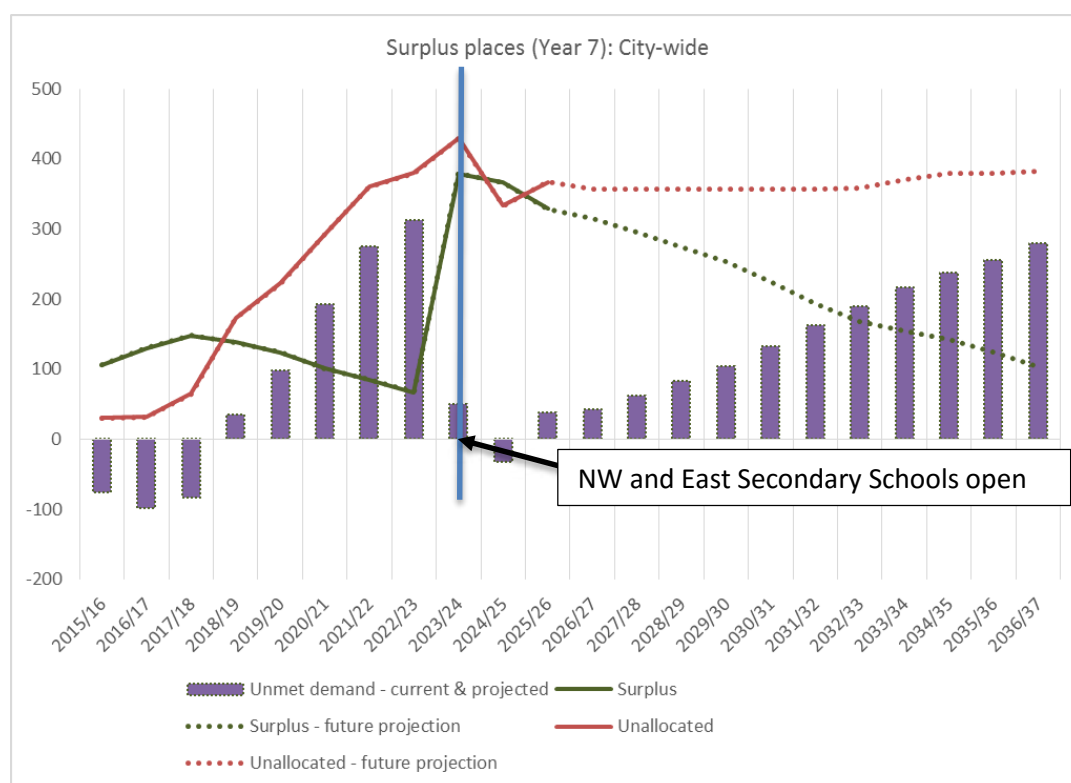
6.9.3 In making these assumptions it is important to highlight the lack of certainty about the timescales for the developments in the east of the City. Discussions between housing developers and the local authorities are at an early stage on these sites. Although there is a positive commitment from all parties to bring these development sites forward, there are many issues which could further delay or prevent this being achieved. This is illustrated by the lengthy discussions around the Wing housing development which have taken a number of year to bring to a resolution.

7.0 COMMENTARY ON ANALYSIS

7.1 City-wide projections

7.1.1 Taking the assumptions made about the current demand and patterns of preference alongside those about the lack of development and timescales for opening new schools it is possible to model the demand for places in Year 7 in the coming years. Chart 1 below provides a projection of the capacity and pressure on places across the City, and including IVC.

Chart 1: Projection of capacity and pressure for Year 7 places across Cambridge



- 7.1.2 As the chart illustrates, across the City currently, there are projected to be surplus places in Year 7. There will be a small deficit in capacity in 2018/9, which is forecast to increase to around 3FE in 2019/20. From this point on, it is projected that the demand for year 7 places will continue to exceed the currently available capacity. This forecast surplus provision reflects recent experience, with a number of schools, specifically having a large number of surplus places.
- 7.1.3 Within these assumptions, the two new schools would open in September 2023 and, if built as a single phase, would add an additional 13FE. Whilst this would be projected to reduce the shortfall in capacity, there could continue to be a shortage in provision which may require additional capacity to be secured.
- 7.1.4 In the period that the capacity and projected demand for year 7 places is closely aligned, these cohorts would be close to capacity as they aged through the school. This would be a particular concern, especially in the new housing development areas, as it would be expected that pupils would moving into the area across all cohorts. With such limited capacity this could lead to challenges in continuing to meet the growth in demand for mid-phase movements into the City.
- 7.1.5 Beyond 2025/6, there could potentially be a further increase in demand for school places, driven mostly by the continued increase in demand arising from the urban extensions. This assumes that the infill development and birth rate / migration across the rest of the City remains reasonable

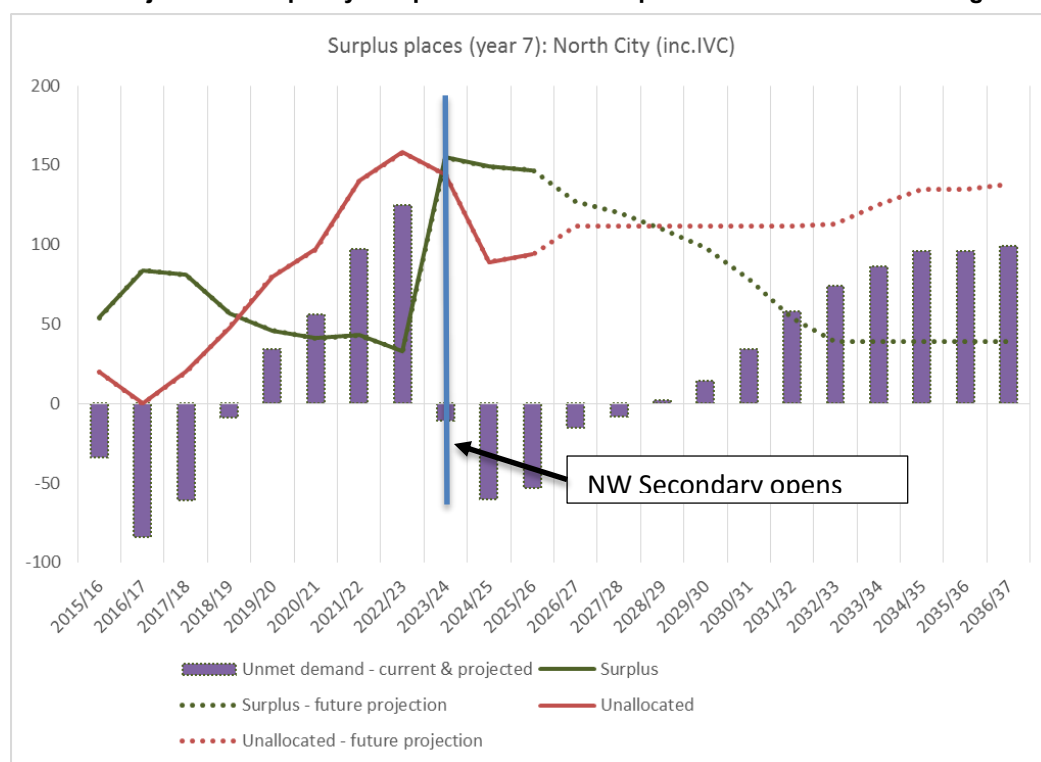
constant. If this were to fall then the scale of this additional shortfall could decrease.

- 7,1,6 The additional charts provided in section 12, show that this pattern is broadly repeated for the other trend based analysis of demand for the current schools. No detailed commentary is offered, although the consistency of the patterns are noted.

7.2 North of Cambridge

- 7.2.1 If the position for schools in the north of Cambridge, Chesterton, NCA and IVC, are considered in isolation then a slightly different picture emerges. This is illustrated in chart 2 below.

Chart 2: Projection of capacity and pressure for Year 7 places across north Cambridge



- 7.2.2 This analysis suggests that the shortfall in provision of year 7 places across these three schools is likely to be relatively low. In many ways this is not unexpected, given the difference in cohort size in schools north, and south of the river.

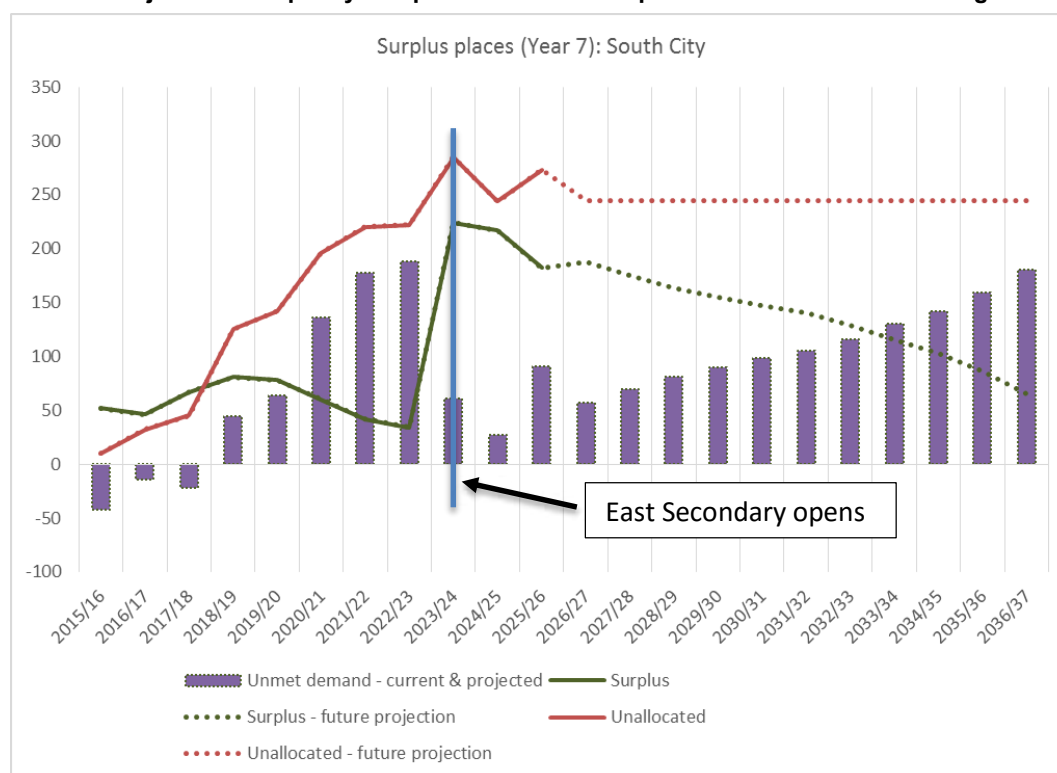
- 7.2.3 Between 2019/20 and 2020/21 this could be between 1FE and 2FE, rising to around 4FE by 2022/23. If the new northwest secondary were to open in 2023, as predicted, as a 6FE school, this would be expected to generate sufficient capacity until 2028/9, with the potential for up to 2FE surplus capacity in some years. At this point, with the demand for secondary school places from the new housing developments growing, the demand for places would begin to exceed the available capacity.

- 7.2.4 Based on current patterns of parental preference, it would be expected that, in the short-term, the majority of the surplus provision would be retained in one school, NCA. This is illustrated in the individual school projection charts, included in section 14. It would be hoped that the recent work which CMAT have undertaken to improve outcomes at the school, combined with the recent redevelopment of the site, there might be a shift in parental preference. This is, however, something which cannot be modelled with any certainty.

7.3 South of Cambridge

- 7.3.1 Chart 3 below provides an overview of the projected position for the schools south of the river. It should be noted that this analysis includes St Bede's.

Chart 3: Projection of capacity and pressure for Year 7 places across south Cambridge



- 7.3.2 This analysis suggests that there would be a significant shortfall in provision across the south of the City. This could be 2FE in 2019/20 and could increase to around 6FE in 2022/3. If the new school in the East of the City were to open as predicted this would meet this shortfall. However, as the chart shows, once the additional demand which would be anticipated from the major housing developments increases there would rapidly be a return to having a shortfall in provision.
- 7.3.3 This analysis does not include the addition of a 1FE increase in capacity at Coleridge. Whilst this may go some way to meeting the initial shortfall in provision projected in 2019/20, it is unlikely that this would fully meet the demand for places.

7.4 North / South City divide

- 7.4.1 The north / south of the river divide exists primarily to aid planning of provision of primary aged pupils. For families of primary aged pupils, it is considered that the river, and limited crossing points is a significant barrier to movement. As the demographic analysis shows, this is less of a barrier for secondary aged pupils – especially given that it would be anticipated that these pupils would be more self-sufficient in terms of travel to school.
- 7.4.2 More detailed analysis of the breakdown of individual school pressures, using the charts in section 14, illustrates the need to consider the growth in demand as a City-wide issue. Chart 21 in section 14, shows the growth in demand within the Parkside catchment area. This suggests that the demand for places within the catchment, would be expected to exceed the school's 4FE capacity.
- 7.4.3 Analysis of the distances between the secondary schools in the City (measured school to school as the crow flies), in table 4 below, shows that that Chesterton is the nearest alternative school, 1 mile away. Coleridge is second nearest, at 1.3 miles, though as chart 19, section 14, suggests that the school would also be over capacity. NCA is the next nearest, 1.5 miles away.

Table 4: Comparison of distances between City secondary schools (Miles)

School	Chesterton	Coleridge	Netherhall	NCA	Parkside	St Bede's	Trump
Chesterton		2.2	3.2	0.7	1	2.6	2.8
Coleridge	2.2		1	2.4	1.3	0.5	1.7
Netherhall	3.2	1		3.4	2.2	0.7	1.9
NCA	0.7	2.4	3.4		1.5	2.8	3.4
Parkside	1	1.3	2.2	1.5		1.7	1.9
St Bede's	2.6	0.5	0.7	2.8	1.7		2
Trump	2.8	1.7	1.9	3.4	1.9	2	

8.0 CONCLUSION

- 8.1 This analysis of future demand for secondary school places across the City suggests that there is both an immediate, and longer-term requirement to increase capacity across the City.
- 8.2 It is likely that the new schools proposed for the northwest and east of the City will meet a significant proportion of the demand for additional places. However, the delivery of these schools is very reliant on the pace of the housing developments with which they are associated. It is possible, therefore, that there could be delays in these schools being delivered.
- 8.3 Moreover, the analysis suggests that there is likely to be a significant shortfall in provision across the City, prior to the potential delivery of these new schools. This would require additional capacity to be secured with the

existing schools in order to meet this more immediate demand for provision.

- 8.4 Taking a whole view of the position across the whole City, the majority of the demand for additional capacity can be linked to south of Cambridge. However, a significant proportion of this pressure is within the Parkside catchment area. Geographically, the schools in the north of Cambridge are likely to be the nearest alternative schools for these catchment areas.
- 8.5 Given the lack of flexibility at schools in the south of the City, especially at Parkside; taking a whole City perspective of the shortfall in demand, and the geographical spread of pressures, providing additional capacity in north of Cambridge may provide the most appropriate mitigation for the immediate growth in demand.
- 8.6 A final consideration is the fact that these projections suggest that, although there may be a number of years where surplus provision exists, in reality that the new schools would lead to there being a balance between demand for places and capacity. This would suggest that there would be limited flexibility within these cohorts to facilitate increases in mid-year admissions. These would be expected in the context of increasing demand from the major urban extensions.
- 8.7 As well as increasing the challenges faced by the Council in meeting its statutory duty, this approach and lack of places could undermine the development of community cohesion within these new communities. Furthermore, if these schools end up being used to meet existing demand and pupils from the new communities being unable to secure a school place could lead to challenges from the developers.

9.0 CATCHMENT LEVEL DEMAND

Chart 4: Chesterton catchment demand and PAN comparison

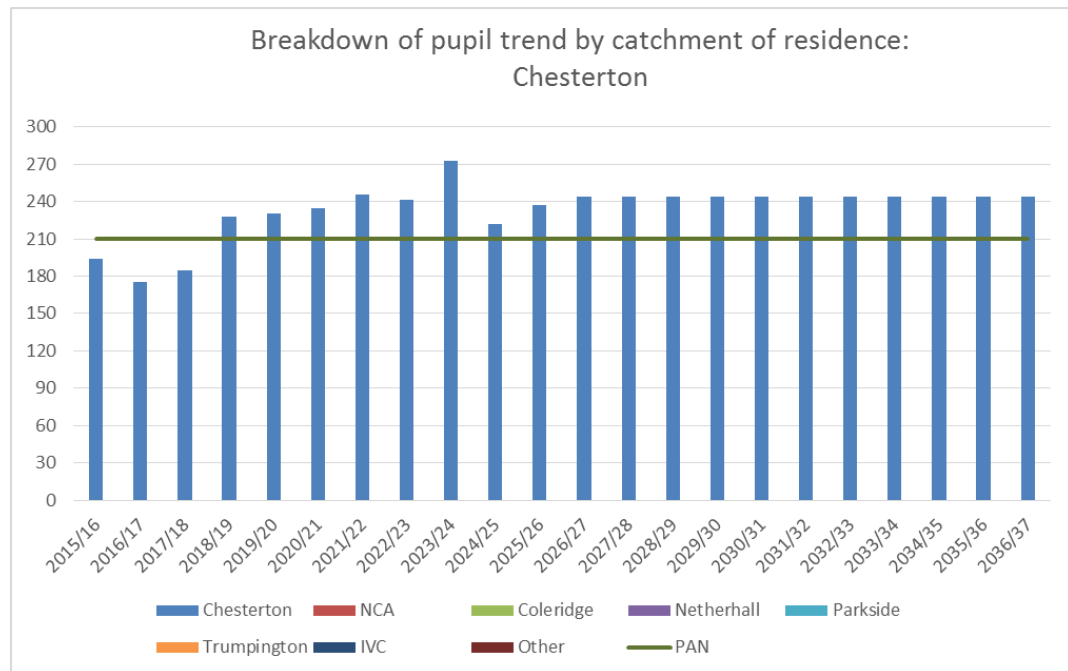


Chart 5: North Cambridge Academy catchment demand and PAN comparison

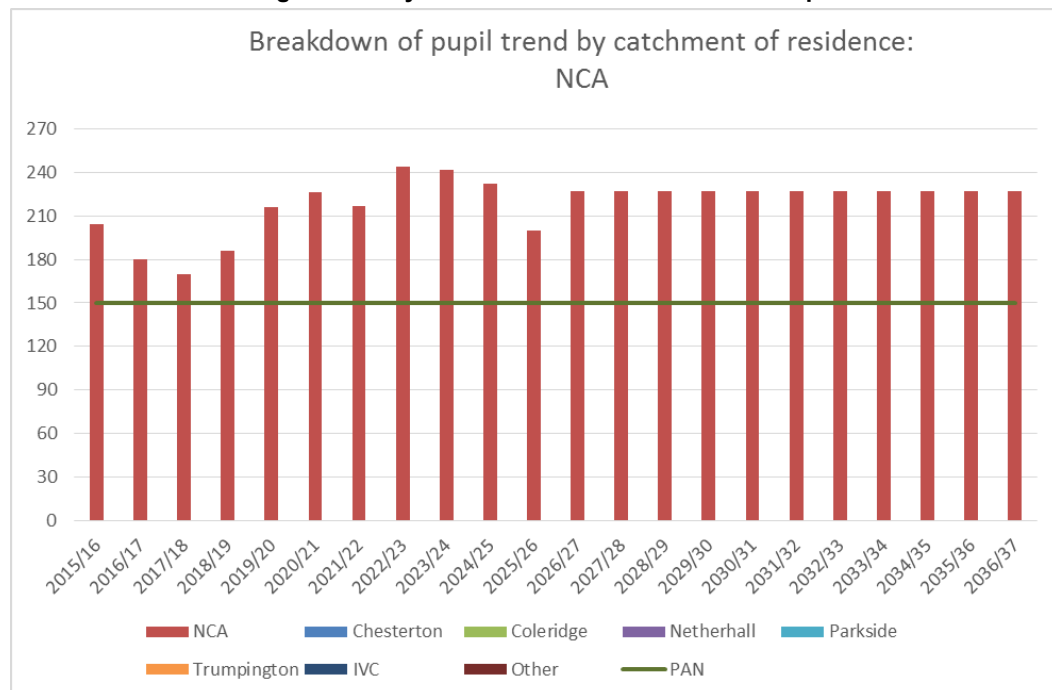


Chart 6: Coleridge catchment demand and PAN comparison

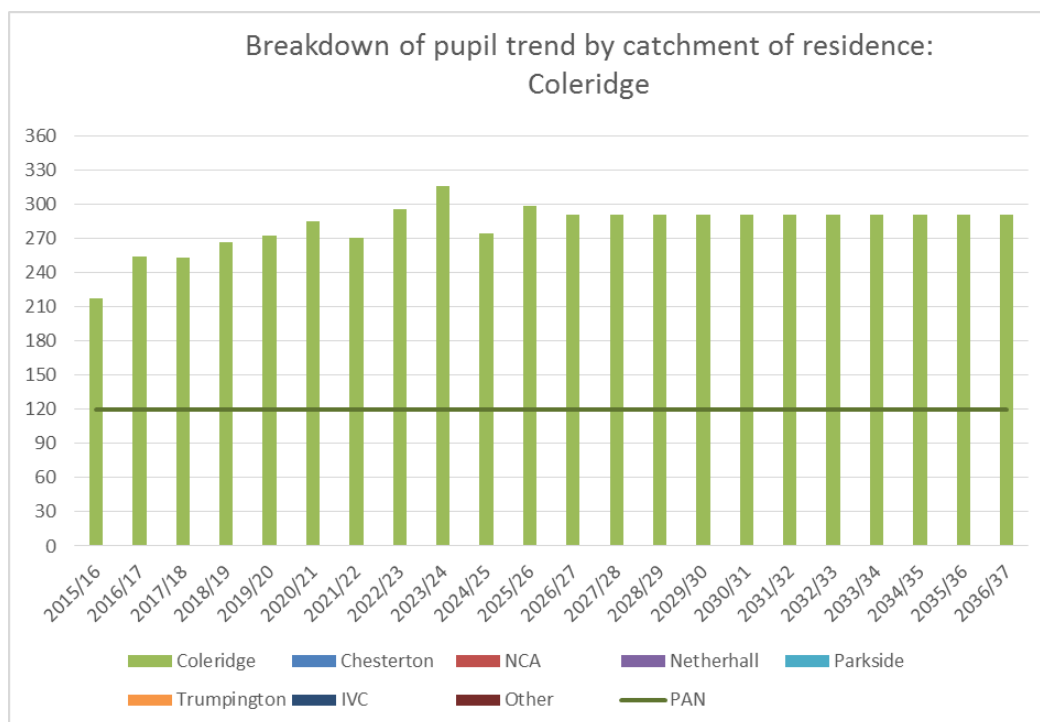


Chart 7: Netherhall catchment demand and PAN comparison

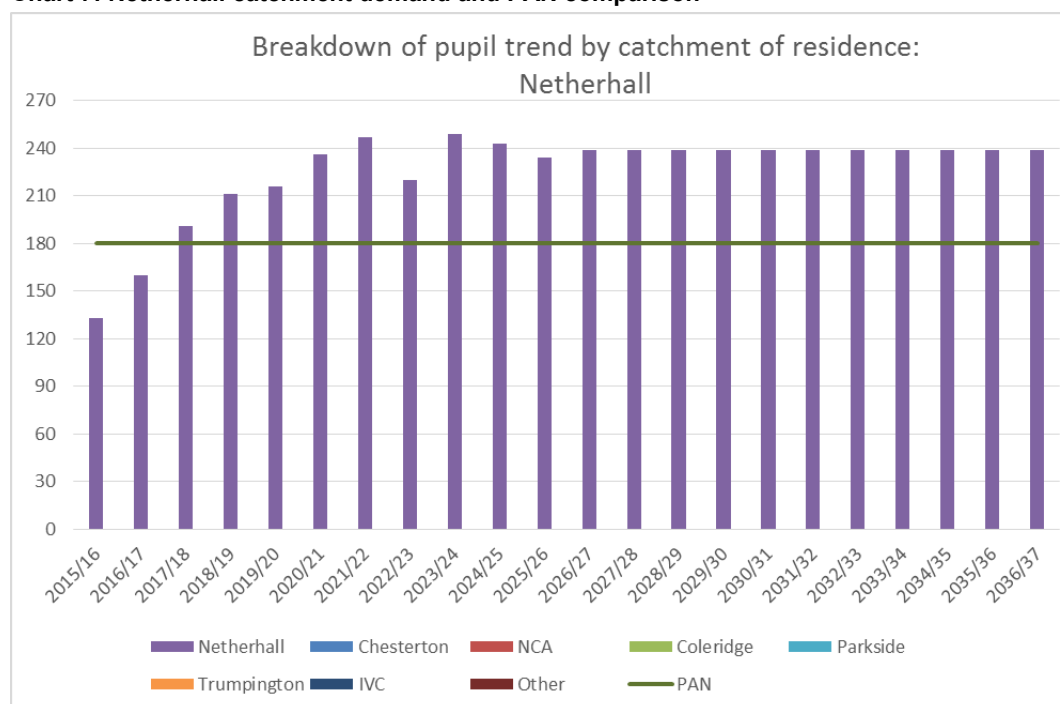


Chart 8: Parkside catchment demand and PAN comparison

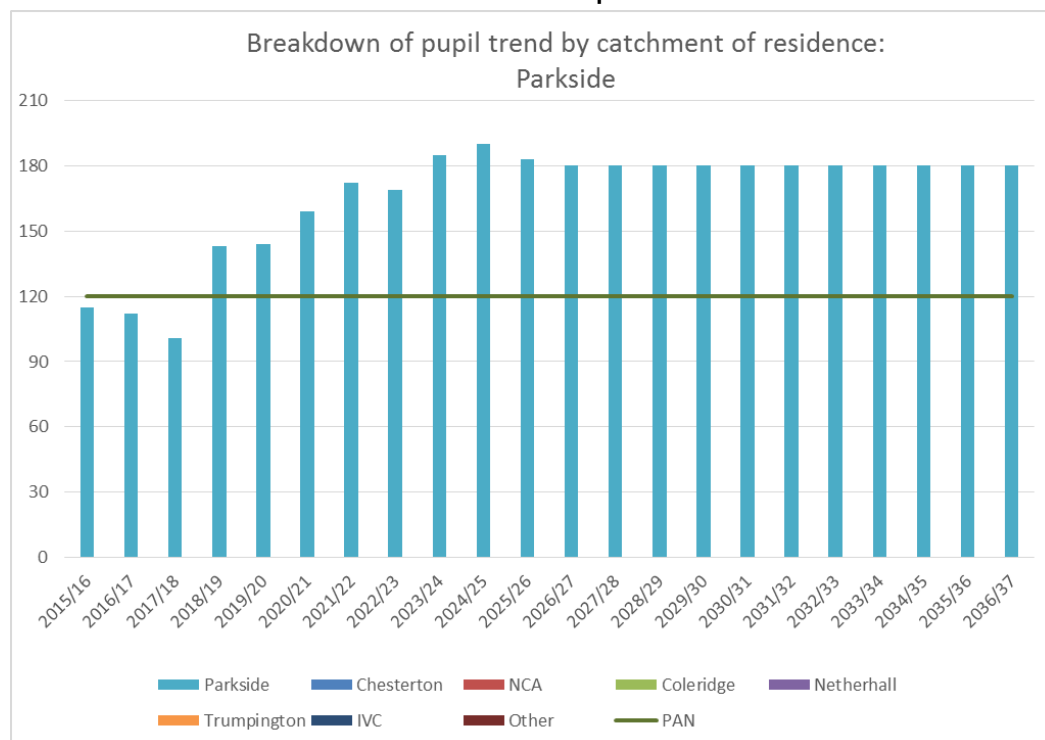
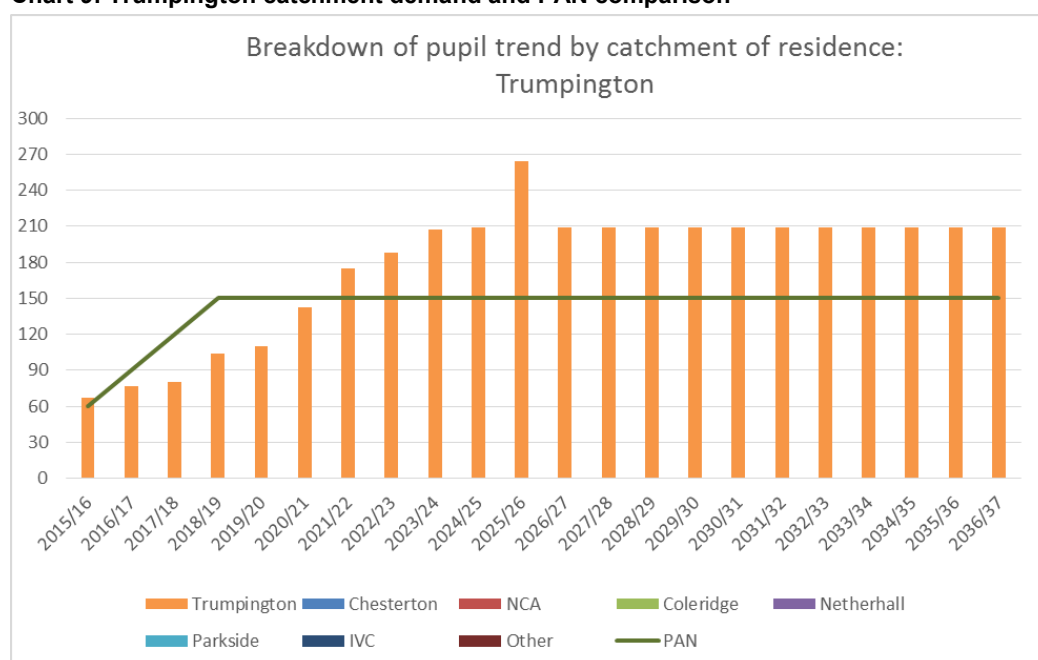
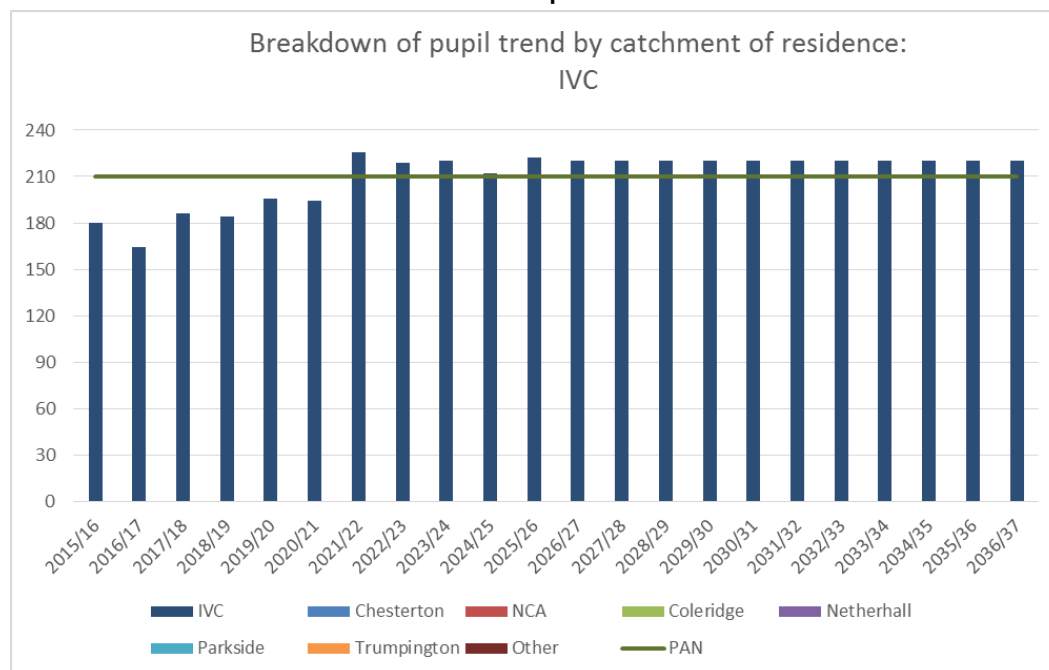


Chart 9: Trumpington catchment demand and PAN comparison



- It should be noted that the pattern of growth in the Trumpington catchment area will distort the future projections beyond 2026/7

Chart 10: IVC catchment demand and PAN comparison



10.0 CONSIDERATION OF VARIABLE WITHIN MODELLING WORK

Table 2: Approach to incorporating different variables within modelling future demand

Variable	Approach and justification
Changing pattern of education provision	<p>Having given consideration to the opening of the UTC and CRC provision officers are of the view that there is no basis including the impact of these changes within the modelling work. The main reasons for this view are:</p> <ul style="list-style-type: none"> • Both provision only caters for KS4 (years 10 and 11), although it is noted that the UTC is consulting on extending the age range, whilst keeping the same number of places, to include year 9. This means that school places would still need to be identified for years 7, 8 and 9, regardless of places being taken up at either provision; • The two provisions have different characteristics, which make forecasting the likely implications with the model very challenging. <ul style="list-style-type: none"> ○ Both provisions have an undefined catchment and, due to the very specific nature of the curriculum / offer, it would be reasonable to expect pupils seeking a place at either provision to come from a wider area ○ CRC has an undefined admission criteria, including a fixed admission number. ○ The UTC's curriculum is very tailored and specific and may not be attractive for all pupils. This could lead to the geographic spread of applications varying significantly from year to year. <p>The Schools Admission Code prevents places being taken away from pupils. Given this, and the points raised above, it is unclear how any 'surplus capacity' in other City schools could realistically be taken into account.</p>
Impact of infill housing development	<p>The local plan identifies the potential for significant levels of infill and windfall housing developments. However, trying to identify a clear forecast of demand arising from these sites is challenging, particularly because of the lack of certainty about the:</p> <ul style="list-style-type: none"> • timing of these development sites coming forward within the local plan period; and • housing / tenure mixes which will be delivered across each site. <p>The local plan also allows for potential windfall development, on sites not currently allocated. Whilst these developments are likely to be much smaller in nature, they would undoubtedly have an impact on demand for secondary provision.</p>

	<p>It is the view of officers, as outlined in paragraph x above, that there is no need to make a specific change to the modelling work to account for this type of development. The impact of these developments are assumed within the approach taken for forecasting potential demand beyond the period of the catchment level forecasts.</p>
<p>Changing patterns and pace of development the urban extension sites</p>	<p>It is recognised that reflecting the additional demand arising from the major urban extensions is a significant challenge. There have, since the initial allocation of these site as part of the 2005 Cambridgeshire and Peterborough Structure plan, been significant changes to the pattern and pace of these developments coming forward.</p> <p>The mitigations identified in the 2007 Review of Secondary Education provision were based on assumptions and information available from developers at the time. Based on these assumptions, the majority of the housing developments would have been well advanced, if not completed, by 2016. However, this does not reflect the current position.</p>
<p>Impact of new secondary schools opening within the urban extensions</p>	<p>It is accepted that there is a need to account for the additional secondary school capacity which will be provided by the new schools proposed within the urban extensions, as identified within the 2007 Review and subsequent negotiations on planning applications.</p> <p>There are a number of factors which need to be considered as part of modelling the impact of these schools, including:</p> <ul style="list-style-type: none"> • the schools are planned to open part way through each development. This will mean that: <ul style="list-style-type: none"> ○ they are likely to have greater capacity than the demand than has been generated by the development at that point; ○ the demand for places within each cohort is likely to continue to grow as the developments progress. ○ If all schools are at capacity in year 7, there would be limited flexibility to accommodate further cohort changes, necessitating the need to secure appropriate flexibility across all schools. • the schools are closely linked to the pace of development on the specific site they are located. Delays and changes to the pace of development of these sites would have an impact on the ability to secure the school sites.

	<ul style="list-style-type: none"> • there are multiple development sites within each quadrant of development. These sites are independent of each other and demand for additional capacity may emerge in advance of the new schools opening. <p>In order to accommodate the different scenarios which may arise in each case, a number of different scenarios have been identified for each of the new schools proposed. These allow for the impact of changes to the opening timescales and size of schools to be modelled. These are set out in section 11, table 6. Section 6 includes an analysis by officers of the likely most likely scenario in each case.</p>
Changes in birth rate and migration patterns	<p>The current catchment level demographic forecasts reflect recent birth and GP registration data. Beyond 2025/6 there is no information actual cohort size on which to base a robust forecast.</p> <p>As set out in paragraph 4.3, officers have assumed an average of the past five years. This is based on the continued level of housing development, specifically infill housing development, as well as assumptions about future growth, under pinned by the City Deal and Devolution agendas.</p> <p>If there is a significant shift in demographic patterns this approach could end up being either an under or over estimate. This underpins the need to ensure that the approach to securing sufficient capacity allows for further expansion, if required.</p>

11.0 SCENARIOS FOR DELIVERY OF NEW HOUSING DEVELOPMENTS AND ASSOCIATED SECONDARY SCHOOLS

Table 5: New housing development scenarios

Scenario	Outline	Assumptions / Rationale
<i>Northwest Fringe</i>		
Baseline	NWC – as AMR DG1 – as AMR DG2 – as AMR	AMR trajectories provided by developers. AMRs are public documents setting out the expectations for housing land supply.
1	NWC – as AMR DG1 – as AMR DG2 – 2-year delay	Reflects planning consents for NWC and DG1 granted but not for DG2. Assumption that planning application submitted imminently for DG2.
2	NWC – as AMR DG1 – as AMR DG2 – 5-year delay	Reflects planning consents for NWC and DG1 granted but not for DG2. Assumption that delay in planning application for DG2 being submitted, based on lack of pre-application discussions with developer.
3	NWC – as AMR DG1 – 2-year delay DG2 – 2-year delay	Reflects development has commenced on NWC site. No planning consent for DG2 but assumes application being submitted imminently.
4	NWC – as AMR DG1 – 2-year delay DG2 – 5-year delay	Reflects development has commenced on NWC site. Planning consent granted for DG1, but developer has yet to implement consent. Assumption that delay in planning application for DG2 being submitted, based on lack of pre-application discussions with developer.
<i>East of Cambridge</i>		
Baseline	Wing – as AMR NCH – as AMR WCW – as AMR	AMR trajectories provided by developers. AMRs are public documents setting out the expectations for housing land supply.

1	Wing – as AMR NCH – 2-year delay WCW – 2-year delay	Wing has planning consent, but has not yet been implemented. Other sites have not yet submitted planning applications, assumes applications will be submitted imminently.	
2	Wing – as AMR NCH – 5-year delay WCW – 5-year delay	Wing has planning consent, but has not yet been implemented. Other sites have not yet submitted planning applications, assumes a delay in applications being submitted lined to Local Plan delays.	
3	Wing – 2-year delay NCH – 2-year delay WCW – 2-year delay	Wing has planning consent, but developer delays the implementation Other sites have not yet submitted planning applications, assumes a delay in applications being submitted lined to Local Plan delays.	
4	Wing – 2-year delay NCH – 5-year delay WCW – 5-year delay	Wing has planning consent, but developer delays the implementation. Other sites have not yet submitted planning applications, assumes a delay in applications being submitted lined to Local Plan delays.	

Table 6: New secondary school development scenarios

Scenario	Outline	Assumptions / Rationale
Northwest Cambridge		
1	School opens in 2023 with a PAN of 180	School site only becomes available on the occupation of the 450 th dwelling across the DG1 and DG2 developments. AMR housing trajectories suggest that 2021 is the earliest this will be reached. Opening date allows for a 2 year construction period. Assumes the Council forward funds construction in a single phase, especially if DG2 not yet implemented.
2	School opens in 2023 with a PAN of 120	School site only becomes available on the occupation of the 450 th dwelling across the DG1 and DG2 developments. AMR housing trajectories suggest that 2021 is the earliest this will be reached. Opening date allows for a 2 year construction period. Assumes the Council does not take risk of forward funding, especially if DG2 not yet implemented.
3	School opens in 2025 with a PAN of 180	School site only becomes available on the occupation of the 450 th dwelling across the DG1 and DG2 developments. AMR housing trajectories suggest that 2023 is the earliest this will be reached if DG1 is delayed by 2 years. Opening date allows for a 2 year construction period. Assumes the Council forward funds construction in a single phase, especially if DG2 not yet implemented.
4	School opens in 2025 with a PAN of 120	School site only becomes available on the occupation of the 450 th dwelling across the DG1 and DG2 developments. AMR housing trajectories suggest that 2023 is the earliest this will be reached if DG1 is delayed by 2 years. Opening date allows for a 2 year construction period. Assumes the Council does not take risk of forward funding, especially if DG2 not yet implemented.
5	School opens beyond current forecast period	School site only becomes available on the occupation of the 450 th dwelling across the DG1 and DG2 developments. Assumes significant delays in the implementation of the planning consent across the DG1 and DG2 development sites.

East of Cambridge		
1	School opens in 2021 with a PAN of 150	Assumes that the proposed site is allocated through the Local Plan process and that the NCH developer is prepared to allow access to the site ahead of housing development progressing. Would require the Council to identify forward funding for additional infrastructure (to be recouped from developer).
2	School opens in 2021 with a PAN of 210	Assumes that the proposed site is allocated through the Local Plan process and that the NCH developer is prepared to allow access to the site ahead of housing development progressing. Would require the Council to identify forward funding for additional infrastructure (to be recouped from developer). Assumes a single phase of development with Council forward funding additional capacity ahead of housing development.
3	School opens in 2023 with a PAN of 150	Assumes that the site only becomes accessible with commencement of development NCH once site allocated through the Local Plan process. Also assumes rapid progress of NCH housing development proposals. Would require the Council to identify forward funding for additional infrastructure (to be recouped from developer).
4	School opens in 2023 with a PAN of 210	Assumes that the site only becomes accessible with commencement of development NCH once site allocated through the Local Plan process. Also assumes rapid progress of NCH housing development proposals. Would require the Council to identify forward funding for additional infrastructure (to be recouped from developer). Assumes a single phase of development with Council forward funding additional capacity ahead of housing development.
5	School opens beyond current forecast period	Assumes that the site is delayed in coming forward for development and that there is no prospect of securing site ahead of wider development proposals.

13.0 ALTERNATIVE TREND BASED MODELLING

Chart 11: City-wide demand and pressures based on a 1-year trend

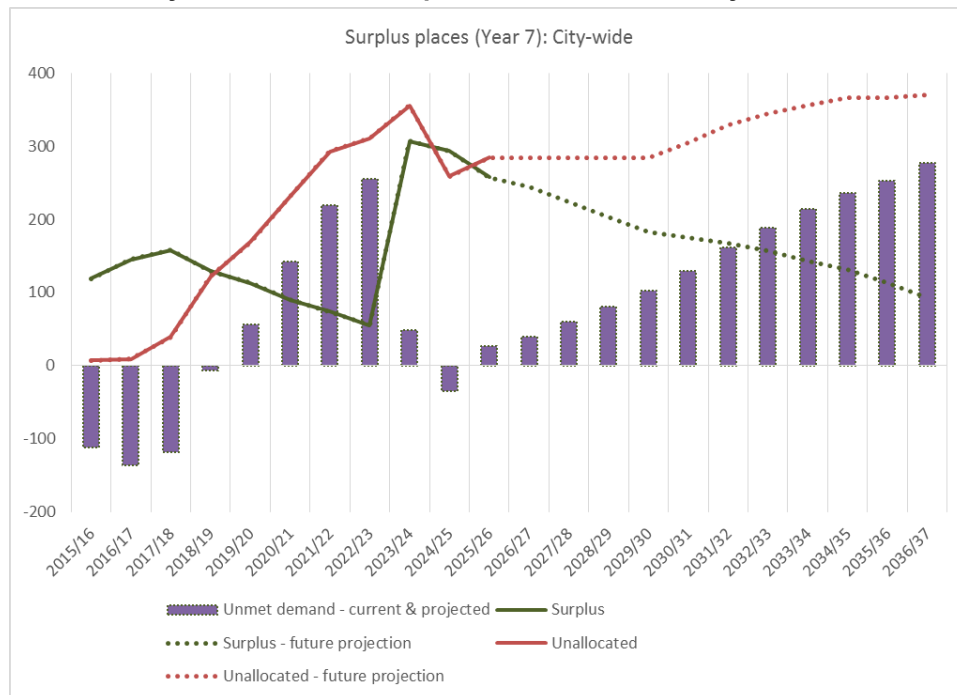


Chart 12: North City demand and pressures based on a 1-year trend

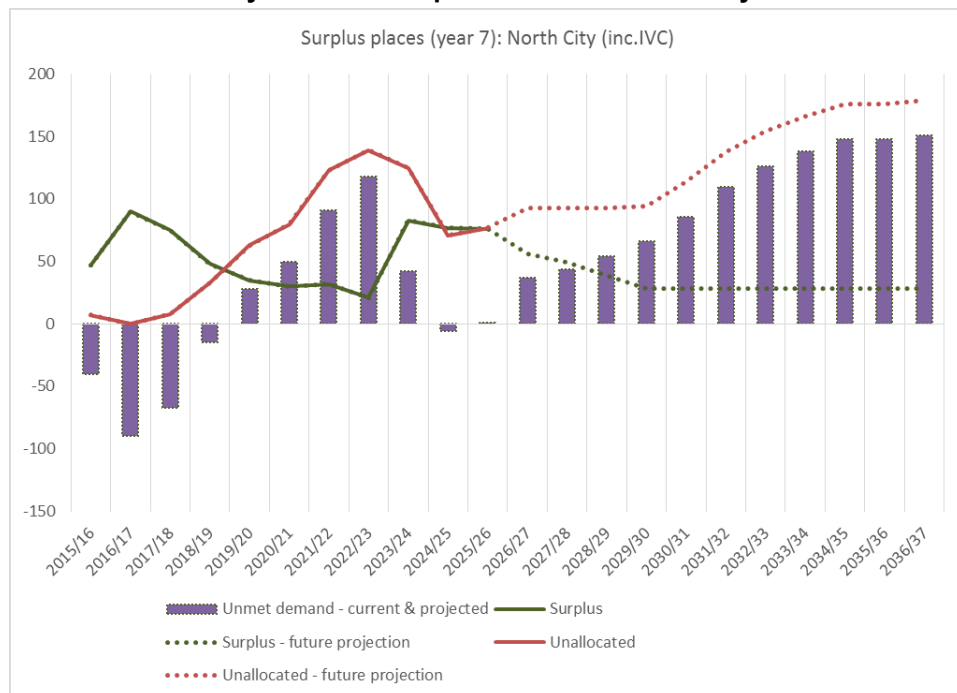


Chart 13: South City demand and pressures based on a 1-year trend

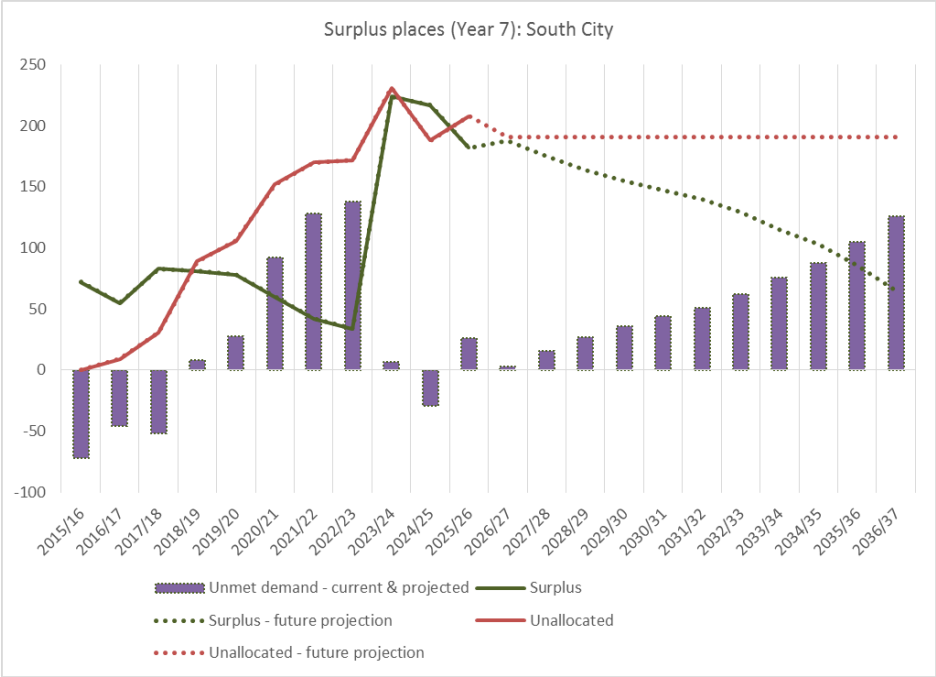


Chart 14: City-wide demand and pressures based on a 5-year trend

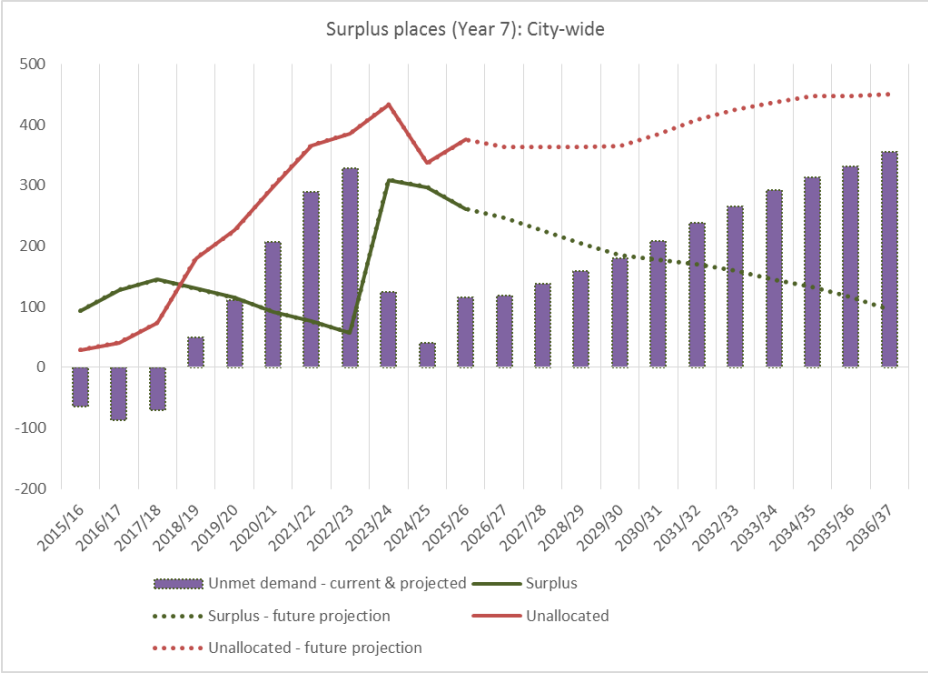


Chart 15: North City demand and pressures based on a 5-year trend

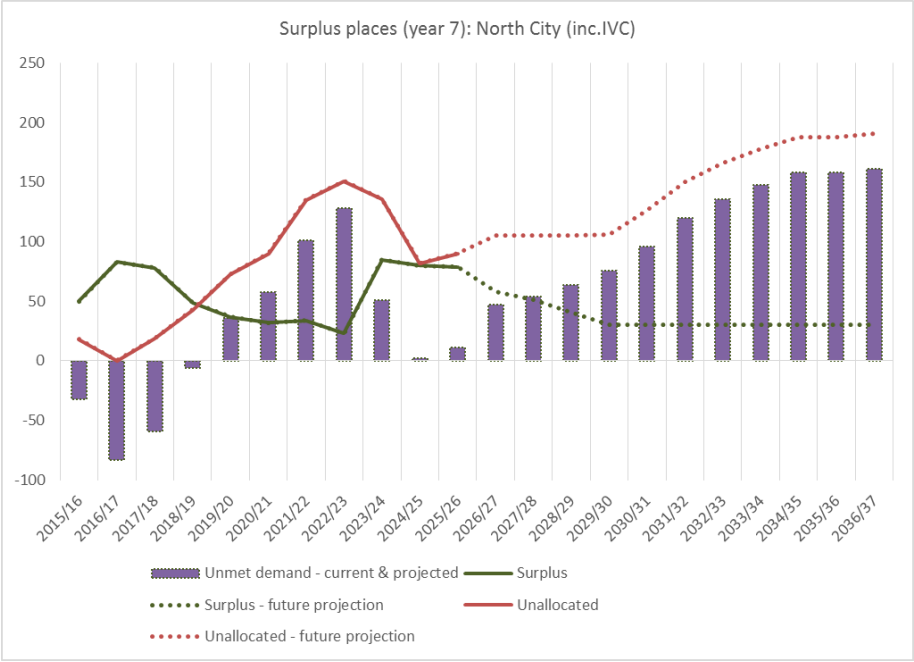
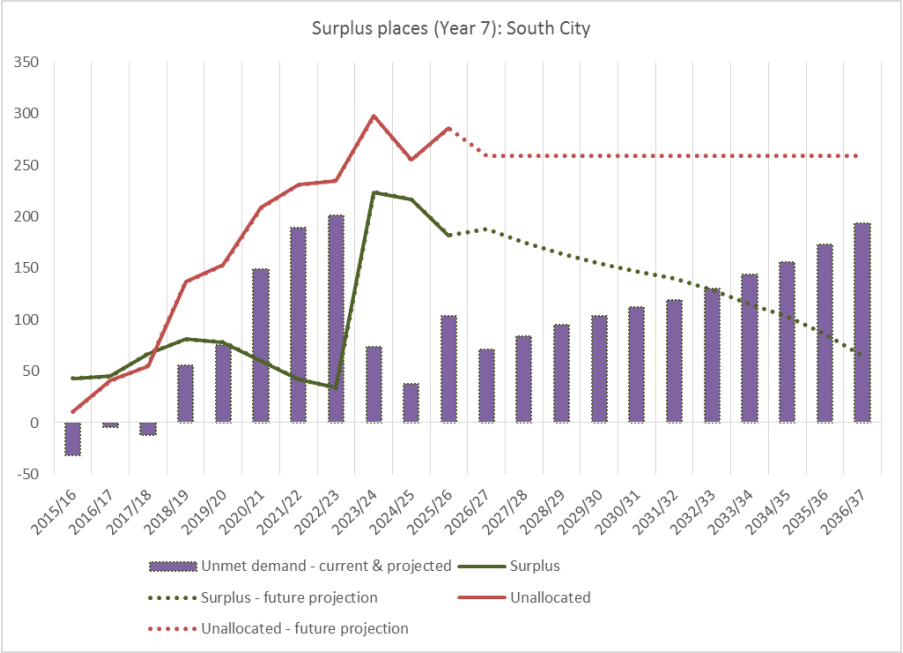


Chart 16: South City demand and pressures based on a 5-year trend



14.0 SCHOOL BASED PROJECTIONS – 3-YEAR TREND ASSUMPTIONS

Chart 17: Chesterton trend based projections

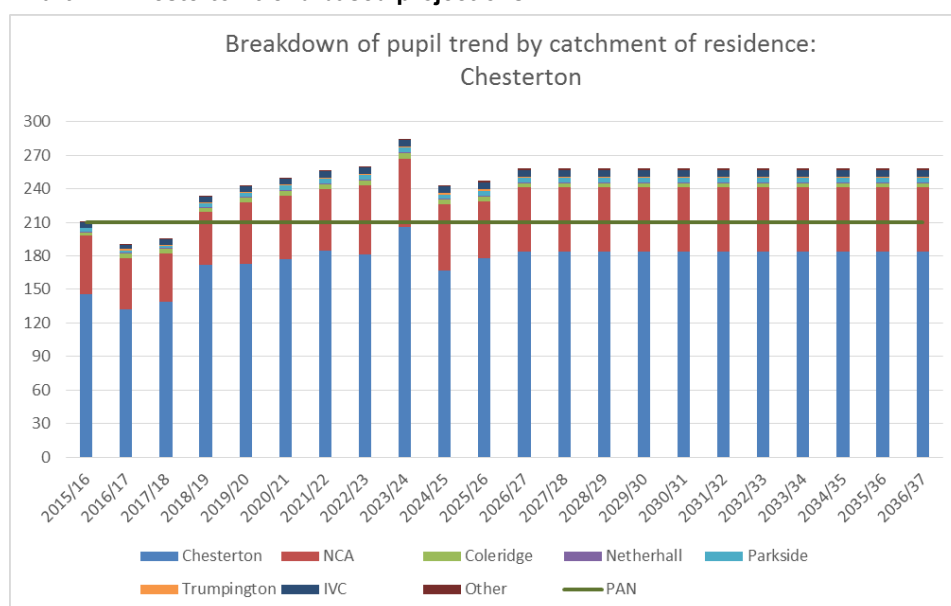


Chart 18: North Cambridge Academy trend based projections

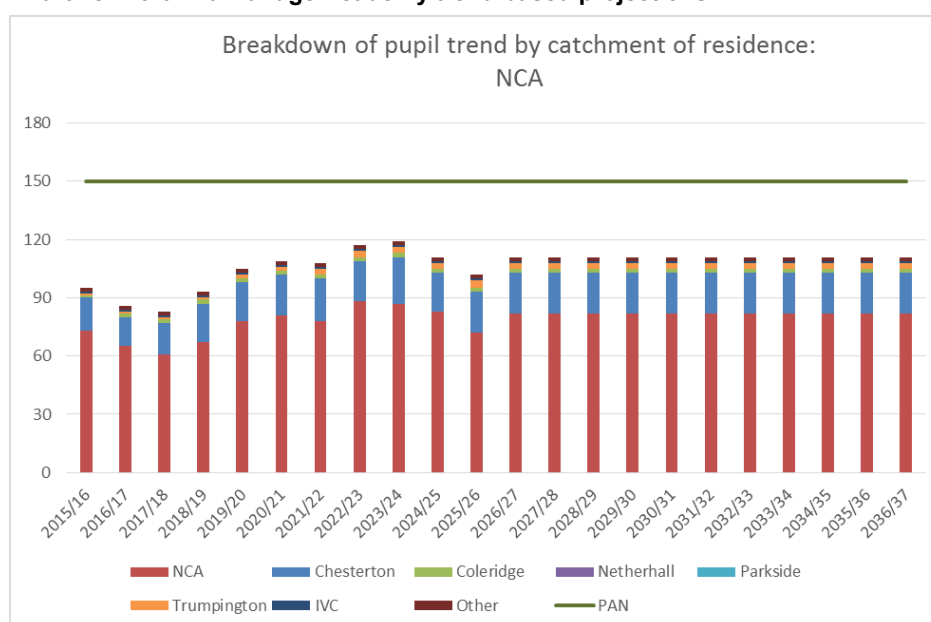


Chart 19: Coleridge trend based projections

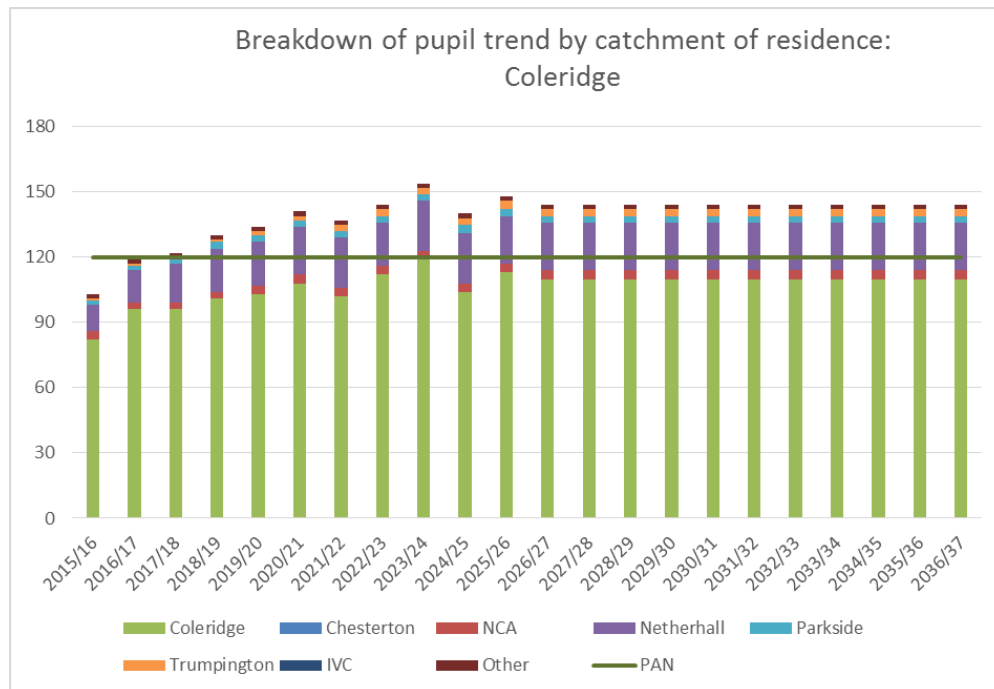


Chart 20: Netherhall trend based projections

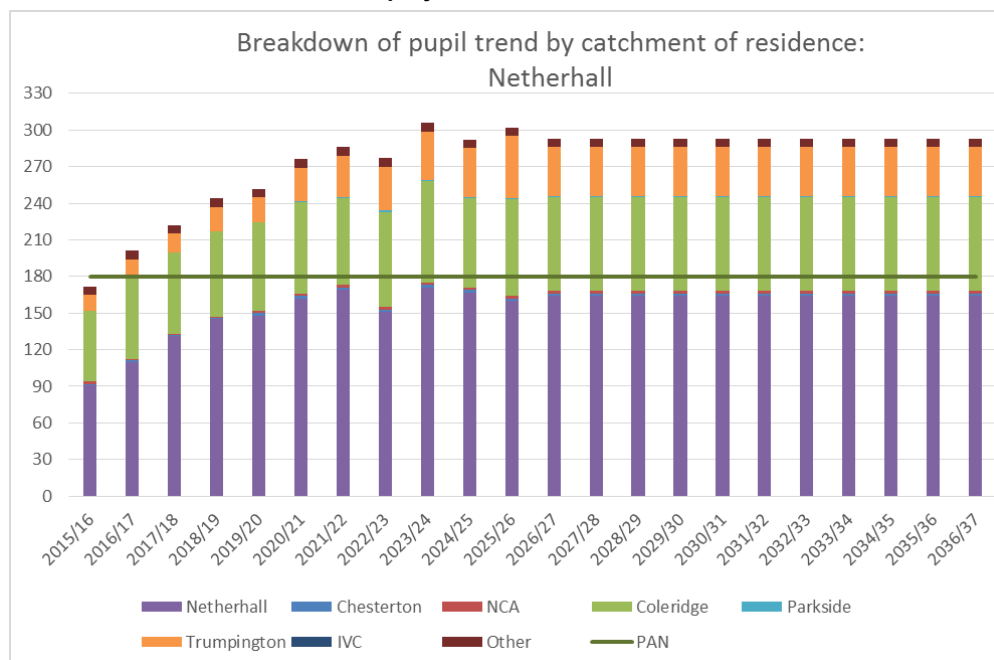


Chart 21: Parkside trend based projections

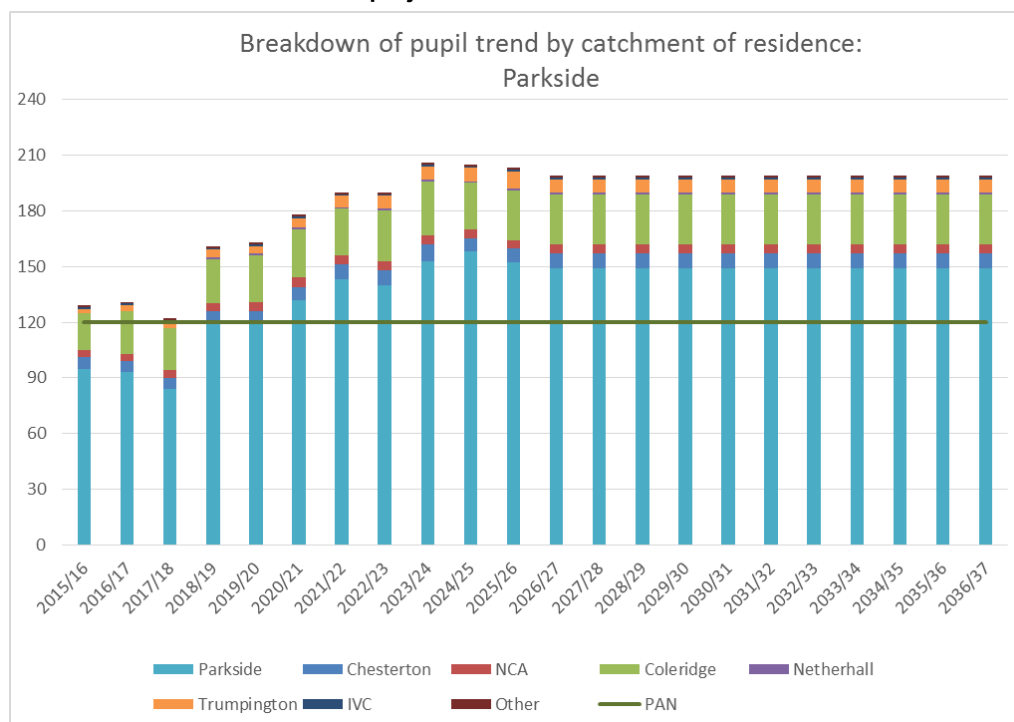
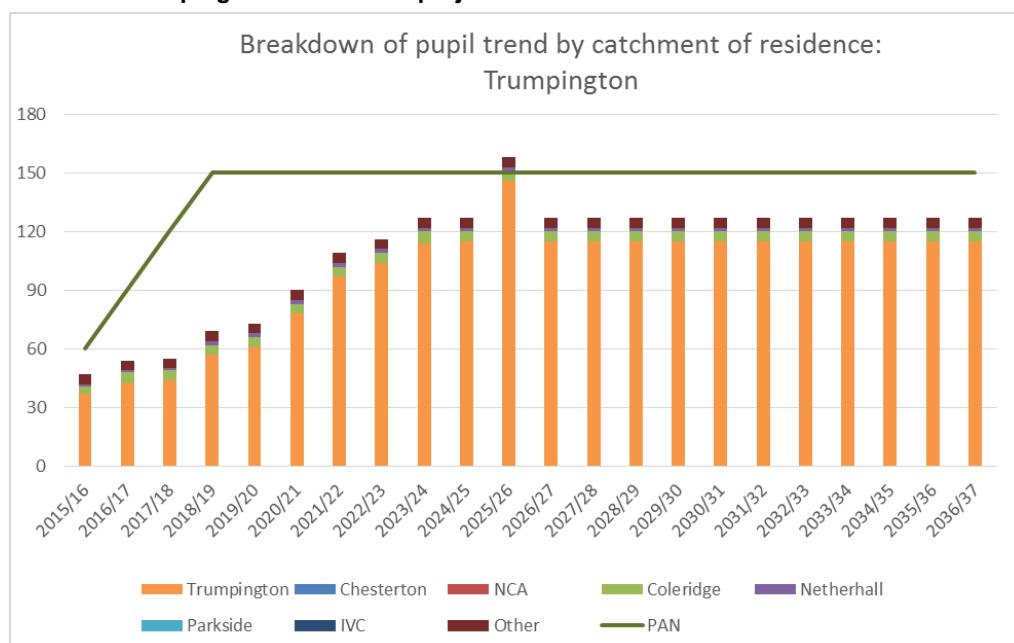


Chart 22: Trumpington trend based projections



- This is based on a 1-year trend for the reasons set out above.
- It should be noted that the pattern of growth in the Trumpington catchment area will distort the future projections beyond 2026/7

Breakdown of pupil trend by catchment of residence:
St Bede's

The chart displays the pupil trend by catchment of residence for St Bede's from 2015/16 to 2036/37. The Y-axis represents the number of pupils, ranging from 0 to 240. The X-axis represents the academic year. The legend identifies the catchments: Chesterton (blue), NCA (red), Coleridge (green), Netherhall (purple), Parkside (teal), Trumpington (orange), IVC (dark blue), and Other (dark red). A horizontal green line at 180 represents the PAN catchment.

Year	Chesterton	NCA	Coleridge	Netherhall	Parkside	Trumpington	IVC	Other	PAN
2015/16	10	10	30	20	5	5	10	100	180
2016/17	10	10	30	20	5	5	10	100	180
2017/18	10	10	30	20	5	5	10	100	180
2018/19	10	10	30	20	5	5	10	100	180
2019/20	10	10	30	20	5	5	10	100	180
2020/21	10	10	30	20	5	5	10	100	180
2021/22	10	10	30	20	5	5	10	100	180
2022/23	10	10	30	20	5	5	10	100	180
2023/24	10	10	30	20	5	5	10	100	180
2024/25	10	10	30	20	5	5	10	100	180
2025/26	10	10	30	20	5	5	10	100	180
2026/27	10	10	30	20	5	5	10	100	180
2027/28	10	10	30	20	5	5	10	100	180
2028/29	10	10	30	20	5	5	10	100	180
2029/30	10	10	30	20	5	5	10	100	180
2030/31	10	10	30	20	5	5	10	100	180
2031/32	10	10	30	20	5	5	10	100	180
2032/33	10	10	30	20	5	5	10	100	180
2033/34	10	10	30	20	5	5	10	100	180
2034/35	10	10	30	20	5	5	10	100	180
2035/36	10	10	30	20	5	5	10	100	180
2036/37	10	10	30	20	5	5	10	100	180

Breakdown of pupil trend by catchment of residence:
IVC

Year	IVC	Chesterton	NCA	Coleridge	Netherhall	Parkside	Trumpington	Other	PAN
2015/16	155	10	20	5	0	0	0	0	210
2016/17	140	10	20	5	0	0	0	0	210
2017/18	155	10	20	5	0	0	0	0	210
2018/19	160	10	20	5	0	0	0	0	210
2019/20	170	10	20	5	0	0	0	0	210
2020/21	170	10	20	5	0	0	0	0	210
2021/22	190	10	20	5	0	0	0	0	210
2022/23	195	10	20	5	0	0	0	0	210
2023/24	195	10	20	5	0	0	0	0	210
2024/25	185	10	20	5	0	0	0	0	210
2025/26	190	10	20	5	0	0	0	0	210
2026/27	195	10	20	5	0	0	0	0	210
2027/28	195	10	20	5	0	0	0	0	210
2028/29	195	10	20	5	0	0	0	0	210
2029/30	195	10	20	5	0	0	0	0	210
2030/31	195	10	20	5	0	0	0	0	210
2031/32	195	10	20	5	0	0	0	0	210
2032/33	195	10	20	5	0	0	0	0	210
2033/34	195	10	20	5	0	0	0	0	210
2034/35	195	10	20	5	0	0	0	0	210
2035/36	195	10	20	5	0	0	0	0	210
2036/37	195	10	20	5	0	0	0	0	210