Greater Cambridge Employment and Housing Needs Update 2024-2045

Final Report – September 2025

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1. Introduction

1.1 This report has been produced by Iceni Projects Ltd supported by Justin Gardner Consulting (JGC) on behalf of Greater Cambridge Shared Planning (contracting to South Cambridgeshire District Council).

1.2 The report provides evidence on the housing and employment needs for the Local Plan looking to 2045 and takes into account the updated National Planning Policy Framework (December 2024). The standard method for local housing need is up to date as of June 2025.

1.3 This work provides an update to the 2023 ‘Greater Cambridge Employment and Housing Evidence Update Employment Land, Economic Development and Relationship with Housing’ (EHEU) report - now notably looking at the revised plan making period being 2024 to 2045.

1.4 The key local evidence-based reports that inform this update work include:

- Greater Cambridge Employment and Housing Evidence Update 2023
- Greater Cambridge Employment Land and Economic Development Evidence Study 2020
- Greater Cambridge Growth Sectors Study: Life science and ICT locational, land and accommodation needs 2024
- Greater Cambridge Growth Sectors Study: Industrial and warehousing locational, land and accommodation needs 2025

1.5 This work updates modelling from the 2023 EHEU to take account of more recent employment and demographic data, to account for a likely uplift in industrial delivery indicated by market data, and to consider the December 2024 Standard Method.

1.6 The remainder of this report is structured as follows:

Chapter 2: A review of demographic outlook to 2045, which leads to a population projection aligned with the Standard Method

Chapter 3: Review of employment scenarios and forecasts to 2045 taking account of recent data, in which 2023 EHEU employment forecasts are updated

Chapter 4: Relationship between housing and economic growth, which compares jobs supported by the Standard Method to modelled employment outcomes, and quantifies employment-led housing need

Chapter 5: Employment land need, in which modelled employment scenarios and market signals data are used to quantify employment land needs

Chapter 6: Conclusions and recommendations

2. Greater Cambridge demographic outlook to 2045

2.1 This section of the report considers overall housing need set against the NPPF and Planning Practice Guidance (PPG) – specifically the Standard Method for assessing housing need. The analysis looks at the method as revised in the December 2024 NPPF and updated for the latest affordability ratios (2024) and housing stock as of May 2025.

2.2 For Greater Cambridge the Standard Method sees an annual housing need for 2,295 dwellings (1,103 in Cambridge and 1,192 in South Cambridge) and for the purposes of analysis in this report the two areas are taken together.

2.3 To consider the implications of housing delivery, two population projections have been developed. The first uses historical data to develop a trend-based projection. Secondly the implications of the Standard Method housing requirement on population growth are considered, using the population projections as a base. The population output of the trend based projections are used as an input into economic forecasts, since population is a driver of demand, to look at potential job growth in later sections of the report. The Standard Method is used to look at labour supply dynamics.

2.4 All projections look at the 2024-45 period. An analysis of local demographic trends which has informed the projections is included in Appendix A1.

Developing Trend-Based Projections

2.5 The purpose of this section is to develop a trend-based population projection using the latest available demographic information. A key driver of this is due to publication of 2021 Census data which has essentially reset estimates of population (size and age structure) compared with previous

mid-year population estimates (MYE) from ONS (ONS has subsequently updated 2021 MYE figures to take account of the Census). In addition, a 2023 MYE is now available and the projection developed looks at a 2024-2045 period (to align with the emerging Local Plan).

2.6 The projection developed looks at migration trends over the past 10-years. A 10-year period is considered to provide a reasonably stable trend. Below, the general method used for each of the components and the outputs from the trend-based projections are set out.

2.7 The latest ONS projections are the 2018-based sub-national population projections (SNPP). Noting the length of time that has elapsed since 2018, and that the 2021 census has occurred since these projections were released, they are not appropriate to use directly in this study. Instead, they have been used as a starting point to which adjustments for recent trends can be applied to account for more recent data. SNPP18 results have been reported unadjusted in some cases in this report to allow comparisons between the ONS position (SNPP18, which was pre-Census) with the preferred projections which have been developed.

Natural Change

2.8 Natural change is made up of births minus deaths. Analysis has shown births decreasing and deaths increasing over time, giving a general downward trend in the natural increase. To project trends forward, each of births and deaths have been considered separately and projected figures in the 2018-SNPP have been compared with actual recorded figures in the MYE.

2.9 The projections also take account of differences between the estimated population size and structure in 2021 (in the 2018-SNPP) and the ONS MYE (as revised to take account of Census data) with some modest adjustments being made to the base position.

Migration

2.10 When looking at migration our start point is to consider levels of migration over the past 10-years (to 2023). Information about migration estimates is shown in the table below with average figures provided for the last 10 years. This shows a modest level of net out migration to other parts of the UK but a notable international net migration.

Table 2.1 Past trends in net migration – Greater Cambridge

Year	Net Internal (domestic)	Net International	All net migration
2013/14	198	2,467	2,665
2014/15	292	2,954	3,246
2015/16	-889	3,404	2,515
2016/17	-942	2,266	1,324
2017/18	-342	2,718	2,376
2018/19	-963	2,104	1,141
2019/20	-838	1,879	1,041
2020/21	-1,347	3,498	2,151
2021/22	523	4,330	4,853
2022/23	-123	4,827	4,704
Average (2013-23)	-443	3,045	2,602

Source: ONS Estimates of population for England and Wales 2024

2.11 As with fertility and mortality data, the information above has been used to develop a projection linking to these trends.

Population Projection Outputs

2.12 The above estimates of births, deaths and migration (including changes over time) have been modelled to develop a projection for the period to 2045 (the end of the plan period). The table below shows projected population growth for this scenario.

Table 2.2 Projected population growth 10-year trends – Greater Cambridge (2024-45)

Trend	Population 2024	Population 2045	Change	% change
10-year trend	321,559	393,638	72,080	22.4%

Source: JGC / Iceni demographic projections

Household Projections

2.13 To understand what this means for housing need the population growth is translated into household growth. Two variables re used for this conversion:

- Household representative rates (HRRs)[1], and
- The proportion of people living in communal institutions.

2.14 These variables have been updated using data from the Census, with the table below summarising the position as of the 2021 Census.

[1] A household representative rate is the proportion of people of a given age group who are the household representative person for a household, commonly understood as the head of a household.

Table 2.3 Communal Population and Household Representative Rates (HRR) from 2021 Census – Greater Cambridge

Age	Communal population	Communal population	HRR	HRR
	Male	Female	Male	Female
Age 0 to 15	156	98	-	-
Age 16 to 19	2,795	3,225	0.019	0.044
Age 20 to 24	5,008	4,518	0.169	0.182
Age 25 to 29	1,202	908	0.383	0.306
Age 30 to 34	439	321	0.598	0.362
Age 35 to 39	143	100	0.699	0.357
Age 40 to 44	77	52	0.736	0.379
Age 45 to 49	70	40	0.752	0.412
Age 50 to 54	48	35	0.769	0.442
Age 55 to 59	66	34	0.788	0.473
Age 60 to 64	67	23	0.761	0.485
Age 65 to 69	37	42	0.690	0.464
Age 70 to 74	55	38	0.740	0.475
Age 75 to 79	0.010	0.017	0.806	0.553
Age 80 to 84	0.021	0.038	0.830	0.639
Age 85 to 89	0.051	0.071	0.888	0.776
Age 90 or over	0.093	0.191	0.909	0.870

Source: Derived from Census 2021 (mainly Tables CT 106 and 107)

2.15 Generally the HRRs increase by age, this is due to older people being more likely to live alone, often following the death of a spouse or partner.

2.16 In terms of the projection for the communal population, the following approach is used, consistent with typical ONS projections:

- For each age group under 75, it is assumed that the number of people in communal accommodation will remain fixed

- For each age group above 75, it is assumed that the share of the population living in communal accommodation will remain at its 2021 level

2.17 For HRRs the figures are calculated at the time of the Census and have been held constant moving forward with the exception of the population aged 25-44 where some increase has been modelled. This is to ensure that the projection does not perpetuate any current suppressed household formation which reflects low housing affordability. This approach is consistent with the EHEU 2023 report for Greater Cambridge.

2.18 Applying these figures to the population projection shows a notable projected growth in the number of households – increasing by 1,652 households per annum (as shown in Table 2.4 below).

Table 2.4 Projected change in households – Greater Cambridge (2024-45)

Trend	Households 2024	Households 2045	Change in households	Per annum
10-year trend	124,739	159,428	34,689	1,652

Source: JGC / Iceni demographic projections

Developing a Projection linking to the Standard Method

2.19 As well as developing trend-based projections it is possible to consider the population implications of housing delivery in line with the Standard Method. The analysis below looks at how the population might change if providing this level of homes occurs (2,295 dwellings per annum).

2.20 A scenario has been developed which flexes migration to and from the area such that there is sufficient population for this level of additional homes to be filled each year. The modelling uses the 10-year trend projection as a base to which adjustments are made. Specifically, migration assumptions have been changed so that the increase in households matches the

housing need (including a standard 3% vacancy allowance). Adjustments are made to both in- and out-migration (e.g. if in-migration is increased by 1% then out-migration is reduced by 1%).

2.21 In developing this projection for the 2024-45 period a population increase of around 105,400 people is shown; this is notably higher than the figure generated from the trend-based projection (growth of 72,100 people as shown in Table 2.2).

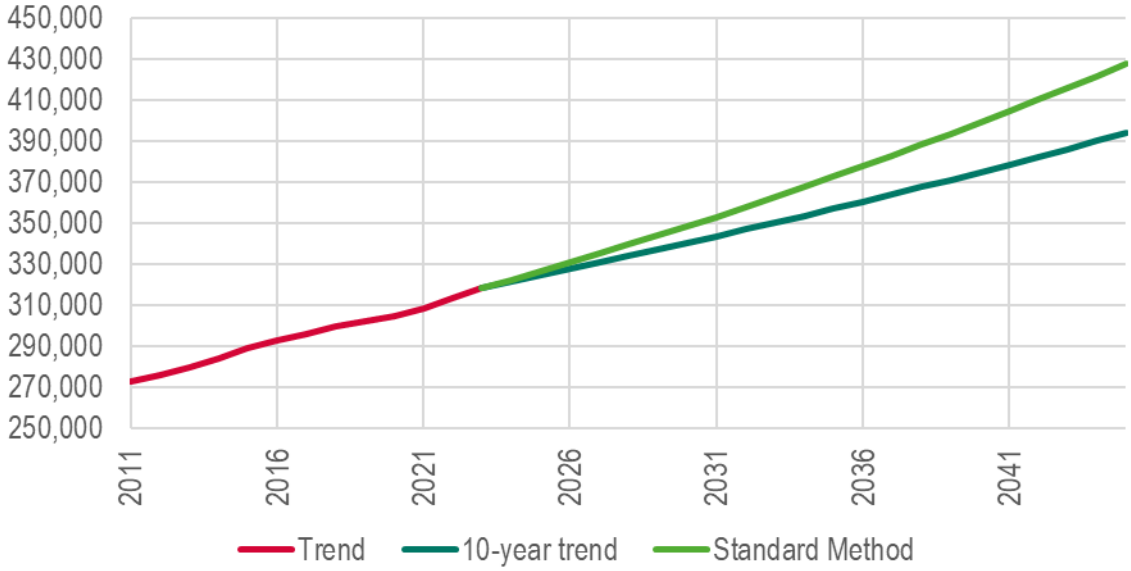
Table 2.5 Projected population growth under the Standard Method – Greater Cambridge (2024-45)

Standard Method	Population 2024	Population 2045	Change	% change
-	321,898	427,309	105,411	32.7%

Source: Demographic projections

2.22 The figure below shows past trends and projected population growth. Under the Standard Method, our analysis suggests the population of Greater Cambridge could rise to 427,300 by 2045 (up from 321,900 in 2024) a 33% increase, or 1.6% per annum. For comparison, between 2011 and 2023 the population increased by an average of around 1.4% per annum. Delivery of the Standard Method would therefore be likely to see population change in excess of past trends.

Figure 2.1 Past trends and projected population – Greater Cambridge



Source: ONS and demographic projections

2.23 A final analysis compares age structure changes under each of these projections. In both cases the projections show an ageing of the population. Higher overall growth under the standard method scenario would be driven by increased migration to Greater Cambridge. As younger people are more likely to move, the standard method projection therefore sees much higher increases in the number of children and people of 'working age' (16-64), compared to only a small increase in the number of people 65 or older. Indeed, the growth in the 16-64 age group accounts for around three-fifths of all population change under both trend and standard method scenarios.

Table 2.6 Projected population change 2024 to 2045 by broad age bands – 10-year trends – Greater Cambridge

Age	2024	2045	Change in population	% change from 2024
Under 16	54,768	67,355	12,587	23.0%
16-64	215,398	254,552	39,154	18.2%
65 and over	51,392	71,731	20,339	39.6%
Total	321,559	393,638	72,080	22.4%

Source: Demographic Projections

Table 2.7 Projected population change 2024 to 2045 by broad age bands – Standard Method – Greater Cambridge

Age	2024	2045	Change in population	% change from 2024
Under 16	54,806	76,297	21,492	39.2%
16-64	215,651	277,316	61,664	28.6%
65 and over	51,440	73,696	22,256	43.3%
Total	321,898	427,309	105,411	32.7%

Source: Demographic Projections

Summary

2.24 This section considers two demographic outcomes, one related to a projection of past trends over the last decade and the second based on the latest standard method housing requirement. Both models see a substantial increase in population with the trend based at around 72,000 extra persons by 2045 and the standard method at around 105,000.

3. Review of employment scenarios and forecasts to 2045 taking account of recent data

3.1 This section draws on previous iterations of modelling for future employment in Greater Cambridge, notably in the 2023 Greater Cambridge Employment and Housing Evidence Update (EHEU) and has been updated here to take account of the most recent data notably from BRES.

Previous model summary

3.2 As with the 2023 EHEU, forecasts from Cambridge Econometrics' (CE's) local economic forecasting model (LEFM) form the starting point for the overall employment forecasting methodology. LEFM is a demand-led model of the relationships between firms, households, government and the rest of the world in a highly disaggregated framework (45 sectors), which enables the impact on the economy (employment and value added) of demand-side factors (such as an increase in demand due to stronger world growth) to be analysed.

3.3 LEFM results that inputted into the 2023 EHEU model (developed in 2022) were based on the 2018 ONS sub-national population projections (SNPP) being the most recent available at the time of modelling.

3.4 There are considerable discrepancies between the 2018-based ONS SNPP and the 2021 census. As such, an updated bespoke population projection was developed in for the EHEU 2023 and was used to produce an updated population baseline forecast. Using this updated population, CE modelled an employment uplift in population-dependent sectors using econometrically derived coefficients. Thereafter, sector growth drivers were applied additionally, as noted below.

Key sectors

3.5 Modelling for the 2023 EHEU included scenarios which increased growth rates above the baseline forecast in the following key sectors. This reflected high recent growth rates (historical data was available up to 2020 at the time of the work due to a two year lag for BRES[2] publication) and strong economic prospects in each:

- **Health and care**: A case for this key sector was established in the 2020 ELEDS (including para 9.38 and elsewhere). The economic conditions for growth were considered to remain robust particularly in terms of the relationship to the growth of life sciences and medical research including at research hospitals.

- **IT services**: Very strong performance up to 2020 (40% increase in employment from 2011) with a number of international companies locating in Cambridge, benefiting from the skills and knowledge cluster. Cambridge is increasingly a hub for artificial intelligence companies and a number of international tech giants have established a presence in Cambridge, including Amazon, Apple and Microsoft in the CB1 area. Stakeholders considered this a fast growth sector with potential for continued strong growth.

- **Head offices & management consultancies / Architectural & engineering services**: The historic performance of these sectors suggested they were likely to exceed the baseline outlook, although

[2] The Business Register and Employment Survey (BRES) data provides detailed employment estimates at detailed geographical and industrial sector breakdowns. It uses a survey-based approach and so is an estimate of employment (as opposed to a complete census). It is regarded as the best official source of employment estimates by detailed geography and sector.

stakeholders indicated growth capabilities were likely to be below life sciences-related sectors.

- **Other professional services (including R&D / life sciences):** The case for this key sector is well known for Greater Cambridge and was established in the 2020 ELEDS (see para 9.42 and elsewhere). BRES (2020) reported that 90% of this sector in Greater Cambridge is made up of 'Scientific research and development' representing life sciences activities. This a primary growth sector for Greater Cambridge. There was considered to be potential to exceed the baseline forecasts in this sector considering past performance.

- **Other manufacturing & repair**: Not a 2020 ELEDS key sector, but introduced as a growth sector in 2023 as being one of the few manufacturing sub sectors to show continued growth. BRES data indicates this is related to the 'Manufacture of medical and dental instruments and supplies' effectively supporting the life sciences. A modest positive outlook was expected rather than the contraction predicted in the baseline.

3.6 Two historical time-periods were used to calibrate potential levels of growth in the key sectors in the 2023 EHEU:

- The 'fast growth' recent decade 2011-2020. This period saw high absolute and percentage increases in employment with little downside, with 2011 being a 'low' transiting to a 2020 'high'.

- A longer and more balanced 2001-2020 period, incorporating strong growth phases but also some full economic cycles with contractions, while still seeing high overall growth rates compared to other areas.

3.7 Uplifts were also applied in business support services, reflecting additional jobs providing services to the key sectors.

Scenarios

3.8 The 2023 modelling included two scenarios with growth in key sectors increased above the population-adjusted baseline outlook:

- **Higher** - Continuation of the fast (10-year) growth rate for five years, followed by a gradual return to the balanced (20-year) growth rate. This was considered as the upper-range of potential growth, with recent high-growth rates continuing and little allowance for cyclical contractions in the economy over a future 20-year period.

- **Central** – Continuation of the fast (10-year) growth rate for five years as in the high scenario, followed by a quicker return to the balanced (20-year) growth rate from 2031-35 and then continuing on the balanced growth rate from 2036 onwards. This was considered as a more moderate but still a 'growth scenario' considerably above baseline forecasts, reflecting overall strong prospects in key sectors, but also the potential for full economic cycles and periods of slower growth within the future 20-year period.

Reviewing employment data 2020-2023

3.9 The previous job scenarios were created in 2022 and were based on historical employment data up to 2020. Since then, three years of additional historical employment information is available, (being 2021, 2022 and 2023), via BRES. Comparing the recent BRES data to previous forecasts provides an illustration of how Cambridge's economy has performed during COVID-19 and since (2020-2023).

Method

3.10 BRES data estimates the number of employees and working proprietors in an area based on business surveys. It does not record the number of self-employed people, government-supported trainees or those serving in the military. As a result, the number of people with jobs of these types must be

estimated or established and added onto BRES in order to provide the total number of jobs in an area.

3.11 To estimate total jobs in 2021 – 2023, a ratio was applied to the BRES data for each CE defined sector, with the ratio approximating the relationship between employees and total jobs.

3.12 Using a ratio in this way makes the simplifying assumption that self-employment (along with other types of jobs excluded from BRES) makes up a consistent proportion of employment over time. This assumption is likely to be reasonable over the short timeframes between 2021-2023.

3.13 The ratio for each sector was based on historical ratios across Greater Cambridge using CE's estimates up to 2020 (data for these years provides corrected real-world job estimates rather than forecasted values) and the employment as recorded in BRES[3].

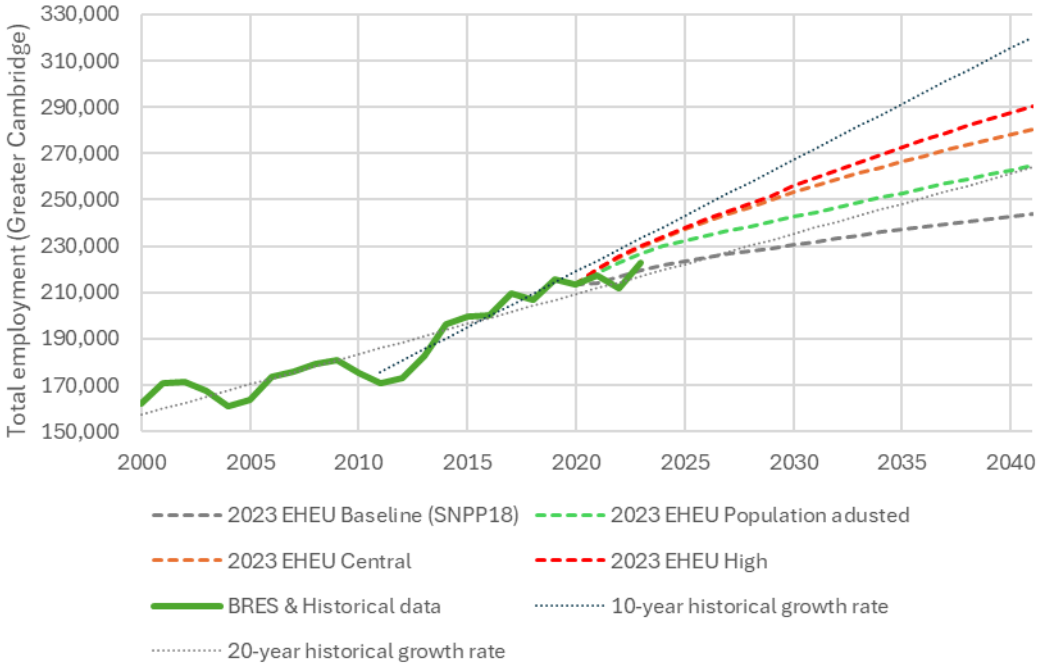
Results

3.14 Between 2020 and 2023, Greater Cambridge added around 9,200 jobs total according to Iceni's analysis (i.e. adjusted BRES figures). This compares to jobs growth of 13,300 under the previous population-adjusted baseline forecast, 15,900 under the central scenario and 16,600 under the high scenario. As such, BRES data suggests that Greater Cambridge has underperformed against forecasts during the COVID-19 pandemic and the immediate aftermath, compared to the previous set of forecasts. This is not surprising given the nature of the pandemic and its effect on the national and global economy.

[3] Median values between 2015 – 2020 were used in cases where there was not substantial year to year variation, while in other cases values from specific years in this range were selected which best represented typical and reasonable values.

3.15 The following figure provides a more detailed breakdown of this trajectory over time. It shows a dip in employment between 2021 and 2022 following COVID-19. While growth recovered in 2023, this recovery was not substantial enough to be in line with the previous forecasts. Nonetheless, the overall jobs position is still sitting between the 10- and 20-year growth rate trends.

Figure 3.1 Comparison of BRES and previous forecasts (all sectors)



Source: Iceni 2025

3.16 More detail on the breakdown of this position across broad sectors is provided in the table below. This shows that:

- In aggregate the **key sectors** have underperformed compared to forecasts and to recent historical growth rates.
- **Non-key sectors** apart from business support services have exceeded forecast expectations and exceed recent historical growth rates
- Employment in **Business Support Services** has contracted, compared to forecast modest growth.

Table 3.1 Comparison of previously forecast employment growth with BRES-based jobs data (average jobs per annum)

Annual employment change	Historical growth (15 - 20)	Population Adjacent Baseline (20 – 23)	Previous Central scenario (20 - 23)	BRES (20 – 23)
Key sectors	2,385	2,593	3,583	1,903
Non-key sectors (exc. Bus. Supp. Serv's)	475	1,448	1,511	1,967
Business support services	-54	400	207	-816
Total	2,806	4,441	5,302	3,054

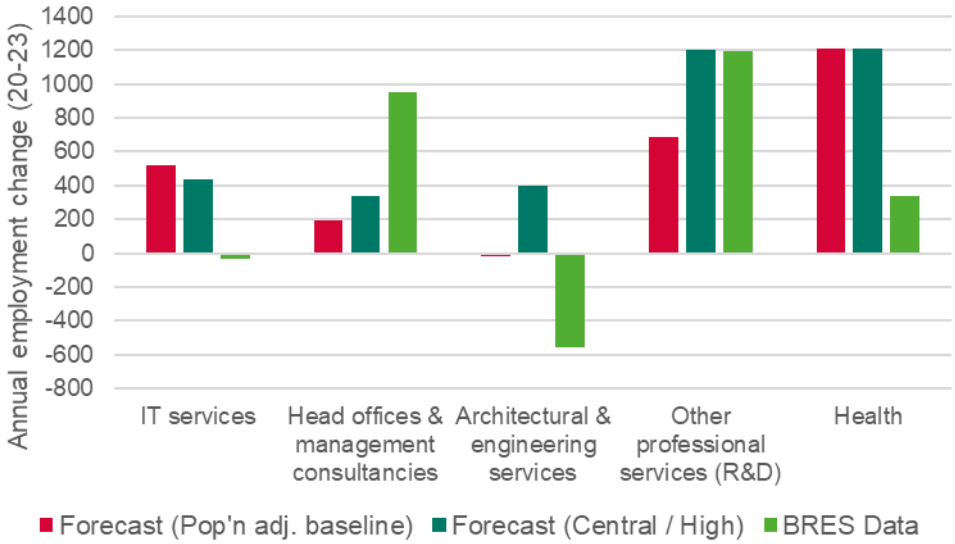
Source: BRES 2023, Iceni 2023, Iceni 2025

3.17 There are variations in performance between the different key sectors, which are illustrated in the figure below.

3.18 Head offices & management consultancies dramatically exceeded forecasts. Other professional services have grown in line with the central and high scenarios. Other key sectors have performed worse than forecast. IT services experienced a very small contraction, while Architectural & Engineering Services experienced a substantial contraction.

3.19 The central / higher scenarios do not deviate in the early years, so are shown on the same bars in the chart.

Figure 3.2 Previous forecast employment growth in key sectors (excluding health and other manufacturing & repair) 2020-23



Source: Iceni 2025

3.20 Overall, this data presents a mixed picture of local economic performance. Some underperformance would be expected resulting from the economic shocks of COVID-19 and the ensuing period of high inflation and energy prices.

3.21 Furthermore, forecasts are made based on a 20 year historic data set and projected over a future 20 year horizon, accounting for cycles of slow and fast growth, and small segments would not be expected to align to trend even if it is achieved in the long term.

3.22 Nonetheless, the BRES data does not show a level of employment growth which would support an upwards revision of the scenario-based forecasts, or which would obviously favour the higher scenario over the central scenario.

Caveats

3.23 As noted, the BRES data is survey-based. As a result, its accuracy depends on it achieving a large enough sample, and its relative margin of error is increased in small areas like individual authorities.

3.24 Separate employment data for Cambridge is compiled by the Centre for Business Research (CBR) at the University of Cambridge Judge Business School. This data is based on a sample of CBR's database, which contains companies representing around two thirds of corporate employment in Greater Cambridge.

3.25 The CBR data presents a more positive picture of economic growth for recent years than the adjusted BRES data. The BRES data indicates compound annual growth rate (CAGR) for employment in Greater Cambridge of 1.4% between 2020 and 2023. By contrast, CBR's analysis suggests that overall employment grew by 2.5% in 2020-21, 6.7% in 2021-22, 6.3% in 2022-23, and 5.3% in 2023-24. This amounts to a CAGR from 2020-21 to 2022-23 of 5.1%.

3.26 CBR's data also provides a more positive view of growth in key sectors in Greater Cambridge. The CBR data suggests that knowledge-intensive (KI) employment has been strong, with growth of 5.8%, 7.8% and 11.2% in 2020-21, 2021-22 and 2022-23 respectively.

3.27 In the context of these alternative employment growth reports, it would not be appropriate to revise growth forecasts downwards (which latest BRES might suggest). The CBR data would instead lean towards a conclusion of planning for a high level of employment growth (for example in line with the higher scenario – see next section). It may be the case that small sample sizes in the BRES data could lead to inaccuracies which under-represent employment growth, and that this issue is not present in CBR data.

3.28 With that said, BRES remains the official and most well-accepted source of detailed employment data across the UK, making its use in detailed employment forecasting appropriate. In this context, CBR's data has been considered primarily as a check on the recent BRES data, and to inform assumptions around potential future employment growth levels.

Updated employment forecasting method

3.29 This section updates 2023 EHEU employment projections to:

- Shift the base year to 2023, taking account of new data (as reported above).
- Extend the projection from 2041 to 2045 in line with the proposed plan period.
- Review key sector growth rates following changes to the base year and end year.
- Account for the employment implications of additional population growth
- Account for the employment implications of additional industrial. floorspace delivery as suggested by industrial market signals.

New base year

3.30 As more recent employment data is now available, the base year for forecasting has been shifted from 2020 to 2023. This is the last year with real-world instead of forecasted job data, and the stepping off point for the forecast. To perform the update, the adjusted BRES data has been used to provide job estimates for Cambridge, South Cambridgeshire and Greater Cambridge in 2021, 2022 and 2023, with CE estimates used in all preceding years.

3.31 After 2023, it has been assumed in the first instance (subject to adjustments discussed below) that the change in jobs per annum for each sector is the same as under the previous modelling scenarios (i.e. as the 2023 EHEU).

Additional years

3.32 The original forecast extended to 2041. This has been extended to 2045 to align with a revised plan period, noting that several years have elapsed since the original modelling.

3.33 To provide a baseline for all scenarios, employment growth outside of key sectors from 2041-2045 was based on the last several years of the 2023 EHEU forecasts, which were in turn aligned with CE's forecasts. Yearly growth rates were calculated from the 2023 results for each sector, and the following methods used to extend the forecast to 2045:

- In cases where growth rates were very low, or there was minimal variation in growth rates from 2036-41, the median yearly change from 2036-41 was assumed to continue until 2045.
- Where there was a clear trend in growth levels (i.e. an increase or decrease over time), a linear trend of growth in the last several years was used
- Where there was year to year variation but no clear trend, an average was taken of the last several yearly growth rates, excluding outliers.

3.34 For the last two methods above, the time period over which the analysis was applied was set on a sector by sector basis to ensure that the forecast 2041-45 growth rates were most well aligned to those from 2031-41.

3.35 For key sectors, Iceni set growth rates in the 2023 EHEU separately for each scenario using historical data (as discussed in the previous model summary earlier in this chapter). Growth rates trended over time from the high-growth 10-year rate to the slower 20-year rate. As a result, there was less year-to-year variation in the forecast growth rate than seen in the non-key sectors, so the yearly additional jobs between 2040-41 were extended out to 2045.

Key sectors and scenarios

3.36 Rebasing the start year to 2023 has the potential result of reducing total forecast growth in key sectors, and in some non-key sectors, because (as outlined in paragraph 3.8) highest growth rates were originally applied in the initial years of the forecast from 2020 before being moderated. This has been adjusted given Greater Cambridge's high growth rates found in CBR's results and strong demand in key sectors as set out for example in the

Greater Cambridge Growth Sectors Study: Life science and ICT locational, land and accommodation needs 2024.

3.37 As a result the central and high scenarios have been amended to extend the time periods for both the high growth rates and the gradual return in growth rates from higher 10 year to the 20-year mean. This means that the 2023 EHEU assumption that there are five years of high growth, five years of a stepped down rate and so on is retained in this report but starting at a 2024 date. The original unamended versions of the scenarios are retained as conservative version labelled **sensitivity**.

Industrial driven jobs

3.38 The 2023 Greater Cambridge Employment and Housing Evidence Update found market signals for strong demand for industrial floorspace, in excess of labour-market based results.

3.39 More recent work in the Greater Cambridge Warehouse and Industrial Space Needs 2025 found increased levels of market-based demand above requirements identified in the 2023 EHEU. These increased levels of market-demand are also consistent with the assessment in Chapter 5 of this report. This results in an additional uplift to the industrial floorspace over the 20-year forecast period from 200,000 sqm (in the 2023 EHEU) to 317,000 sqm for 2024-45.

3.40 As set out in section 5, this overall industrial floorspace requirement can be seen to comprise three parts:

- A part required to accommodate increased employment (i.e. baseline employment growth, uplifts in key sectors and population-supported job uplifts);
- Replacement demand space not associated with increased employment but rather replacing lost / aged stock; and
- A further market-driving uplift, implying additional jobs to support it over and above the first two elements,

3.41 The third of these components is dealt with here.

3.42 Additional jobs created by the additional industrial floorspace above forecasted levels was estimated by assuming:

- A 30% / 70% split between B2/E(g)(iii) and B8 floorspace
- Employment density assumptions in line with previous modelling (44sqm / FTE[4] in B2/E(g)(iii) and 70sqm / FTE in B8)
- Sector-specific ratios between FTE and total employment based on local BRES data
- Labour-demand floorspace model outputs for Greater Cambridge showing the expected relationship between industry sector and floorspace type

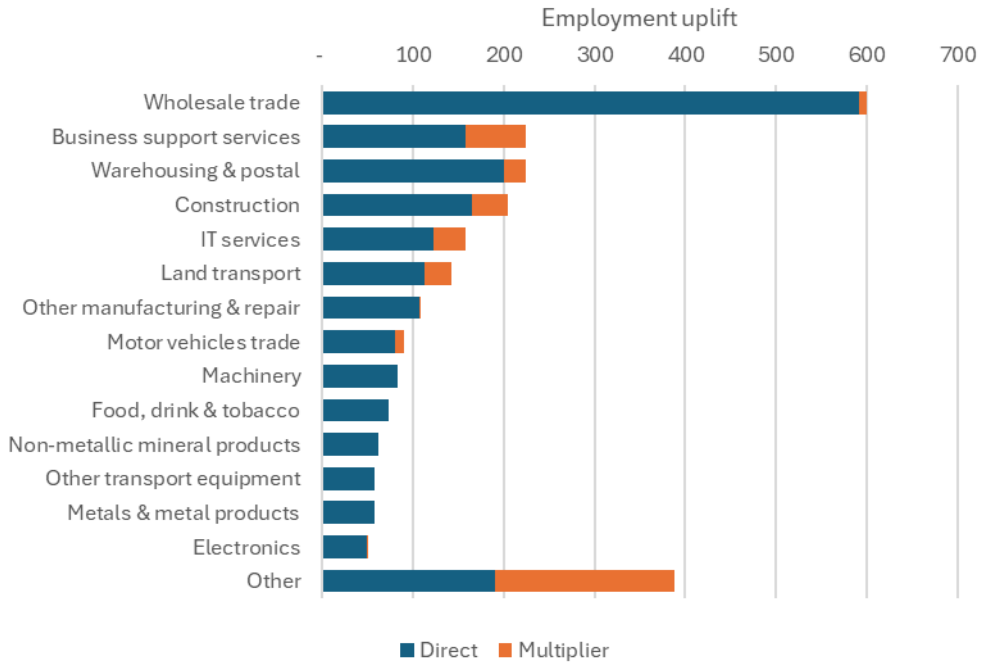
3.43 This resulted in additional direct employment in Greater Cambridge of 2,109 by 2045. The most jobs being in the Wholesale Trade and Warehousing & Postal sectors, but jobs were also spread throughout a wide variety of sectors, reflecting the broad range of sectors present in industrial space.

3.44 Iceni also estimated multipliers to capture additional employment created throughout the supply chain (more detail on how multipliers were derived is given in Appendix B). This calculation resulted in 415 additional composite multiplier jobs by 2045 (i.e. direct and indirect multipliers added together) in Greater Cambridge, with the largest sectors being business support services, construction and IT services.

[4] FTE refers to full-time equivalent jobs. This is a measure of employment which accounts for what fraction of full time a person works. For example, a person working a three day per week job works 60% (or 0.6) of full time hours, generating 0.6 full-time equivalent jobs.

3.45 The overall employment uplift in additional industrial space, broken down into direct and multiplier employment and by sector, is shown in the figure below. The total additional jobs associated is 2,524.

Figure 3.3 Industrial-driven job uplift in Greater Cambridge (2024-45)



Source: Iceni 2025

Population growth

3.46 As outlined in Chapter 2, population forecasts have been revised, with an increase in growth levels compared to those considered in the 2023 EHEU. This would be expected to feed through to increased employment in population-serving sectors such as retail, hospitality, education, health and care.

3.47 To capture this, a jobs per 1,000 additional residents multiplier has been estimated (more details on this multiplier are given in Appendix B). It has been applied to calculate employment uplift from two different kinds of population uplift:

- **Direct uplift:** The population uplift between the trend-based projection described in Chapter 2, and the SNPP18 baseline. The trend-based

projection has been used instead of the standard method projection because the employment modelling for this report is a demand-side projection based on past employment and population trends. By contrast, a standard-method based population is based on potential housing supply uplift, rather than on past trends.

- **Indirect uplift:** The sizeable employment uplift in key sectors, as well as the additional modelled industrial employment, mean that Greater Cambridge would require a larger workforce than would be supported by the trend-based population projection (this is shown in Chapter 4). As such, the jobs/1,000 additional residents multiplier has been applied to an estimate of the additional population that would be needed to support modelled labour force requirements. This is effectively a form of induced multiplier which captures the flow-on effects in population-driven sectors of increased local employment. Accounting for this multiplier aligns with previous modelling work Iceni has undertaken (see Greater Cambridge Employment Land and Economic Development Evidence Study 2020 para 9.68).

3.48 The direct uplift calculation resulting in a total population-based employment uplift across Greater Cambridge of 5,416 jobs between 2024-45. The sector breakdown of these jobs is shown in the figure below.

Figure 3.4 Population-serving employment uplift in Greater Cambridge (2024-45)

Source: Iceni 2025

3.49 To calculate the indirect uplift, the results of Chapter 4 have been used to calculate a ratio between population and jobs supported. The additional population (i.e. above the trend-based demographic forecast) needed to support each employment scenario has then been calculated and combined with a jobs per 1,000 required residents ratio.

3.50 The resulting uplift is between around 2,400 – 6,800 jobs, scenario dependent. The industry composition for these jobs in percentage terms was the same as for the population-serving employment uplift shown in Figure 3.4 above.

Updated forecast results

Key sectors

3.51 In combination, the revised forecasts result in additional employment across Greater Cambridge in the key sectors of between 37,400 and 55,800, depending on the scenario used. Total employment in these sectors would grow from around 78,200 in 2023 to between 118,600 and 137,000 (broadly an increase of 50% to 75%). The tables below break these totals down sector by sector, then report change for the 2024-45 plan period.

3.52 Other professional services (including R&D) is forecast to remain the largest of the key sectors in terms of growth and total employment, making up between 33% – 37% of the key sector growth. This is followed by health (20% - 25% of key sector growth), and IT services.

Table 3.2 Employment results for key sectors, Greater Cambridge

Sector	2023	Central 2045	High 2045	Central Sensitivity 2045	High Sensitivity 2045
Other profess. services (inc. R&D)	24,100	44,200	46,100	37,800	40,700
Health	21,400	34,800	35,500	30,400	30,400
IT services	13,300	19,700	20,600	18,000	19,000
A&E Services	8,500	16,100	16,500	15,400	15,800
HO & Mgmt Consultancy	9,200	15,200	15,700	14,400	14,900
Other manufacturing	1,700	2,600	2,600	2,600	2,600
Total	78,200	132,600	137,000	118,600	123,300

Source: Iceni

Table 3.3 Employment change for key sectors, Greater Cambridge (2024-2045)

Sector	Central	High	Central Sensitivity	High Sensitivity
Other profess. services (inc. R&D)	18,800	20,800	12,500	15,300
Health	13,000	13,700	8,500	8,500
IT services	5,900	6,800	4,300	5,200
A&E Services	7,200	7,600	6,500	6,900
HO & Mgmt Consultancy	5,600	6,100	4,800	5,300
Other manufacturing	800	800	800	800
Total	51,400	55,800	37,400	42,100

Source: Iceni

As shown in the following table, the forecast compound annual growth rates over 21 years are generally lower than the historical rates between 2001-23 (long term cycle) and 2010-2020 (more recent high growth). However, in some cases the forecast growth rates exceed the long-term historical growth rate. There are several reasons why forecast compound growth rates are generally lower than the observed high growth and in some cases long-term rates:

- Periods of low as well as high growth would be expected over a 21-year future period, meaning that the high-growth (2010-2020) rate may not be able to be sustained.

- The forecasts are based around the continuation of past high rates of absolute growth (i.e. additional employment per year). Over time as the employment base grows, this represents a lower compound annual growth rate. Sustaining high compound rates for sectors that start at a relatively small base leads to unreasonable absolute growth (e.g. a sector of 1,000 jobs which grows by 15% or 150 jobs reaches

1,150 after one year – however a sector of 20,000 growing 15% is 3,000 additional jobs – thus compound rates usually fall as sectors get larger).

- The general decline in compound growth rates in the future compared to the past is indicative of continued maturation of the local economy in Greater Cambridge, whereby growth rates would be expected to stabilise or decline slightly over time.

Table 3.4 Compound annual growth rates of key sectors, Greater Cambridge

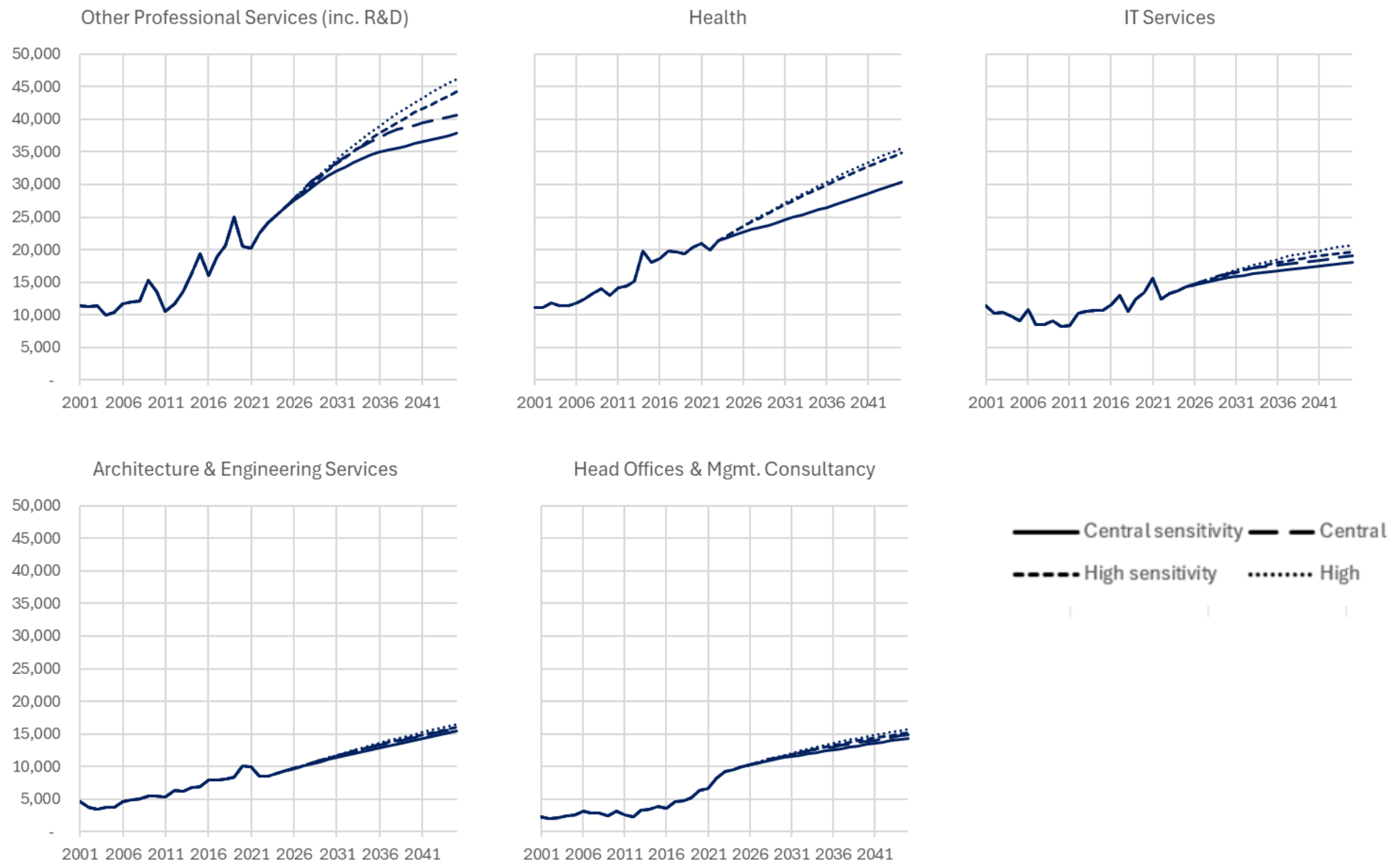
Services	2001-23	2010-20	Central 2024-45	Central Sensitivity 2024-45	High 2024-45	High Sensitivity 2024-45
Other profess. services (inc. R&D)	3.4%	5.3%	2.3%	1.9%	2.9%	2.7%
Health	3.0%	3.9%	1.6%	1.6%	2.3%	2.2%
IT services	0.7%	4.8%	1.5%	1.3%	1.9%	1.7%
A&E Services	2.8%	5.7%	2.8%	2.6%	3.0%	2.9%
HO & Mgmt Consultancy	6.4%	8.4%	2.1%	1.9%	2.4%	2.2%
Other manufacturing	1.9%	4.2%	1.8%	1.8%	1.8%	1.8%
Total	2.8%	5.1%	2.0%	1.8%	2.5%	2.3%

Source: Iceni

3.53 More information on how the forecasts for each sector compare to historical growth rates and cycles is provided in a series of illustrations in Figure 3.5 below.

3.54 The greatest differences between the different forecasts are present for the Other Professional Services and Health sectors, partly as a result of the size of these sectors and partly reflecting the higher growth rates seen in these sectors between 2010 - 2020 compared to 2001 - 2023.

Figure 3.5 Employment forecasts for key sectors (Greater Cambridge)



Total employment

3.55 Overall, the scenarios report between around 67,600 and 90,900 additional jobs to be added to Greater Cambridge over the 21-year period between 2024 and 2045 (see Table 3.5 and Figure 3.6 below). This compares to 66,600 and 75,800 additional jobs under the previous results. The year 2023 is included as this is the latest BRES publication at the time of writing (BRES data adjusted as noted elsewhere).

Table 3.5 Total employment results under previous scenarios (Greater Cambridge)

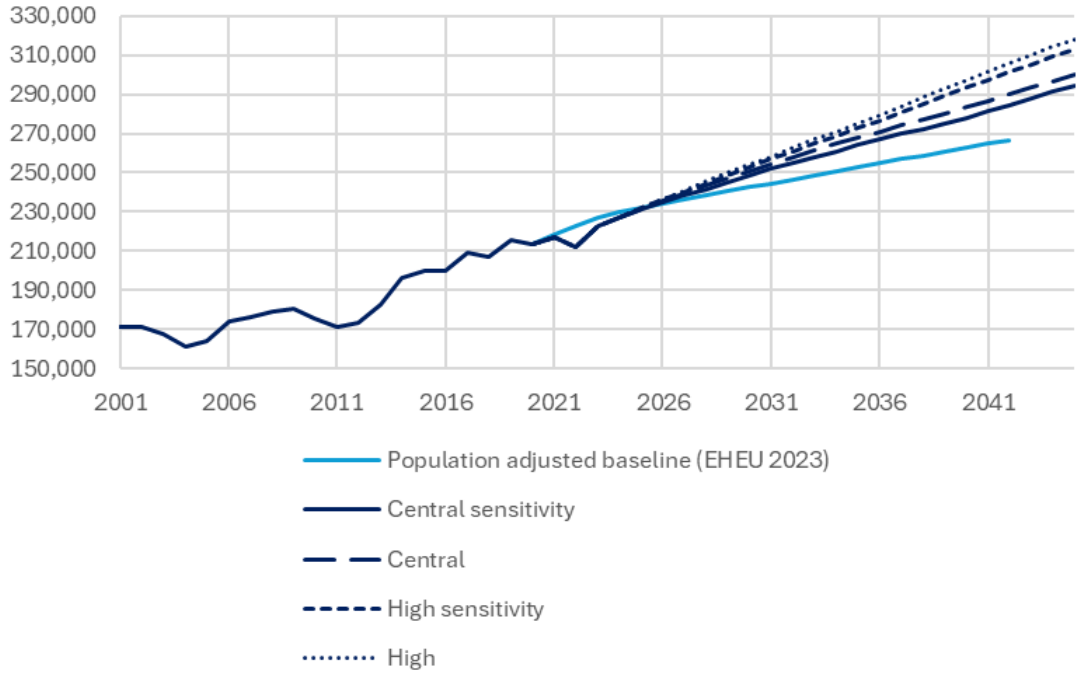
Previous scenarios at 2023	2020	2023	2041	Change (20 - 41)
Central (2023)	213,595	229,500	280,300	66,700
High (2023)	213,595	229,403	289,400	75,800

Table 3.6 Total employment results under revised scenarios (Greater Cambridge)

Revised scenarios 2025	2023	2024	2041	2045	Change (24 – 45)
Central (2025)	222,757	227,000	286,900	300,200	73,200
High (2025)	222,757	227,000	301,800	318,300	90,900
Central Sensitivity (2023, updated)	222,757	227,400	281,200	294,600	67,600
High Sensitivity (2023, updated)	222,757	227,400	297,600	313,200	85,900

Note: Forecast results are rounded to the nearest 100. The reported change may appear to be different than the difference between columns due to this rounding.

Figure 3.6 Total Greater Cambridge employment results



Source: Iceni 2025

3.56 Figure 3.6 above is helpful in illustrating that all the scenarios (above the population adjusted baseline) would see a sustained level of strong growth with little downside in cyclical variation.

3.57 The key differences between EHEU 2023 and 2025 results include:

- Employment in 2023 (the adjusted BRES data) is around 7,000 jobs under the levels previously forecast, as a result of slower than forecast growth during and immediately after COVID-19 (noting the questions around the accuracy of the BRES data discussed earlier in this chapter).
- Additional population-driven and industrial-driven growth counteracts reduced BRES growth.
- The new Central and High scenarios increase growth in key sectors, which in combination with the increased population-driven and industrial-driven employment lead to levels of change over 21 years outpacing that of the previous scenarios (Sensitivity labels).

Recommendations for development planning

3.58 It is necessary to consider which of the scenarios are the most likely outcome to assist the Local Plan development. The following table provides further comparisons between historical and forecast growth rates in order to better contextualise the reasonableness of each scenario.

Table 3.7 Comparison of growth rates between historical data and forecast scenarios, Greater Cambridge 2024-45

Year	Average annual change	CAGR (Historical)	21-year change	CAGR (21-year change from 2024)
1991 - 2023	2,555	1.44%	53,654	1.03%
2001 - 2023	2,356	1.21%	49,486	0.96%
2010 - 2023	3,624	1.84%	76,094	1.41%
2010 – 2020	3,985	2.07%	83,688	1.50%
Central	**3,490**	**-**	**73,200**	**1.34%**
Central sensitivity	3,220	-	67,600	1.25%
High	4,330	-	90,900	1.62%
High sensitivity	4,090	-	85,900	1.54%

Source: Iceni Projects

3.59 Through the fastest growth phase of the decade to 2020, the economy grew by almost 4,000 jobs per annum, although this included a bounce back from a trough in 2010-12. BRES based analysis suggests that this slowed during COVID-19.

3.60 The updated Central scenario is considered the most likely outcome. This relies on much of the future period seeing (very) strong growth of around 3,500 additional jobs per annum or more, which is higher than the 2001-23 rate, so in part relies on the growing economic base, but also builds in an assumption that there will be slower or contracting periods and unforeseen

shocks, which is likely in most economies. The **central is the preferred scenario** based on the data available.

3.61 For the High (latest) and High Sensitivity (2023 EHEU based) scenarios to be achieved, the economy would need to sustain and exceed this 2010-2020 level of absolute growth for the next twenty years. A larger economic base does make this more achievable, however it would mean continuous expansion with limited or no shocks or cyclical periods of low growth, which are effected by national and global conditions. The 2010 start year of assessment also represents a low year (see figure 3.9) whereas 2001 is more balanced. Furthermore, as per Figure 3.5, the life sciences sector in particular will need to perform very strongly throughout the period particularly through the late 2030s and into the 2040s.

3.62 It is important to acknowledge that the high scenarios could be achieved or exceeded. For this to take place it is considered that a step change in infrastructure investment and development would be needed to facilitate growth, notably in transport to connect in and move labour, as well as in wider services infrastructure and the expansion of both housing and commercial development programmes. As a parallel, Milton Keynes in the 1980s and 1990s saw huge population and economic growth derived from an unrivalled programme of investment and development. Effectively, the higher scenarios here would be a policy on approach, but are not considered the most likely outcome based on the data and balance of probability, with even the central scenarios still being very large population and economic growth in a period of macro economic uncertainty.

4. Relationship Between Housing and Economic Growth

4.1 The analysis below considers the relationship between housing and economic growth; seeking to understand what level of jobs might be supported by the population growth associated with the Standard Method, and resulting changes to the local labour supply. It then considers the relationship between economic growth and housing, and what levels of housing are required under different economic outcomes.

4.2 To look at estimates of the job growth to be supported by Standard Method associated housing delivery, a series of stages are undertaken. These can be summarised as:

- Estimate changes to the economically active population (this provides an estimate of the change in labour-supply);
- Overlay information about commuting patterns, double jobbing (i.e. the fact that some people have more than one job) and potential changes to unemployment; and
- Bringing together this information will provide an estimate of the potential job growth supported by the population projections.

4.3 The above assumptions are then applied in revers to consider the link between the economy and housing.

Growth in Resident Labour Supply

4.4 The approach taken in this report is to derive a series of age and sex specific economic activity rates and use these to estimate how many people in the population will be economically active across the projection period. This is a fairly typical approach with data being drawn in this instance from the Office for Budget Responsibility (OBR) – July 2018 (Fiscal Sustainability

Report) – this data has then been rebased to information in the 2021 Census (on age, sex and economic activity).

4.5 The table below shows the assumptions made. The analysis shows that the main changes to economic activity rates are projected to be in the 60-69 age groups – this will to a considerable degree link to changes to pensionable age, as well as general trends in the number of older people working for longer (which in itself is linked to general reductions in pension provision).

Table 4.1 Projected changes to economic activity rates (2024 and 2045) – Greater Cambridge

Age	Males 2024	Males 2045	Males Change	Females 2024	Females 2045	Females Change
16-19	25.4%	25.9%	0.5%	24.6%	25.1%	0.4%
20-24	45.0%	45.0%	0.0%	48.1%	48.1%	0.0%
25-29	77.8%	77.8%	0.0%	77.9%	77.9%	0.0%
30-34	89.9%	89.9%	0.0%	84.0%	84.0%	0.0%
35-39	92.3%	92.2%	-0.2%	84.2%	85.1%	0.9%
40-44	92.2%	91.4%	-0.9%	84.6%	86.6%	2.1%
45-49	92.1%	90.9%	-1.2%	84.4%	87.9%	3.5%
50-54	90.2%	89.4%	-0.8%	81.3%	85.4%	4.1%
55-59	84.2%	83.4%	-0.8%	76.3%	79.5%	3.2%
60-64	73.4%	77.4%	4.1%	62.2%	68.1%	5.9%
65-69	40.3%	53.7%	13.4%	31.2%	44.8%	13.6%
70-74	18.4%	22.1%	3.6%	10.1%	17.1%	6.9%
75-89	8.4%	8.9%	0.4%	3.7%	6.5%	2.7%

Source: Based on OBR and Census (2021)

4.6 Working through an analysis of age and sex specific economic activity rates it is possible to estimate the overall change in the number of economically active people in the area – this is set out in the table below (linking to 10-year trends and the Standard Method).

4.7 The analysis shows that under the Standard Method the economically active population would grow by 57,500 people (a 35% increase from 2024 levels). The 10-year trend is also shown for context, and would result in a lower level of growth in the economically-active population of 38,700 people (a 23% increase).

Table 4.2 Estimated change to the economically active population (2024-45) – Greater Cambridge

Population projection	Economically active (2024)	Economically active (2045)	Total change in economically active	% change
10-year trend	165,795	204,493	38,697	23.3%
Standard Method	165,828	222,929	57,101	34.4%

Source: Derived from demographic projections

Linking Changes to Resident Labour Supply and Job Growth

4.8 To convert economically active people into jobs supported, three main factors need to be considered:

- **Commuting patterns** – where an area sees more people in-commute for work than out-commute it may be the case that a higher level of increase in the economically active population would reduce the demand from other areas for sufficient workforce for a given number of jobs (and vice versa where there is net out-commuting);
- **Double jobbing** – some people hold down more than one job and therefore the number of workers required will be slightly lower than the number of jobs; and
- **Unemployment** – if unemployment were to fall then the growth in the economically active population would not need to be as large as the growth in jobs (and vice versa).

Commuting Patterns

4.9 The tables below show summary data about commuting to and from Greater Cambridge from the 2011 and 2021 Census (being the only available data-sources).

Table 4.3 Commuting patterns – Greater Cambridge – 2011

Commuting patterns	Cambridge	South Cambridgeshire	Greater Cambridge
Live and work in Local Authority (LA)	33,704	23,832	89,175
Home workers or no fixed workplace	9,773	16,157	25,930
In-commute	51,299	34,983	54,517
Out-commute	16,388	39,701	23,889
Total working in LA	94,776	74,972	169,748
Total living in LA (and working)	59,865	79,690	139,555
Commuting ratio	0.632	1.063	0.822

Source: 2011 Census

Table 4.4 Commuting patterns – Greater Cambridge – 2021

Commuting patterns	Cambridge	South Cambridgeshire	Greater Cambridge
Live and work in Local Authority (LA)	22,895	14,669	56,952
Home workers or no fixed workplace	37,294	44,530	81,824
In-commute	32,681	22,864	36,157
Out-commute	10,402	23,075	13,626
Total working in LA	92,870	82,063	174,933
Total living in LA (and working)	70,591	82,274	152,865
Commuting ratio	0.760	1.003	0.874

Source: 2021 Census

4.10 The level of net commuting is shown as the commuting ratio in the final row of the tables and is calculated as the number of people living in an area (and working) divided by the number of people working in the area (regardless of where they live).

4.11 For the whole of Greater Cambridge, the data shows a degree of net in-commuting for work in both Census 2011 and 2021, but this was notably lower in 2021. That is, the 2021 commuting ratio is higher, indicating more self-containment, with a lower proportion commuting to work into Greater Cambridge from outside the area during the week before the 2021 Census, which would be expected due to lock down enforcement at the time.

4.12 There are evident issues associated with both commuting datasets. 2011 has the drawback of being highly dated. However the 2021 data is heavily influenced by the COVID-19 pandemic movement restrictions in place at the time. There is as expected a large increase in the number of home workers (or those of no fixed workplace) in 2021 compared with 2011. However with the lifting of restrictions and the return to normal working patterns, the 2021 data can be considered unreliable.

4.13 The 2021 ratio points to a lower level of net in-commuting, which means that fewer in-commuters from outside Greater Cambridge will be 'relied upon' for supporting ongoing growth.

4.14 However, given the uncertainty associated with the 2021 data as well as proposed major transport investment in the plan period (EWR), which would facilitate greater in-flows, **the 2011 census is considered to provide the most reasonable position for modelling**. This is in line with Iceni's approach elsewhere including the Breckland HEDNA 2024 and Coventry and Warwickshire HEDNA 2022, which draw on Census 2021 data in some respects but not for commuting purposes.

4.15 Commuting datasets are not updated regularly and no suitable alternative has been found to further test these issues further.

Double Jobbing

4.16 The analysis also considers that a number of people may have more than one job (double jobbing). This can be calculated as the number of people working in the local authority divided by the number of jobs.

4.17 Data from the Annual Population Survey (available on the NOMIS website) for the past 15-years average (for which data exists) suggests across Greater Cambridge that typically about 5.3% of workers have a second job. It has therefore been assumed that around 5.3% of people will have more than one job moving forward – this means the number of jobs supported by the workforce will be around 5.3% higher than workforce growth. It has been assumed in the analysis that the level of double jobbing will remain constant over time.

Unemployment

4.18 The last analysis when looking at the link between jobs and resident labour supply is a consideration of unemployment. Essentially, this is considering if there is any latent labour force that could move back into employment to take up new jobs. This is particularly important given there is likely to have been notable increases in unemployment due to Covid-19, although it will be difficult to be precise about numbers.

4.19 Given the estimates of economic activity and job growth are taken from mid-2024 it is considered that there is no need to include a further adjustment to take account of the pandemic. Essentially, it is assumed that people who lost employment through the pandemic will now be back in work (if they are seeking work) and so there is no latent labour supply available to fill additional jobs.

Jobs Supported by Growth in the Resident Labour Force

4.20 The tables below show how many additional jobs might be supported by population growth under the different projection scenarios. It is estimated under the Standard Method that around 73,900 additional jobs could be

supported by the changes to the resident labour supply over the 2024-45 period using the preferred 2011 Census commuting ratios.

Table 4.5 Jobs supported by demographic projections 2024-45 – Greater Cambridge

Trend	Total change in economically active	Allowance for double jobbing	Allowance for net commuting (= jobs supported) (2011 Census)
10-year trend	38,697	40,874	49,717
Standard Method	57,101	60,762	73,362

Source: Iceni analysis

4.21 For the job scenarios considered (as shown below) it is notable that the Central scenario (the preferred scenario) provides a very similar number of jobs to the standard method under 2011 Census commuting assumptions:

- **Central – 73,248 jobs;**
- Sensitivity Central – 67,608 jobs;
- High – 90,936 jobs and
- Sensitivity High – 85,864 jobs

4.22 Under the current methodology (since December 2024), the Standard Method housing need changes periodically when affordability ratios or baseline housing stock statistics are updated. Relatively minor amendments are expected with each new statistical release, which will lead to minor amendments to the number of jobs supported by the Standard Method. For small changes in the Standard Method number of homes, the percentage change in number of homes would be roughly similar (although not necessarily identical) to the percentage change in jobs supported.

Economic-led Housing Need

4.23 To look at estimates of the numbers of homes required to support jobs growth, the method followed is identical to that for translating homes into jobs but completed in reverse to get to a population growth. In essence within the modelling, migration is changed to support the additional employment. The stages of the modelling can be summarised as:

- Start with estimates of job growth;
- Estimate changes required to the economically active population to meet the jobs growth – this takes account of information about commuting patterns, and double jobbing (i.e. the fact that some people have more than one job);
- Flex levels of migration within the demographic model so that the change in the economically active population equals the change required to meet the number of jobs (migration can be ‘flexed’ up or down with stronger economic growth resulting in higher net in-migration as more people are required in the labour supply); and
- Apply household representative rates to the resulting population projection and apply a vacancy allowance to calculate the number of households and dwellings needed.

4.24 The extent of additional migration necessary is however influenced by the commuting assumption made. A consistent approach is taken to that in the 2023 EHEU. This means that a 1-1 relationship between jobs growth and labour supply in Greater Cambridge is modelled beyond that supported by the Census 2011 ratio; such that the additional jobs growth above the level supported by the standard method is accommodated by additional workforce within Greater Cambridge alone.

4.25 Drawing through the modelling assumptions set out above, the tables below show estimates of housing need required to support the job growth scenarios. The analysis shows a range of need across the study area of between 2,150 and 2,963 dwellings per annum.

4.26 For Census 2011 commuting assumptions, the central scenario shows a need for 2,292 dwellings per annum, which is virtually identical to jobs supported by the standard method (2,295). As discussed above, this is the preferred set of commuting assumptions.

Table 4.6 Projected housing need – range of job growth forecasts – Greater Cambridge (2024-45, Census 2011 commuting)

Housing need	House-holds 2024	House-holds 2045	Change in house-holds	Per annum	Dwellings (per annum)
Central	124,775	171,509	46,733	2,225	**2,292**
Central Sensitivity	124,775	168,618	43,842	2,088	2,150
High	124,775	182,462	57,687	2,747	2,829
High Sensitivity	124,775	179,300	54,524	2,596	2,674
Standard method	-	-	-	-	**2,295**

Source: Iceni analysis

4.27 The implied housing requirements under each scenario should remain essentially unchanged by small changes to the Standard Method housing need in the future. As such, the implied dwelling requirements (e.g. 2,292 dpa under the Central Scenario) can continue to be compared to the Standard Method housing need as the Standard Method is updated with new affordability and housing stock baseline data (under the current December 2024 methodology).

4.28 It is of note that whilst the trend based population is an input to the economic models (central / high etc) as these are uplifted further for other economic growth factors, it is then the case that a greater population is needed (than trend) to support the anticipated growth. The alignment above between central scenario and standard method dwelling counts above indicates that population growth broadly in line with the standard method model (see section 2) is needed to meet the central scenario economic growth, assuming the 2011 Census commuting.

4.29 The economic-led housing need shown above is lower than that calculated in the 2023 EHEU, despite higher levels of forecast jobs growth. This comparison is shown in the table below.

Table 4.7 Comparison of forecast jobs growth and economic led housing need between current and 2023 EHEU studies

Scenario	Change in jobs	Change in dwellings	Dwellings per annum
Central scenario (2024-45)	73,200	48,132	2,292
2023 EHEU Central scenario (2020-41)	66,600	51,723	2,463

Source: Iceni analysis

4.30 In both cases economic led housing need has been calculated from jobs forecasts using a series of demographic assumptions (as explored in this chapter and in Chapter 2). Between the two studies, several changes in

demographic assumptions and the underlying data sources have led to the divergences of employment and housing results.

4.31 In multiple ways these changes reflect the availability of more up-to-date data, noting that the data sources used in the 2023 EHEU (while up-to-date at the time) did not fully incorporate the results of the 2021 census. Specific changes include:

- Slightly lower household representative rates have been assumed in the future, consistent with data from the 2021 census. This means that average household sizes are slightly larger, and so fewer dwellings are needed to house the same population.
- There has been a shift in population-age distribution towards working age people, consistent with more up-to-date population estimate data. This means that working age people make up a higher proportion of the population, and so less population growth (and fewer dwellings) are required relative the number of local jobs.
- The standard method housing need is higher (2,295 vs 1,769 previously). In both studies a consistent approach to commuting assumptions has been used, with Census 2011 commuting assumptions applied up to the population supported by the standard method, and 1:1 commuting assumptions above this. As Greater Cambridge's commuting ratio is below 1, more in-commuting is therefore assumed in the updated results than in the 2023 EHEU. This means a lower local population (and so fewer dwellings) is required relative to the number of local jobs.

Summary

4.32 This section examines the relationship between jobs and homes.

4.33 The preferred employment scenario (Central 73,248 jobs) shows a similar level of jobs to be supported by the Standard Method (73,362).

4.34 For preferred commuting assumptions from Census 2011, the central scenario shows a need for 2,292 dwellings per annum, which is virtually identical to the Standard Method of 2,295.

4.35 Planning for the Standard Method therefore broadly supports the labour needed for these outcomes.

4.36 Regardless of the commuting assumptions, the high / high sensitivity scenarios are not met by the Standard Method employment levels.

5. Employment land need

Labour demand and supply models

Method

5.1 A labour demand modelling approach has been used to convert the employment forecasts from Chapter 3 into employment land need. This model includes the following steps. A labour supply model has not been developed as the central jobs scenario and standard method jobs supported effectively come to the same count, so there is no additional insight gained from running this as a separate land need.

5.2 First, employment is converted into FTE for each sector. This conversion uses ratios relating to employment to FTE which have been calculated from sector by sector BRES data for Greater Cambridge. The ratios have been updated from those used previously (2023 EHEU) in line with the 2023 BRES data.

5.3 Secondly, FTE by sector is converted to FTE by land use class. This conversion uses a sector vs use class matrix which is consistent with the matrix used in previous modelling, and which was developed quantitatively to reflect the likely land use mix for each sector in Greater Cambridge. At this step an assumption is also made around the proportion of employment that is entirely remote (which again is consistent with previous assumptions).

5.4 Finally, FTE by land use class is converted to floorspace by use class. Land use densities assumptions for this step were in line with those for the 2020 ELEDS densities, which were also used in the 2022 update:

- Office (E(g)(i)): an average of 11 sqm NIA and 14 sqm GEA per employee

- R&D (E(g)(ii)): an average of 28 sqm GEA per employee based on local data;
- Industrial (E(g)(iii)/B2): a blended average 44 sqm GEA per employee, reflecting a blend of 36 sqm GIA for B2 and 47 sqm GIA for E(g)(iii) (former B1(c))
- Warehouse/ Distribution (B8): an average of 70 sqm GEA per employee. This is the lower of the range of employment densities for B8 activities, reflecting the type of warehousing in the area more typified to final mile than regional / national distribution.

Results

5.5 Applying the method listed above produces the following floorspace requirements over the 21-year period 2024-2045.

Table 5.1 Labour-demand based floorspace need results, Greater Cambridge 2024-45

Need results	Office	R&D	Industry	Warehouse	Total
Central	215,900	302,700	2,800	81,000	602,500
Central sensitivity	238,200	371,200	3,500	86,700	699,600
High	261,700	454,000	7,600	99,400	822,700
High sensitivity	281,800	501,000	7,900	104,300	894,900

Source: Iceni

Flexible margin and future vacancy capacity

5.6 As per the 2023 EHEU Iceni considers it good practice to include a flexible margin to account for:

- The potential error margin with the forecasts;
- Providing a choice of sites to facilitate competition; and
- Providing flexibility to allow for any delays in sites coming forward.

5.7 Such a margin is typically based on 2 or 5 years of average gross completions or around 20% of total needs. Iceni considers a 2 year margin appropriate and proportionate to the scale of needs, noting that the employment scenarios already provide a range of potential outcomes. Providing a 2-year margin is consistent with the approach previously used. Application of these figures results in the below requirements.

5.8 In addition, a further 7.5% of the need is added to reflect the expectation that a level of vacancy is necessary in stock to allow for choice and churn – this is also consistent with the previous approach.

Table 5.2 Labour-demand based floorspace need results, Greater Cambridge 2024-45 including flexible margin and 7.5% vacancy, 2024-45

Need results	Office	R&D	Industry	Warehouse	Total
Central	278,600	380,800	22,100	103,500	785,000
Central sensitivity	302,600	454,400	22,800	109,600	889,400
High	327,800	543,400	27,300	123,200	1,021,700
High sensitivity	349,500	593,900	27,500	128,500	1,099,400

Completions forecast

5.9 Iceni has considered completions trends. These provide an indication of market demand, other than where there have been land supply restrictions.

5.10 Completions (and market absorption models, see later) can be particularly useful for industrial and logistics market forecasting where labour demand models are considered increasingly ineffective in reporting future floorspace needs. This is due to changes in floorspace and jobs densities, partly due to space gains required related to productivity based investment in space /

plant, and not necessarily labour growth. There are also issues around replacement of aged or lost commercial premises that drive demand.

5.11 A roll forward of completions would assume future needs being of a similar pattern to the past. This draws on latest data from the councils (net and gross) as reported in AMRs. This data is shown by use type in the figures below.

Figure 5.1 Gross / net yearly completions – Greater Cambridge (sqm)

Note – Blue (right) is net, black (left bar) is gross. Average for period shows with dotted blue line.

Source: Iceni Projects based on GCSP data

5.12 The datasets for this 2011/12 to 2023/24 period have been annualised and projected forward to the 2024-45 period as below.

Table 5.3 Completions-based floorspace requirements 2024-45 (sqm)

Type	S Camb Net	S Camb Gross	Camb Net	Camb Gross	Gr Camb Net	Gr Camb Gross
B1 Mix	60,500	75,100	32,400	55,800	92,900	130,900
Office	65,300	134,300	79,800	254,600	145,100	388,900
R&D	207,200	246,500	206,200	228,800	413,400	475,300
Light Ind.	28,200	57,000	-10,500	8,300	17,700	65,300
Industrial	-20,500	103,300	-5,700	17,600	-26,200	120,900
Warehousing	73,000	139,100	-39,700	20,800	33,300	159,900
Total	413,600	755,200	262,600	585,900	676,200	1,341,100

5.13 These results represent a slight drop in floorspace compared with the 2023 EHEU results (which were for the period 2020-41), due to generally lower levels completions in 2021/22-23/24 than the average over the earlier part of the period. The figures nonetheless indicate substantial potential demand for floorspace of a variety of types, particularly for office and R&D.

Market signals

5.14 A model that rolls forwards the trends in lease deals is also set out here, consistent with the previous report.

5.15 This approach ideally relies on good quality local data on net absorption, being lease deals minus lease exits (breaks). However, CoStar data which Iceni has access to doesn't pick up all transactions particularly for smaller deals, and doesn't clearly differentiate R&D deals from industrial and offices. Office data is likely to include R&D transactions, hence the scale of office absorption from CoStar. To try and overcome this issue we have considered data from Bidwells, some of which has been provided directly (2022 and updated using later market reports for 2024). This again does not entirely suit the exercise as this is for all deals (gross absorption) excluding

exits, and the study areas do not match completely as Bidwells' study area is reportedly for the County, so the figures will be too high. A further potential issue is that with low availability, absorption will be suppressed, so figures may under estimate need.

5.16 The limitations of this exercise are accepted but notwithstanding it is considered useful to provide a general market direction and assist in triangulating against other methods. The table below summarises the modelled outputs.

Table 5.4 Market signals-based floorspace requirements, 2024-45 (sqm)

Type	CoStar net annual average 10y	CoStar 10y roll forward to 2045	CoStar net annual average 5y	CoStar 5y roll forward to 2045	Bidwells gross annual average 5y	Bidwells roll forward to 2045
Office	25,400	533,000	25,400	542,400	29,700	623,200
Industrial*	12,700	270,000	13,100	275,000	44,800	940,300
R&D	-	-	-	-	15,500	326,400

* Filtered out R&D deals, although these may appear in office data. Due to data availability, warehousing and general industrial are combined.

Source: Iceni analysis of data from CoStar 2024 (to year ending 2023), Bidwells Market Report 2024

5.17 The figures indicate:

- The office trend is strong using data up to end 2023 with 2022 seeing a bounce back from slower leasing during COVID-19. Emerging results for 2024 however suggest negative net absorption. Some R&D space absorption is presumed to be captured in the office type figures.
- Strong demand in industrial with figures exceeding the previous EHEU outcomes (that relied on up to year end 2021 inputs) reflecting good demand in recent years.

- The R&D data is lower and Bidwells deals may under-represent the market demand potential in this instance.

Replacement demand

5.18 As per the 2023 EHEU, Iceni considers it appropriate to consider the need to make provision for industrial spaces that may be lost in the future and not readily compensated for, thus suppressing the amount of space available. Many existing industrial premises are older stock and may not be fit for modern business purposes, particularly when considering the plan period ahead. The need for this adjustment is one of the reasons why labour demand models alone may fail to forecast future industrial needs, as they do not factor in the loss of older premises that need to be replaced in the future.

5.19 For example, high-level analysis of Co-star data in the 2023 update report noted that if pre-1990 industrial stock needed to be replaced (52% of floorspace in previous analysis), and 50% was replaced on existing sites this would amount to around 100,000sqm of additional need.

5.20 Analysis of historic losses of B2 and B8 space indicate around 13,000 sqm lost per annum between 2011 – 2024, slowing to around 8,300 sqm per annum over the last six years. If stock loss continues between 2024-45 in line with historic rates and between 25-50% of losses are replaced on new sites, there would be a need for floorspace on new sites of around 44,000 – 87,000 sqm under the slower 6-year loss rate or 68,000 – 137,000 sqm under the longer-term loss rate.

5.21 These estimates help to corroborate the way in which we can think about replacement demand. The lower end would better represent the preferred policy position (i.e. protection and intensification of existing sites, which has seen some effect given the reduction in losses), however an increasingly ageing stock as well as pressures on EPC ratings may make this more challenging. The midpoint of the 25% and 50% of the replacement demand

historic rates is c75,000 and 130,000 sqm. On balance 75,000 to 100,000 sqm of replacement demand, as per the 2023 EHEU, appears reasonable.

Suppressed demand

5.22 Suppressed demand models involve taking into account past property market performance, identifying historic periods of low stock availability, and topping up future needs to compensate for the fact that trends on take up and occupancy may have been suppressed due to lack of available space. It is widely recognised that 5-10% (with a 7.5% mid point) availability or vacancy is needed in commercial markets for functionality and enabling business to grow into new space or facilitate inward investment.

5.23 In the case of the industrial market in Greater Cambridge for example, availability has been between 5% – 8% for much of the last decade, but dropping below 5% during COVID-19 in 2021 before starting to rise.

5.24 It is not clear that calculating suppressed demand aligns to the planning practice guidance in the same way as labour demand, supply and past take up models (see PPG Reference ID: 2a-027-20190220). However, Iceni Projects does recognise the value in considering the effects of suppressed demand (see for example Iceni's West Midlands Strategic Employment Sites Study 2024[5]). Such calculations which would normally be applied at a full property market area or functional economic market area (FEMA) level to understand the market interactions. As noted in the Greater Cambridge Employment Land and Economic Development Evidence Study 2020 p16, the FEMA is reported as including: Cambridge; South Cambridgeshire; East Cambridgeshire; Fenland; Huntingdonshire; and Peterborough. For the

5 https://www.birmingham.gov.uk/download/downloads/id/29999/west_midlands_strategic_employment_sites_study_2024.pdf

industrial market this FEMA area includes districts with considerable presence of strategic large scale industrial units which are not present in Greater Cambridge, which distorts the picture. The Greater Cambridge specific industrial need has been explored in the Greater Cambridge Warehouse and Industrial Space Needs 2025, which is included in the needs figure in this paper.

5.25 Given the inclusion of a margin for flexibility and future vacancy; and the focus of assessment being on the Cambridge / South Cambridgeshire districts, a detailed supressed demand model has not been included in this assessment.

5.26 Estimates are that to meet suppressed demand in the local industrial market at a 5% availability rate would be approximate to the recommended need of 317,000 sqm, whereas 8% would be higher at around 360,000 sqm.

5.27 Suppressed demand could theoretically be applied to the office and R&D markets, although these have a closer alignment to labour demand based models than the industrial sector where suppressed demand estimates are usually applied. Whilst labs have seen low availability particularly 2020-2023, good time series data on net absorption in the lab sector is not readily available, so suppression models have not been explored. Furthermore, with significant permissions in recent years, availability reached 7% in 2024, the highest in a decade, according to Bidwells' Cambridge Arc Market Databook Feb 2025. As a result detailed calculations regarding suppressed demand have not been considered.

Future need discussion

5.28 The range of outputs from the previous sections are reported below (first table excluding margin and vacancy adjustments, second table including these). The net absorption model is excluded due to data uncertainties but is included in the sector narrative and recommendations that follow.

5.29 B1 mix (from the completions data) does not make a substantial contribution and influence on the completions trends. Its floorspace has been split 50/50 between office and R&D in the tables below based on discussions with officers and consistent with the previous approach.

Table 5.5 Floorspace needs summary excluding margin and vacancy, Greater Cambridge 2024-45

Use	Central Scenario	High Scenario	10 year net absorption	Completions net	Completions gross
Office	238,200	281,800	533,700	191,600	454,400
R&D	371,200	501,000	326,400	459,900	540,800
Ind.	3,500	7,900	*	-8,500	186,200
Warehouse	86,700	104,300	270,000*	33,000	159,900
Total	699,600	894,900	1,130,100	676,000	1,341,300

Source: Iceni analysis of data from CoStar, Bidwells Market Reports

* Note industrial and housing space combined for 10 year net absorption results

Table 5.6 Floorspace needs summary including margin and vacancy, Greater Cambridge 2024-45

Use	Central Scenario	High Scenario	10 year net absorption	Completions net	Completions gross
Office	302,600	349,500	600,900	252,400	534,900
R&D	454,400	593,900	419,300	549,700	636,700
Ind.	22,800	27,500	*	9,900	219,200
Warehouse	109,600	128,500	317,000*	51,800	188,300
Total	889,400	1,099,400	1,337,200	863,800	1,579,100

Source: Iceni analysis of data from CoStar, Bidwells Market Reports

* Note industrial and warehousing space combined for 10 year net absorption results

Office

5.30 There is broad consistency in office floorspace need between the labour demand scenarios and the net completions trend position. CoStar and

Bidwells suggest higher values, but these may blend in some R&D results and may underestimate the recent effects of COVID-19.

5.31 Forecast continued strong growth in the Greater Cambridge economy leads to strong growth in the need for office space according to labour demand modelling. However, given ongoing hybrid working following COVID-19 and a reduction in demand for office space (albeit less of a reduction than previously anticipated), it is considered unlikely that the need for office space would be significantly higher than indicated by the net completions trend. Taking this and the market signals into account, while planning positively for growth, the central scenario is considered appropriate, being **302,600 sqm** including margin adjustments.

5.32 This is broadly similar to, although slightly higher than the 2023 result (**289,700 sqm**). The difference in results is largely due to changes in employment forecasts.

R&D

5.33 For R&D premises, the net completions trend exceeds all labour demand results except for the high scenario. Completions trend results are buoyed substantially by a large addition of floorspace in 2018-19 (the 2019 Addenbrookes Hospital Campus expansion of c 60,000 sqm). This is unlikely to be included in the Bidwells results (as an institutional take up), and so they are somewhat lower. Without this expansion, the net completions R&D result would be 378,300 sqm or 462,000 sqm including margin and vacancy, which falls between the central and high results.

5.34 These results are lower than those in the 2023 update (net completions trend results of 494,800 sqm or 586,200 sqm including margin and vacancy) as a result of several years of low delivery in 2021-22 and 2022-23 which does not reflect actual market conditions of high demand.

5.35 The R&D labour demand results are based on an employment density of 28 sqm per FTE, based on recent permissions information (as per the 2020 ELEDS). Longer run historic data may have had different densities and the

HCA Densities Guide suggests 40-60 sqm which is considered too low in this instance. The future modelling is highly sensitive to these changes but it is likely that densities in the future would be closer to the higher end of the ranges discussed (28-40 sqm / FTE), given land pressures and build costs in Cambridge.

5.36 The range of outcomes and sensitivities does present some challenges when providing future recommendations. In Iceni's view, looking across the outcomes, a future need of around **600,000 sqm of R&D** is considered appropriate, in line with the results of the 2023 update. This is above the modelled labour requirement needs, reflecting uncertainties in future densities and to provide generously in market choice terms. This need would sit between the net and gross completions trend position, noting that as discussed above the completions trend may be slightly artificially shifted downwards by COVID-19.

Industrial and warehousing

5.37 Iceni considers it appropriate to collate the industrial and warehouse needs.

5.38 Excluding margin and vacancy adjustments, the labour demand scenarios report need in a range between 90,200 sqm – 112,200 sqm. This is higher than the 2023 update results, which were for between 40,000 – 60,000 sqm. The difference is largely due to higher population forecasts which increase the level of forecast industrial employment in several key population serving sectors (including through the further population-driven employment uplift). Demand is also increased by warehousing space requirements partly related to changes in shopping patterns, and due to key sector adjustments to forecast 'other manufacturing' employment.

5.39 These figures are higher than the net completions trend position, but considerably lower than the gross completions trend position.

5.40 The labour demand results are considered too low in the context of market signals, and do not make an allowance for replacement demand. The market absorption rates suggest a need of around 270,000 sqm looking

forwards (10 year Co-star trend). Further adjustments to align it with the EHEU methodology are an uplift for future vacancy requirement of 7.5%, as well as a margin for flexibility[6], which are considered appropriate to include. These components amount to a revised total of around **317,000 sqm** with adjustments. Delivering space to meet this level is assumed to include replacement demand as well as net growth, the additional labour component for which is explored in section 3. This responds positively to the level of market need reported in market indicators and stakeholder feedback.

Supply Balance

5.41 The following table compiles supply information, including commitments and allocations, from the following Greater Cambridge evidence base reports completed by Iceni, both correct at April 2024 (the start of the plan period) and draw from authority monitoring data:

- Greater Cambridge Growth Sectors Study: Life science and ICT locational, land and accommodation needs (September 2024)
- Greater Cambridge Warehouse and Industrial Space Needs (March 2025)

5.42 The second column of this table shows supply in office, R&D and then mixed office / R&D, the latter reflecting schemes that include a mix of office, lab and ICT space, for which a detailed breakdown by space use is not available. In the third column, this space has been notionally split into office and R&D using a 50/50 split (consistent with assumptions used to calculate

[6] Applied is 10%, which is in line with the 2 year margin applied in the EHEU.

demand earlier in this chapter). This allows the balance, which is the supply minus the demand, to be calculated.

5.43 The table reports a positive balance of supply for office / R&D space, but a shortfall regarding industrial space.

Table 5.7 Needs / Supply floorspace balance (m2)

Use	Need (2024-45)	Net supply (As of April 2024) inc. losses	Supply (assigned to main categories)	Balance
Office	302,600	177,162	337,196	34,594
Office / R&D	-	320,067	-	-
R&D	600,000	547,110	707,144	107,144
Industrial	317,000	28,595	28,595	-288,405
Total	1,219,600	1,072,934	1,072,934	-146,666

5.44 As noted, the data used to calculate this supply was current as of April 2024, which is the start of the modelling period used in this report. However, since then several additional large schemes have been approved including:

- Grafton Centre – 47,300 sqm office and R&D
- South of Coldham's Lane – 85,900 sqm office and R&D
- Melbourn Science Park – 27,800 sqm office and R&D
- Land North of Cambridge North Station – 68,000 sqm office and R&D

5.45 These four schemes amount to 229,000 sqm of additional office and R&D space not included in the above table.

5.46 Based on the table above and the additional schemes approved since April 2024, office and R&D floorspace supply clearly exceeds the assessed need. However, there is a shortfall between the net industrial floorspace supply and need of around 290,000 sqm.

5.47 There is a further 91,200 sqm of industrial supply identified in proposed allocations in the emerging plan, which would reduce the shortfall to around 200,000 sqm. It is also noted that there is a gross industrial floorspace supply (as opposed to the net stated above which includes losses) of 106,292 sqm, which indicates that new deliveries are responding to a qualitative need for new space, achieving some of the replacement demand need identified above.

6. Conclusions and recommendations

6.1 Key findings from this report are:

a) Latest demographic data has been used to develop population models for the standard method and trend based, the former exceeding past trends.

b) Recent employment data, notably from BRES, has been used to revisit the employment forecast models, which have been updated to a 2024-2045 period. They have also been adjusted for expected increases in industrial and warehousing workforce jobs derived from market signals in land demand.

c) A revised central scenario is considered the most likely outcome for employment growth, based on available data, which sees around 73,200 additional jobs in Greater Cambridge by 2045. A (revised) higher scenario of 90,900 jobs may be achievable, but is less likely when taking into account future potential economic cycles.

d) The Standard Method housing requirement would support 73,362 jobs using the preferred 2011 commuting assumptions. By comparison, the preferred employment scenario (Central) is for 73,248 jobs, which is therefore supported by the Standard Method under 2011 commuting assumptions.

e) For Census 2011 commuting assumptions (the preferred set of assumptions), the Central scenario shows a need for 2,292 dwellings per annum, which is virtually identical to the Standard Method (2,295). For Census 2021 commuting assumptions, the Central scenario shows a need for 2,422 dwellings per annum.

f) Employment land modelling reports planning for a need of

- 302,600 sqm offices
- 600,000 sqm of R&D
- 317,000 sqm of industrial / warehousing

g) There is a substantial surplus of office and R&D supply in Greater Cambridge compared to this need position (1,044,339 sqm as of April 2024 plus at least a further 229,000 sqm approved since then). There is a shortfall of around 290,000 sqm of industrial space, or 200,000 sqm if proposed emerging Local Plan allocations are accounted for.

A1. Population structure

A1.1 As of mid-2023 (the latest date for which ONS has published mid-year population estimates (MYE)), the population of Greater Cambridge is estimated to be 318,500; this is an increase of around 39,100 people over the previous decade or 14%, which is a notably higher percentage than seen across benchmark areas.

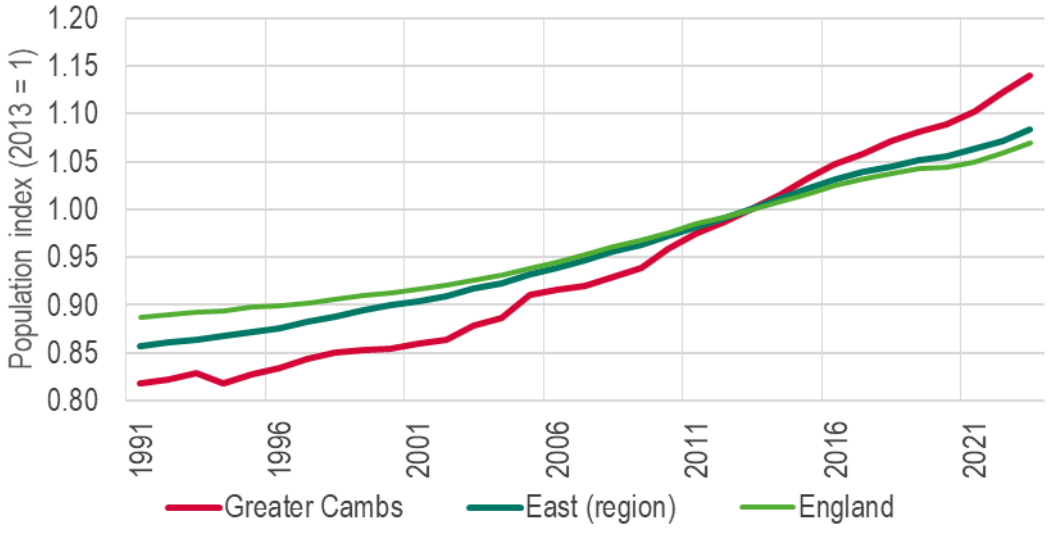
Table A1 Population change (2013-23)

Location	2013	2023	Change	% Change
Greater Cambridge	279,417	318,504	39,087	14.0%
East (region)	5,970,484	6,468,665	498,181	8.3%
England	53,918,686	57,690,323	3,771,637	7.0%

Source: Mid-year population estimates

A1.2 The figure below shows an indexed population change back to 1991 (index to 1 in 2013). This shows population growth to have generally been stronger than seen in other areas and particularly over the past 15-years or so.

Figure A1 Indexed Population Change – 1991-2023

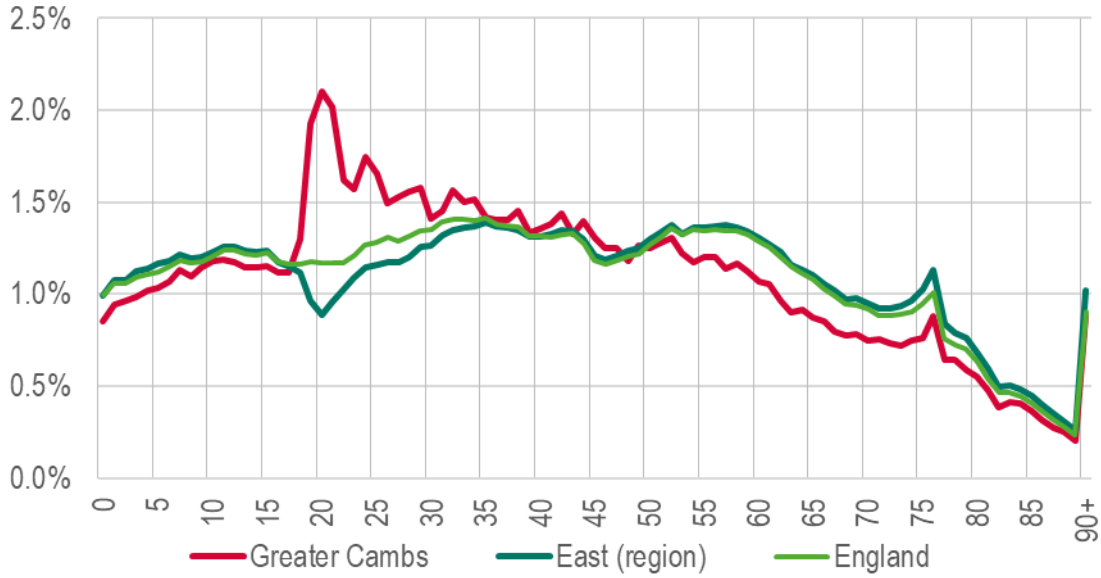


Source: ONS Mid-year population estimates

Age structure

A1.3 The figure below shows the age structure by single year of age (compared with a range of other areas). From this it is clear that Greater Cambridge has a younger age structure, with a lower proportion of the population in all age groups from around age 50. There are also a notably higher proportion of people aged in their late teens and early 20s which will be linked to the student population of Cambridge.

Figure A2 Indexed Population Change – 1991-2023



Source: ONS Mid-year population estimates

A1.4 The analysis below summarises the above information (including total population numbers for Greater Cambridge) by assigning population to three broad age groups (which can generally be described as a) children, b) working age and c) pensionable age). This analysis highlights the higher proportion of people aged 16-64, and a lower proportion of children (aged under 16) and those aged 65+ when compared with other locations.

Table A2 Population profile (2023) – summary age bands

Age	Greater Cambridge	Greater Cambridge	East (Region)	England
-	Population	% of population	% of population	% of population

Under 16	54,866	17.2%	18.8%	18.5%
16-64	213,162	66.9%	61.3%	62.9%
65+	50,476	15.8%	19.9%	18.7%
All Ages	318,504	100.0%	100.0%	100.0%

Source: ONS Mid-year population estimates

Age Structure Changes

A1.5 The figure below shows how the age structure of the population has changed in the 10-year period from 2013 to 2023 – the data used is based on population so will also reflect the increase seen in this period. There have been some changes in the age structure, with increases seen in many age groups. Where there are differences, it is often due to cohort effects (i.e. smaller or larger cohorts of the population getting older over time).

Figure A3 Population age structure (people) (2013 and 2023) – Greater Cambridge

Source: ONS Mid-year population estimates

A1.6 Again, the information above is summarised into the three broad age bands to ease comparison. This shows population increases in all age bands with the highest proportionate increase being amongst those aged 65 and over. However, in total population terms the key growth age group has been

people aged 16-64 – this age group increasing by 24,700 people, accounting for 63% of all population change in the area.

Table A3 Change in population by broad age group (2013-23) – Greater Cambridge

Age	2013	2023	Change	% change
Under 16	48,437	54,866	6,429	13.3%
16-64	188,419	213,162	24,743	13.1%
65+	42,561	50,476	7,915	18.6%
Total	279,417	318,504	39,087	14.0%

Source: ONS Mid-year population estimates

Components of Population Change

A1.7 The table below consider the drivers of population change from 2011 to 2023. The main components of change are natural change (births minus deaths) and net migration (internal/domestic and international). There is also an Unattributable Population Change (UPC) which is a correction made by ONS upon publication of Census data if population has been under or over-estimated (this is only calculated for the 2011-21 period). There are also 'other changes', which are variable (sometimes positive and sometime negative) – these changes are often related to armed forces personnel, prisons or boarding school pupils.

A1.8 The data shows natural change to generally be dropping over time – there are still more births than deaths but the figures are more in balance than was seen a decade or so ago. Migration is variable, and generally positive for international migration and negative for internal (domestic) migration – although this latter point is not consistent for each year. The analysis also shows (for the 2011-21) period a positive level of UPC (totalling around 4,700 people over the 10-year period), this suggests when the 2021 Census was published ONS had previously under-estimated population change.

A1.9 Overall, the data shows a continuing trend of increasing population throughout the period studied.

Table A4 Components of population change, mid-2011 to mid-2023 – Greater Cambridge

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2011/12	1,488	25	1,706	-282	308	3,245
2012/13	1,186	367	2,756	-1,074	370	3,605
2013/14	1,207	198	2,467	135	431	4,438
2014/15	1,016	292	2,954	-22	521	4,761
2015/16	1,238	-889	3,404	-7	472	4,218
2016/17	933	-942	2,266	55	531	2,843
2017/18	906	-342	2,718	3	574	3,859
2018/19	946	-963	2,104	85	476	2,648
2019/20	762	-838	1,879	-69	371	2,105
2020/21	790	-1,347	3,498	230	604	3,775
2021/22	620	523	4,330	-15	0	5,458
2022/23	248	-123	4,827	30	0	4,982

Source: ONS Mid-year population estimates

A2. Employment and population multipliers

Population multipliers

A2.1 Population multipliers were calculated showing how many jobs would expected to be added in each sector given an increase in local residents. These multipliers reflect the additional jobs that would be expected in order to provide services to the additional population in population-driven sectors like retail, hospitality, recreation, and local health and education services.

A2.2 Sector-specific ratios of additional jobs per 1,000 additional residents were used. These ratios were derived from several different sources, with the most reasonable values selected from these sources on a sector by sector basis:

- The additional jobs per additional resident between the previous baseline and population-adjusted baseline forecasts, both of which were provided by Cambridge Econometrics
- The 10th, 25th and 50th percentiles of employment per 1,000 residents in authorities across England and Wales
- Correlations between employment and population in authorities across England and Wales

A2.3 Ratios were only applied in selected sectors where there is a strong relationship between the amount of population and the level of employment, and which do not play a strong business-serving or export-oriented role in the local economy. Key sectors were not included, as they are uplifted elsewhere, and where a sector plays both population-serving and business serving roles (for example financial services), lower multipliers were selected from the range of values.

A2.4 In sum, the calculated ratios suggest that around 175 local jobs will be created per 1,000 additional location residents (excluding health, which as noted in this report is addressed as a key sector instead of population-serving sector). The largest ratios were for retail trade, education, food and beverage services, and residential and social care.

A2.5 When calculating the indirect population-driven (induced) employment uplift, the size of the ratio has been discounted to 155 local jobs per 1,000 additional required residents. This reflects some of this induced job uplift already being captured through the industrial driven jobs uplift which has been calculated separately.

Employment multipliers

A2.6 Multipliers were calculated to reflect the impact of uplifted employment throughout the supply chain.

A2.7 Direct and indirect multipliers were calculated using the UK input-output tables from the UK government along with local employment composition data and high-level assumptions around the proportion of services within each sector likely to be sourced locally rather than from the rest of the UK.

A2.8 Input-output tables, published by the UK Government, show how different industries in the economy are linked by tracking the flow of goods and services between them. They help illustrate how output from one sector is used as input by another, providing insight into the structure of the UK economy.