

Policy-led employment prospects for Cambridgeshire 2007 to 2031

Incorporating East of England Plan (RSS) minimum dwelling targets & Cambridgeshire County Council's population forecasts

February 2009

Introduction

This paper summarises a suite of 'policy-led' employment forecasts for Cambridgeshire and its five constituent districts for the period 2007 to 2031, broken down by main industry sectors. The forecasts are constrained by (i) the new dwelling floor 'targets' incorporated in Policy H1 of the East of England Plan and (ii) by the forecast population considered likely to live in this number of homes.

The East of England Plan covers the period to 2021. For the subsequent ten years it is assumed that the 'residual' annual new dwelling target for the period 2007 to 2021 will continue in each district. The only exception relates to Cambridge City and South Cambridgeshire. This is because it is assumed that Cambridge will be effectively 'built out' by 2021 and new development thereafter has been allocated to neighbouring South Cambridgeshire.

The employment forecasts have been produced by Cambridge Econometrics and build on the 'baseline' projections derived from their Regional Economic Prospects model in November 2008. However the trajectories of population are taken from forecasts produced by Cambridgeshire County Council's Research Group in 2007. These are 'dwelling-led' and are constrained to the 'residual' annual housing targets in the Regional Spatial Strategy (RSS). It is important to note that in some parts of the county this provision can be considered as a 'minimum' as the new build rates achieved in the period 2001 to 2007 exceed the targets. The employment forecasts take some account of the current recession whilst the population forecasts have not been modified to incorporate the economic downturn and any consequent reduction in net in-migration in the period from mid 2008 on.

The first section provides a broad overview at district level and the second looks at specific industry sectors. An annex summarises the population growth and associated labour supply assumed by the 'policy-led' forecast and also examines issues relating to data quality.

Throughout the paper comparisons are made with Cambridge Econometrics' 'trend' employment projections¹. These are written up in detail in a separate technical paper.

Broad overview

Table 1 shows forecast employment in Cambridgeshire districts in 2007, 2021 and 2031 – where the population is constrained to the RSS Policy H1 new dwelling 'minimum' targets.

¹ 'Trend' projections are informed by an analysis of past relative performance at a local level, but they are driven by the forecasts from Cambridge Econometrics' Regional Economic Prospects model. Hence even under the 'trend' projection, there should be no assumption that in absolute terms future performance will be a straight line extrapolation of past growth

Table 1- RSS policy-led forecast of employment 2007, 2021 and 2031, Cambridgeshire districts, '000

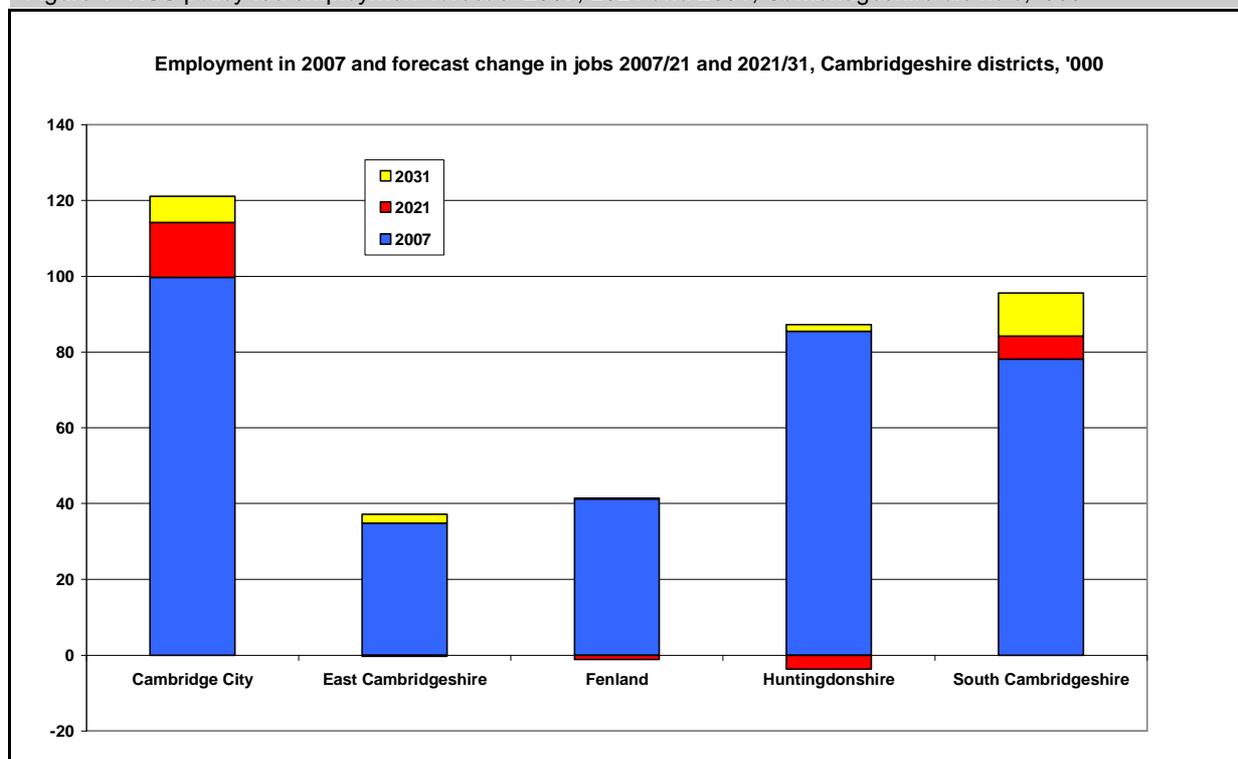
District/area	2007	2021	2031 (trend comp)	2007/21 (% p.a.)	2021/31 (% p.a.)
Cambridge City	99.7	114.2	121.1 (117.1)	14.5 (1%)	6.9 (0.6%)
East Cambridgeshire	34.8	35.2	37.6 (41.4)	0.3 (0.1%)	2.4 (0.7%)
Fenland	41.2	40.1	40.3 (42.7)	-1.1 (-0.2%)	0.2 (0%)
Huntingdonshire	85.5	81.1	83.5 (92.2)	-3.7 (-0.3%)	1.7 (0.2%)
South Cambridgeshire	78.1	84.2	95.6 (93.3)	6.1 (0.6%)	11.4 (1.4%)
Cambridgeshire	339.4	355.4	378 (386.7)	16.0 (0.4%)	22.6 (0.6%)
As compared with 'trend' projection	0.0	-6.1	-8.7	-6.1 (-0.2% p.a.)	-2.6 (-0.1% p.a.)

Source: Cambridge Econometrics, CCC Research Group Note: All figures rounded independently

Table 1 shows that employment growth of 38,600 is forecast between 2007 and 2031 in Cambridgeshire as a whole. In the period 2007 to 2021 virtually all net growth (of 16,000 jobs) occurs in Cambridge City and South Cambridgeshire. Fenland and Huntingdonshire are both forecast to experience a reduction in employment. In the period 2021 to 2031 most of the 22,600 employment growth is accounted for by these two districts. However there is also modest job growth forecast in East Cambridgeshire and Huntingdonshire, with virtually no growth anticipated in Fenland.

As compared with the 'trend' employment projection of 47,300, 'policy-led' job growth in Cambridgeshire over the period 2007 to 2031 is 8,700 lower, (18%). This is 'explained' by the lower population growth anticipated in the County Council's population forecast as compared with the 'trend', which incorporates ONS 2006-based population projections.

Figure 1- RSS policy-led employment forecast 2007, 2021 and 2031, Cambridgeshire districts, '000



Source: Cambridge Econometrics, CCC Research Group

Industry sector analysis overview for Cambridgeshire

Table 2 provides an overview of forecast employment change 2007 to 2021 and from 2021 to 2031 by main industry sector in Cambridgeshire as a whole. Figure 2 provides a breakdown of change over the whole period 2007 to 2031.

Table 2- RSS policy-led forecast of change in employment 2007 to 2031, main industry sectors, Cambridgeshire, '000, (%)

Industry sector	2007	2021	2031	2007/21 (% p.a.)	2021/31 (% p.a.)
Agriculture	8.9	7.8	6.5	-1.1 (-0.9%)	-1.3 (-1.7%)
Mining, quarrying etc	0.1	0.1	0.1	0 (0%)	0 (0%)
Manufacturing	39.8	31.5	25.7	-8.3 (-1.5%)	-5.8 (-1.8%)
Utilities	0.5	0.6	0.6	0.1 (1.4%)	0 (0%)
Construction	22.7	23.2	23.9	0.5 (0.2%)	0.7 (0.3%)
Distribution, hotels & catering	63.7	66.5	70.7	2.8 (0.3%)	4.1 (0.6%)
Transport & communications	14	14.5	15.0	0.5 (0.2%)	0.5 (0.4%)
Financial & business services	74.6	92.2	111.6	17.6 (1.7%)	19.4 (2.1%)
Other services, (education, health, leisure etc.)	115	119.1	124.0	4.0 (0.3%)	4.9 (0.4%)
Total	339.4	355.4	378.0	16.0 (0.3%)	22.6 (0.6%)

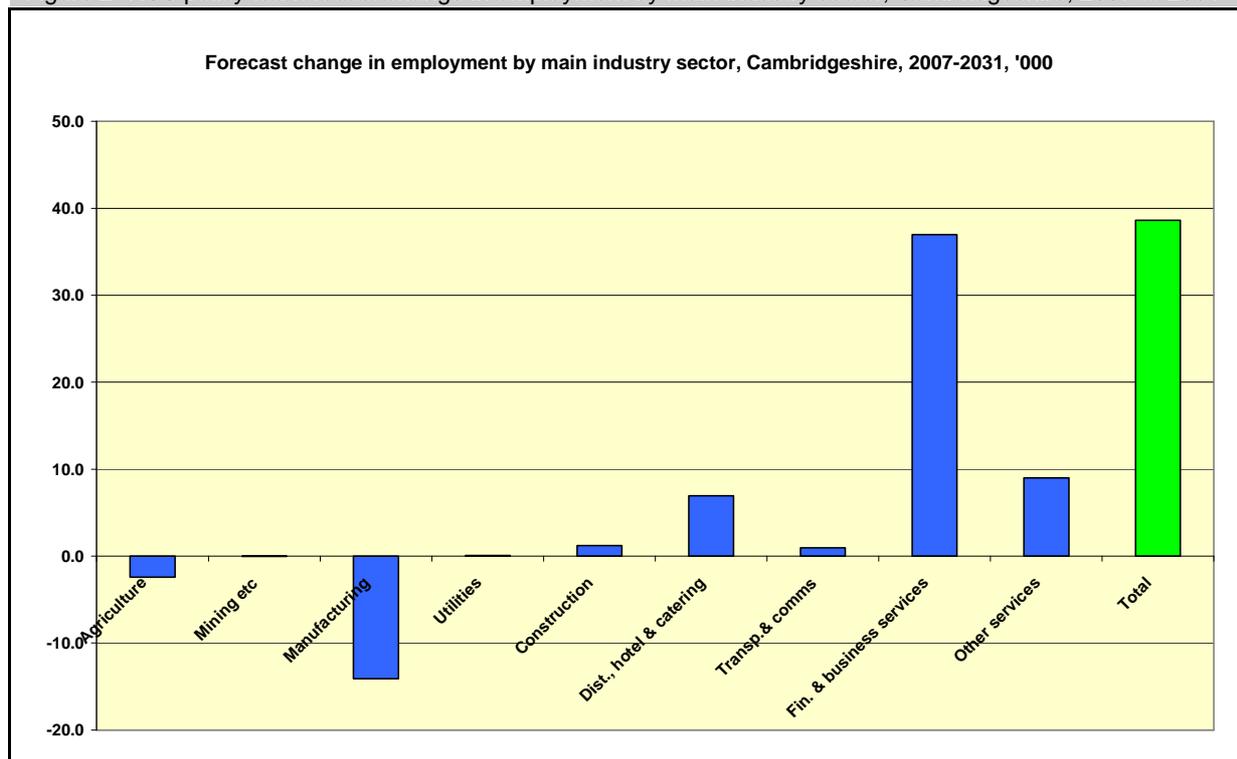
Source: Cambridge Econometrics; CCC Research Group Note: All figures rounded independently

Table 2 shows clearly that job growth forecast in financial and business services outstrips increases expected in all other sectors of the economy, (37,000 between 2007 and 2031). This wide-ranging sector includes computing services, R&D, accountancy and many support services, including employment agencies, security and packing. Consequently some workers classified as 'business services' may in practice be working at the premises of firms in agriculture, transport, retailing or manufacturing.

Other industry sectors forecast to experience a significant increase in jobs include 'other services', (8,900 over the entire period) and distribution, hotels & catering, (6,900). 'Other services' includes the bulk of public sector jobs such as education, police, fire, defence and health & social work. More modest job growth is forecast in construction (1,200) and in transport & communication, (1,000). Very little change in employment is anticipated in quarrying and the utilities/energy sector. Two sectors are expected to undergo a continuing loss of employment – agriculture, (down by 2,400) and manufacturing, with a reduction of over 14,000 jobs between 2007 and 2031.

Table 3 shows the differences in employment growth over the period 2007 to 2031 as between the 'trend' projection and the 'policy-led' forecast by main industry sectors.

Figure 2- RSS policy-led forecast change in employment by main industry sector, Cambridgeshire, 2007 to 2031



Source: Cambridge Econometrics, CCC Research Group

Table 3- Comparison of employment change 2007 to 2031 by main industry sector, 'trend' projection and RSS policy-led forecast, Cambridgeshire, '000

Main industry sector	2007	2031 'trend'	2031 RSS policy-led	2007-2031 'trend' (% p.a.)	2007-2031 RSS policy (% p.a.)
Agriculture	8.9	6.5	6.5	-2.4 (-1.1%)	-2.4 (-1.1%)
Mining, quarrying etc	0.1	0.1	0.1	0 (0%)	0 (0%)
Manufacturing	39.8	25.8	25.8	-14.0 (-1.5%)	-14.0 (-1.5%)
Utilities	0.5	0.6	0.6	0.1 (0.8%)	0.1 (0.8%)
Construction	22.7	24.6	23.9	2.0 (0.3%)	1.2 (0.2%)
Distribution, hotels & catering	63.7	71.9	70.7	8.2 (0.5%)	6.9 (0.5%)
Transport & communications	14	15.2	15	1.2 (0.4%)	1.0 (0.3%)
Financial & business services	74.6	112.7	111.6	38.1 (2.1%)	37.0 (2.1%)
Other services, (education, health, leisure etc)	115	129.1	124	14.1 (0.5%)	9.0 (0.3%)
Total	339.4	386.7	378	47.3 (0.6%)	38.6 (0.5%)

Source: Cambridge Econometrics, CCC Research Group Note: All figures rounded independently

Selected industry sectors

Table 4 looks in more detail at selected industry sectors where job growth might be expected. Professional services are expected to generate an additional 19,700 jobs over the period 2007 to 2031, significantly more than any other sector. Computing services are expected to increase by just over

11,000 jobs, with an annual growth rate of 3.4% or more. Health & social work employment is forecast to increase by 8,600 over the 24 year period. The 'other business services' sector, which includes employment agencies, security and packing, is forecast to grow by 6,300 jobs.

Table 4- Selected industries – RSS policy-led employment forecasts 2007 to 2031, Cambridgeshire, '000 (%)

Selected industry sectors	2007	2021	2031	2007/21 (% p.a.)	2021/31 (% p.a.)
Distribution (wholesale & motor vehicles)	18.3	17.5	17.6	-0.8 (-0.3%)	0.1 (0%)
Retailing	28.2	29.4	31.6	1.3 (0.3%)	2.2 (0.7%)
Hotels & catering	17.2	19.8	21.5	2.5 (1%)	1.7 (0.9%)
Land transport	9.7	10.4	11.0	0.7 (0.5%)	0.6 (0.6%)
Communications	4.4	4.1	4.0	-0.2 (-0.4%)	-0.1 (-0.2%)
Banking & finance	3.9	3.9	3.9	0 (0%)	0 (0.1%)
Computing services	10.7	15.8	21.8	5.1 (3.4%)	6.0 (3.8%)
Professional services	37.6	46.8	57.3	9.2 (1.7%)	10.5 (2.2%)
Other business services	22.2	25.2	28.5	3 (1%)	3.3 (1.3%)
Public administration & defence	18.6	16.9	16.1	-1.7 (-0.6%)	-0.8 (-0.5%)
Education	41.5	41.9	43.0	0.4 (0.1%)	1.1 (0.3%)
Health & social work	36.7	41.3	45.3	4.6 (0.9%)	4.0 (1%)
Miscellaneous services	18.3	18.7	19.6	0.5 (0.2%)	0.9 (0.5%)

Source: Cambridge Econometrics, CCC Research Group Note: All figures rounded independently

Only two other industry sectors are forecast to experience growth of more than 2,000 jobs over the outlook period: hotels & catering, with additional employment amounting to 4,200 and retailing, with an extra 3,500 jobs. Sectors with forecast employment growth of between 1,000 and 2,000 include education, (1,500), 'miscellaneous services', including leisure, (1,300)

It is important to note that a number of sectors are forecast to lose jobs, especially in the first part of the outlook period. Table 4 shows declining employment in the distribution and motor vehicles sector, in communications and in public administration. To this must be added the significant job losses forecast for many manufacturing industries; the following sectors are expected to lose more than 1,000 jobs between 2007 and 2031:

- Wood & paper products 2,400
- Mechanical engineering 1,500
- Rubber & plastics 1,300
- Printing & publishing 1,200
- Food, drink & tobacco 1,100
- Textiles, clothing & leather 1,100

- Non-metal mineral products 1,100

Agriculture is also expected to undergo further job losses amounting to 2,400 by 2031.

As compared with the ‘trend’ employment projection the ‘policy-led’ forecast generally shows lower rates of job growth in the sectors dependent on local consumption – retailing, education, health and leisure services. Construction is also affected by the lower rate of population growth.

Table 5 shows where the forecast job growth and decline by selected industry sectors is expected to impact spatially across Cambridgeshire.

Table 5- Change in projected employment 2007 to 2031, selected industry sectors, by district, '000 & % p.a.

Selected industry sectors	Cambridge City	East Cambs	Fenland	Hunts	South Cambs	Cambs
Agriculture	-0.1 (-2.9%)	-0.5 (0.9%)	-0.7 (-0.9%)	-0.3 (-0.9%)	-0.8 (-1.6%)	-2.4 (-1.1%)
Manufacturing	-1.7 (-1.9%)	-1.3 (-1.5%)	-2.5 (-1.5%)	-4.1 (-1.4%)	-4.4 (-1.4%)	-14.1 (-1.5%)
Construction	0.4 (0.5%)	0.4 (0.5%)	0.1 (0.1%)	0.3 (0.2%)	0 (0%)	1.2 (0.2%)
Distribution	-0.2 (-0.2%)	-0.1 (-0.2%)	0 (0%)	-0.2 (-0.2%)	-0.2 (-0.2%)	-0.7 (-0.2%)
Retailing	1.4 (0.6%)	0.2 (0.3%)	0.3 (0.3%)	0 (0%)	1.6 (1.6%)	3.4 (0.5%)
Hotels & catering	2.3 (1.6%)	0.1 (0.3%)	0.2 (0.5%)	0.2 (0.2%)	1.5 (1.7%)	4.2 (1.0%)
Land transport	0.2 (0.4%)	0.1 (0.2%)	0.1 (0.2%)	0.9 (1.2%)	0.1 (0.4%)	1.3 (0.6%)
Computing services	4.5 (4.3%)	0.7 (5.8%)	0.3 (5.8%)	1.6 (3.5%)	4.0 (4.4%)	11.1 (4.3%)
Professional services	4.6 (1.6%)	2.3 (3.3%)	0.4 (0.9%)	1.7 (1.0%)	10.6 (3.3%)	19.7 (2.2%)
Other business services	1.3 (0.8%)	1.5 (1.5%)	1.0 (1.5%)	1.1 (1.0%)	1.4 (1.5%)	6.2 (1.2%)
Public administration & defence	-0.1 (0%)	-0.2 (-1.0%)	-0.4 (-0.8%)	-1.9 (-0.9%)	0 (0%)	-2.5 (-0.6%)
Education	2.1 (0.4%)	-0.5 (-0.6%)	-0.3 (-0.4%)	-1.1 (-0.7%)	1.3 (0.8%)	1.5 (0.2%)
Health & social work	5.7 (1.9%)	0.4 (0.4%)	0.7 (0.6%)	0.3 (0.1%)	1.6 (0.9%)	8.6 (1.0%)
Miscellaneous services	1.1 (0.9%)	-0.3 (-0.5%)	-0.1 (-0.3%)	-0.3 (-0.3%)	1.0 (1.0%)	1.4 (0.3%)
Total	21.4 (0.9%)	2.7 (0.3%)	-0.9 (-0.1%)	-1.9 (-0.1%)	17.4 (0.9%)	38.6 (0.5%)

Source: Cambridge Econometrics; CCC Research Group Note: All figures rounded independently

In Cambridge City the main growth sectors are forecast to be health & social work (5,700 jobs), professional services (4,600) and computing services (4,500 jobs). Education and hotels & catering are both expected to grow by more than 2,000 jobs. Sectors where employment is forecast to increase by just over 1,000 include retailing, other business services and miscellaneous services, such as leisure. Job losses are forecast in distribution, public administration and manufacturing.

In East Cambridgeshire, where relatively low employment growth overall is forecast between 2007 and 2031, there are industry sectors where growth is anticipated and others where job losses are expected. Professional services are forecast to increase by 2,300 jobs and ‘other business services’, which include employment agency and packing businesses, are expected to expand by 1,500 jobs. Other sectors with modest employment growth forecast include health & social work, computing services, retailing and construction. However, such growth is largely offset by forecast reductions in

employment levels in agriculture, manufacturing, education, miscellaneous services and public administration.

Fenland is forecast to experience net job losses over the period 2007 to 2031, with most employment lost in the period up to 2021. Job growth of 700 or more is anticipated in both health & social work and in 'other business services' – which include agriculture-related businesses such as gangmasters and packing. More modest growth is forecast for professional services, computing services, retailing and hotels & catering. However, the district is forecast to lose around 2,500 jobs in manufacturing and a further 700 agricultural jobs. With population growth forecast to decline from recent levels the district is also expected to lose employment in education, public administration and 'miscellaneous services'.

Huntingdonshire is also expected to lose more jobs than it gains over the outlook period. As with Fenland this reflects the anticipated reduction in the rate of population growth as compared with the recent past and the consequences for job losses in sectors such as education, miscellaneous services and public administration. Significant employment growth of between 1,000 and 2,000 is forecast to continue in the three industry sectors of professional services, computing services and 'other business services'. Land transport is expected to grow by 900 jobs. However the district's relative dependence on manufacturing employment means that it is particularly vulnerable to the recession and overall 4,100 jobs are forecast to be lost by 2031.

The scenario is very different for *South Cambridgeshire*. Although the district is forecast to experience a similar reduction in manufacturing employment as Huntingdonshire, (4,400 jobs through to 2031), its strong professional services base provides the platform for significant job growth, 10,600. This reflects relatively high growth in R&D employment in particular. The computing services sector is also forecast to grow strongly, with 4,000 additional jobs by 2031. No other sector is forecast to grow by more than 1,700 jobs and much of the employment growth that is anticipated in other industries is strongly linked to serving the increasing population. Health & social work, education, retailing, hotels & catering and miscellaneous services are all customer-driven.

Policy-led forecast & trend projection compared

The 'policy-led' forecast of employment in Cambridgeshire differs from the 'trend' projection in two ways. The first relates to the overall number of jobs available in 2031. The 'policy-led' forecast involves a lower rate of population growth than the 'trend'. Hence total employment growth between 2007 and 2031 amounts to 38,600 under the policy-led forecast as compared with 47,300 as generated by the 'trend' projection.

The second difference relates to the spatial distribution of employment. The RSS policy-led forecast assumes significantly higher shares of the county's housing – and population – growth occur in Cambridge City and South Cambridgeshire than does the 'trend' projection. The policy-led forecast not only assumes that East Cambridgeshire, Fenland and Huntingdonshire account for lower shares of the county's housing growth than in the recent past; it also assumes these districts attract lower rates of new dwelling construction than have been achieved in the period 2001 to 2008. The consequence is that employment growth is concentrated on Cambridge City and South Cambridgeshire – see Table 6.

Table 6- Comparison of policy-led forecasts & trend projections for employment, 2007 to 2031, Cambridgeshire districts, '000

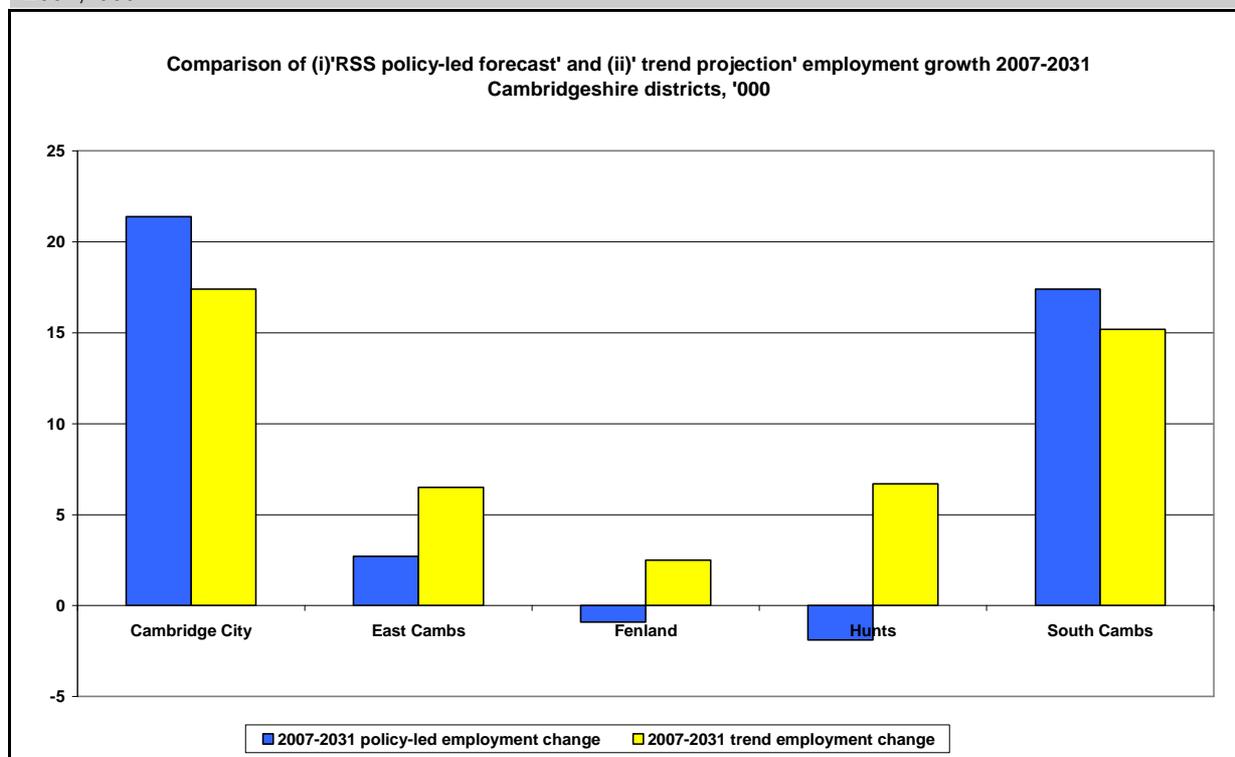
Date; element	Cambridge City	East Cambs	Fenland	Hunts	South Cambs	Cambs County
2007	99.7	34.8	41.2	85.5	78.1	339.4
2031 RSS policy-led	121.1	37.6	40.3	83.5	95.6	378
2031 trend projection	117.1	41.4	42.7	92.2	93.3	386.7
2007-2031 policy-led employment change	21.4	2.7	-0.9	-1.9	17.4	38.6
2007-2031 trend employment change	17.4	6.5	2.5	6.7	15.2	47.3
Share of Cambs employment growth policy-led %	55.4%	7%	-2.3%	-4.9%	45.1%	100%
Share of Cambs employment growth trend %	36.8%	13.7%	3.2%	14.2%	32.1%	100%

Source: Cambridge Econometrics; CCC Research Group Note: All figures rounded independently

Table 5 shows that the 'trend' projection allocates 27,600 additional jobs in Cambridge City and South Cambridgeshire between 2007 and 2031, equivalent to 69% of the county total. However, the policy-led forecast effectively attributes all of the county's net employment growth to these two districts – 38,800, over 100%!

Figure 3 compares the forecast and projected job growth for districts over the period 2007 to 2031.

Figure 3- RSS policy-led forecast & 'trend' projection employment growth, Cambridgeshire districts, 2007 to 2031, '000



Source: Cambridge Econometrics; CCC Research Group

Summary – main issues arising

The RSS policy-led forecast of employment for Cambridgeshire presents a number of key issues which are summarised as follows:

- The overall rate of increase in employment in the county is likely to be very much slower than has occurred in the recent past (although data on employee estimates from the Annual Business Inquiry are unreliable statistically; the Annual Population Survey of households provides contradictory evidence suggesting a significantly lower rate of employment growth in recent years).
- The overall rate of increase of jobs is lower than indicated by the 'trend' employment projection; the latter assumes higher rates of population growth in line with ONS 2006-based population projections.
- Cambridge City and South Cambridgeshire effectively account for all net new jobs over the period to 2031 as their share of the county's new house building increases.
- The additional jobs created in Huntingdonshire and Fenland between 2007 and 2031 (which are primarily linked to population increase), are insufficient to counteract the numbers of jobs likely to be lost in manufacturing and agriculture.
- Four main industry sectors are forecast to account for the bulk of net additional jobs: professional services, computing services, health & social work and 'other business services'. Each sector is expected to create at least 6,000 jobs net over the period 2007 to 2031.
- Two industry sectors are forecast to grow by between 2,000 and 6,000 jobs in the outlook period: hotels & catering and retailing.
- Manufacturing industry is forecast to lose more than 14,000 jobs county-wide over the period to 2031. This is equivalent to a 35% reduction of the estimated number of manufacturing jobs in 2007, (39,800). Public administration is forecast to lose 2,500 jobs and agriculture is expected to lose 2,400 jobs countywide.
- The 'policy-led' forecast assumes that house-building rates fall as compared with recent levels in East Cambridgeshire, Huntingdonshire and in Fenland and only meet the 'minimum' target levels indicated by Policy H1 in the East of England Plan. Higher rates would give rise to an increased population and would impact on the numbers of jobs that could be supported in some industry sectors, such as retailing and education.

Annex: Population growth, labour supply forecasts & data cleaning

Population growth

The first section of the Annex summarises the underlying assumptions on population growth incorporated in the district employment projections. For comparison purposes the population growth forecast in each district from 2007 on by Cambridgeshire County Council's Research Group has been applied to the ONS 2007 mid-year population estimates for districts. It should be noted that the

County Council disputes some of these and considers them too high. The County Council's mid year estimate for 2007 is 586,900 as compared with the ONS estimate of 598,300.

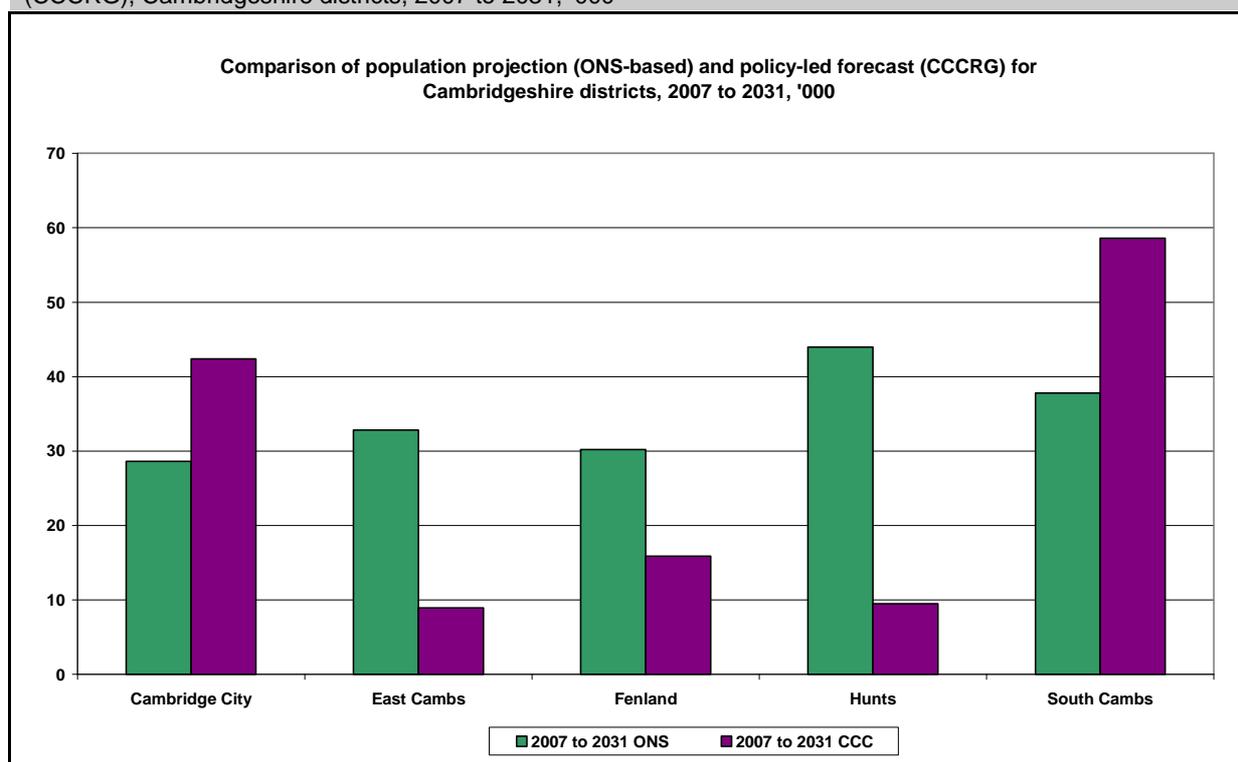
Table 7- Forecast population increase in Cambridgeshire districts, 2007 to 2031 compared with 2001 to 2007 ONS mid year estimates, '000

District/area	2001 (ONS)	2007 (ONS)	2031 (CCC growth)	2001/2007 ONS (% p.a.)	2007/2031 CCC (% p.a.)
Cambridge City	111.2	120.1	162.5	8.9 (1.3%)	42.4 (1.5%)
East Cambridgeshire	73.8	81.1	90	7.3 (1.7%)	8.9 (0.5%)
Fenland	84.4	91.6	107.5	7.2 (1.4%)	15.9 (0.7%)
Huntingdonshire	158.6	168.7	178.2	10.1 (1.1%)	9.5 (0.2%)
South Cambridgeshire	129.9	136.9	197.5	7.0 (0.9%)	58.6 (1.8%)
Cambridgeshire	557.8	598.3	733.6	40.5 (1.2%)	135.3 (0.9%)

Source: Cambridge Econometrics; CCC Research Group; ONS

Figure 4 compares the 'trend' population projection 2007 to 2031 with the Cambridgeshire County Council Research Group's policy-led forecast. In the county as a whole the 'trend' projected growth 2007 to 2031 is 173,500 as compared with the policy-led growth forecast of 135,300.

Figure 4- Comparison of 'trend' population projection growth (ONS) and RSS policy-led population forecast (CCCRG), Cambridgeshire districts, 2007 to 2031, '000



Source: Cambridge Econometrics, CCC Research Group, ONS

The Figure shows clearly the concentration of policy-led forecast population growth on South Cambridgeshire and Cambridge City. South Cambridgeshire is forecast to grow by 58,600 and Cambridge City by 42,400 – collectively accounting for 75% of the increase in Cambridgeshire's population over the period 2007 to 2031. Fenland contributes a 12% share of population growth and both Huntingdonshire and East Cambridgeshire account for 7% shares.

Labour supply

Cambridgeshire County Council has applied age specific economic activity rates to its policy-led population forecasts in order to provide a forecast of labour supply change. The economic activity rates are derived from modelling carried out by ONS and published in 2006. It should be noted that changes to rates are incorporated on an annual basis up to 2016 but no changes have been made for subsequent years. There is a particular concern that the rates fail to take full account of changes to the State pension age for women and pressures for both men and women to keep working for more years than in the past. However, this exercise provides an initial forecast of the labour force at a district level. Table 8 provides a summary and comparison with the forecast change in employment.

Table 8- Comparison of policy-led forecasts of employment and labour supply, 2007 to 2031, Cambridgeshire districts, '000

District/area	2007-2031 labour supply forecast change	2007-2031 employment forecast change	2007-2031 labour supply - employment
Cambridge City	17.5	21.4	-3.9
East Cambridgeshire	0	2.7	-2.7
Fenland	3.7	-0.9	4.6
Huntingdonshire	-3.9	-1.9	-2.0
South Cambridgeshire	22.3	17.4	4.9
Cambridgeshire	39.6	38.6	1.0

Source: Cambridge Econometrics, CCC Research Group

Table 8 indicates a very close relationship between the policy-led forecasts of labour supply and employment, both at a countywide and district level. However the labour supply is likely to be a minimum increase – and the employment forecast relates to jobs, rather than people. The structure of industry is changing and the growing service sectors include relatively more part-time jobs. This means that more people in future are likely to require two part-time jobs to maintain their standard of living. The implication is that unemployment and/or underemployment will increase.

Data cleaning

In order to 'quality assure' the trend employment projections two types of 'data cleaning' have been carried out. The first relates to checking and amending underlying industry sector estimates of employment at a district level. The second is concerned with adjusting trends to take account of local factors which are considered 'very likely' to happen.

Cleaning underlying estimates

The employment projection model incorporates district-level estimates of jobs by industry sectors. These estimates are primarily based on the Annual Business Inquiry (ABI), a sample survey of employers undertaken by the Office for National Statistics (ONS). The detailed estimates have been scrutinised by SQW Consulting to check for errors. A small number of corrections have been made to ensure that the 'forecasting base' is as accurate as possible. These include:

- Adjusting employment in the 'health & social care' sector to take account of actual employment at the main hospitals in the county. This is because the ABI records employment

of some major NHS Trusts at single HQ locations. Cambridgeshire County Council provided information drawn from its 'Employers Database' to assist with the allocation exercise.

- Adjusting employment in pharmaceuticals where it has been misallocated by the ABI at a district level, (from Cambridge City to South Cambridgeshire)

Trend adjustment by industry sector

The following adjustments were made:

- Health & social care: in line with the Addenbrooke's '2020 vision' it has been assumed that Papworth Hospital will move to the Addenbrooke's site within the outlook period. It has also been assumed that future *growth* in health & social care employment will generally follow population growth in terms of its distribution.
- Agriculture: following discussions with economic development staff in the county it was considered that the initial projections of employment in this sector were unduly pessimistic; however, recent declines in employment may be explained partly by a switch from directly-employed workers to the use of agency staff. Consequently any upward adjustments to employment in agriculture should be offset by a commensurate reduction in numbers employed in 'other business services'. It was agreed to reduce the initial projected loss in agricultural employment by 50% and compensate by amending 'other business services' jobs.
- Chemicals manufacture: in the light of the significant investment in new plant at two of the major employers in South Cambridgeshire it was agreed to hold future employment in this sector at 2007 levels.
- Professional services: Past experience has shown employment in this sector increasing much faster in Cambridgeshire than in the region as a whole. The initial projections suggested that the county's rate of growth would fall to average 'regional' rates. Cambridge Econometrics has subsequently reviewed and amended their projections
- Computing services: following a major study into the future prospects of computing services it is considered that the initial rates of job growth projected for Cambridgeshire appear unrealistically high and a small reduction in the rate has been incorporated in the revised projections.

It is important to note that no assumptions have been made regarding the relocation of Marshalls Aerospace from South Cambridgeshire, nor have any assumptions been made about the future numbers and deployment of armed forces personnel. The main known move is of armed forces from RAF Brampton to RAF Wyton, both located in Huntingdonshire.

No specific assumption has been made about the expansion of Littlehey prison in Huntingdonshire.