Demographic Change in Gloucestershire and its Implications for LSC Funded Provision
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1. Executive Summary

Gloucestershire’s population is set to increase over the 10-year period between 2004 and 2014. The population aged 16 to 18 years is set to increase to peak in 2007, while the 19 to 24 year old population will peak in 2012.

16-18 year old participation in structured learning is currently below LSC target levels, an increase of 2,100 participants between 2003 and 2004 is required to meet the target level of 80% of the County’s 16 to 18 year old population. The Forest of Dean (63%) has the lowest participation rate in the County, while Cheltenham (72%) has the highest.

Assuming that participation rates stay at current levels, numbers participating amongst the County’s 16 to 18 year olds in Gloucestershire will fall between 2003 and 2014, despite a slight increase between 2003 and 2007. Should Gloucestershire reach national participation targets, participation will show an overall increase in the County.

The total number of learners in LSC funded provision stands at 12,300 places across the three main funding streams: Further Education, Work-Based Learning and Maintained Sixth Forms.

Given current rates, demand for LSC funded provision will show a short-term rise, peaking in 2007, before falling in subsequent years. Demand levels will increase if the LSC was to reduce the level of NEETs (people not in education, employment or training) from the current 4% level, and eradicate employment without training, currently standing at 3% of the 16 to 18 year old cohort.

To meet the needs of the County’s 16 to 18 year old population, the LSC must increase supply of provision across the three main funding streams. The most efficient and effective method of meeting projected demand in Gloucestershire is to employ short-term, less permanent, measures. Demand is projected to fall beyond 2007 and, thus, permanent longer-term measure would be an inefficient use of the LSC’s resources, as they may become redundant in the long-term.

This report makes two key recommendations:

1. This report is designed to be used as reference material to inform further analysis on specific aspects of future provision in the County. It is suggested that further studies should be conducted to identify a more detailed, policy driven, view of key aspects of demand and supply of LSC funded provision and participation in Gloucestershire.

2. The report identifies the need for short-term measures to be implemented to increase the supply of LSC funded provision in Gloucestershire, in light of projected demand. It is important for the LSC to consider the specific measures required to tackle this, through the Strategic Area Review (StAR) process.
2. Introduction

Demographic trends can have a significant influence on the activities planned and funded by the Learning and Skills Council (LSC), particularly within the 16-24 age group. Increases in this age group may increase demand for provision, while on the other hand, a reduction in the relevant population may result in an over supply of services. Analysis of future supply and demand issues surrounding learner numbers and the provision of post-16 education may have wide reaching implications, feeding into the current Strategic Area Review (StAR) process. Such issues may, for example, surround the level of resources deployed around the county in anticipation of future trends in learning, or the achievement of Local LSC Targets.

2.1. Aim

The aim of this report is to identify the main demographic trends over the next 10 years in key LSC age groups (16 to 18 year olds and 19 to 24 year olds) in Gloucestershire and across the County’s six districts. The report also assesses the impact these demographic trends may have on future participation in structured learning and demand for LSC funded provision in the County, as well as the associated supply issues in terms of LSC funding.

2.2. Methodology

The report will initially look at projections, provided by Gloucestershire County Council, for the County’s population totals between 2004 and 2014, as well as looking at trends at a district level. It will then focus on the demographic trends specifically in the 16 to 18 and 19 to 24 age groups forecast for the next 10 years.

The report will continue by looking at current participation levels in structured learning across Gloucestershire and will investigate the possible effect that these future demographic trends will have on the County’s future participation, given current trends and also the LSC’s participation targets.

Finally, this report investigates demand for LSC funded provision in the County, observing current demand levels and applying future population dynamics to predict future levels of demand for the LSC’s three main funding streams i.e. Maintained Sixth Form, Further Education and Work-Based Learning. The report discusses some of the impacts the projected demand may have on supply levels of LSC funded learning provision, focussing on the three main funding streams.

It must be reiterated that the analysis in this report focuses on the potential demographic effects on participation in structured learning and demand for LSC funded provision. Such trends do not reflect any major structural or policy effects and is to be used as a ‘what if’ tool given current situations.
3. Gloucestershire’s Changing Population


**Figure 1. Total Population Change 2004-2014**

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2014</th>
<th>Change</th>
<th>Annual Growth Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td>109,605</td>
<td>106,696</td>
<td>-2,909</td>
<td>-2.7</td>
</tr>
<tr>
<td>Cotswold</td>
<td>81,381</td>
<td>82,321</td>
<td>940</td>
<td>1.2</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>81,896</td>
<td>86,666</td>
<td>4,770</td>
<td>5.8</td>
</tr>
<tr>
<td>Gloucester</td>
<td>111,647</td>
<td>116,591</td>
<td>4,944</td>
<td>4.4</td>
</tr>
<tr>
<td>Stroud</td>
<td>109,380</td>
<td>110,557</td>
<td>1,177</td>
<td>1.1</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>79,643</td>
<td>90,979</td>
<td>11,336</td>
<td>14.2</td>
</tr>
<tr>
<td><strong>Gloucestershire</strong></td>
<td><strong>573,551</strong></td>
<td><strong>593,809</strong></td>
<td><strong>20,258</strong></td>
<td><strong>3.5</strong></td>
</tr>
<tr>
<td><strong>ENGLAND</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>2014</td>
<td>Change</td>
<td>Annual Growth Rate %</td>
</tr>
<tr>
<td></td>
<td>573,551</td>
<td>593,809</td>
<td>20,258</td>
<td>3.5</td>
</tr>
</tbody>
</table>


**Figure 2. Total Population of Gloucestershire 2004-2014**

- The total population of Gloucestershire is set to rise steadily over the period 2004 to 2014, with an increase of almost 20,300 from 573,551 in 1994 to a projected figure of 593,809 in 2014.
- The population is set to increase by 3.5% over the 10-year period at a growth rate of 0.43% per annum, reflecting the national population change over the same period.
• Within Gloucestershire, Cheltenham (-2.7%) is the only district to witness an overall reduction in the total population over the period 2004-2014, while Tewkesbury (14.2%) has the largest population increase.
• It must be noted that when looking at population change across Gloucestershire, certain geographic issues should be taken into account. One of the main issues concerns the Tewkesbury district and its geographical nature. The Tewkesbury district borders on the urban fringe of both Gloucester and Cheltenham, and local planning policy suggests that most of the population increase in the district will actually be based around the County’s two main urban centres (see Appendix 7.1.).
• Along with Tewkesbury, the Forest of Dean (5.8%) and Gloucester (4.4%) districts will witness population increases above the County average, while Cotswold (1.2%) and Stroud (1.1%) show increases below that of Gloucestershire as a whole.

3.2. Focus on Young People

The Learning and Skills Council (LSC) places particular focus on the 16-24 age group when looking at post-16 education provision, with the goal of increasing skill levels amongst the current and future workforce, retaining young people in education beyond compulsory school age and encouraging adults back into learning.

*Figure 3. Change of 16-24 Year Old Population 2004-2014*

<table>
<thead>
<tr>
<th>District</th>
<th>2004</th>
<th>2014</th>
<th>Change Number</th>
<th>Change Per Cent</th>
<th>Annual Growth Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td>14,460</td>
<td>13,644</td>
<td>-816</td>
<td>-5.6</td>
<td>-0.6</td>
</tr>
<tr>
<td>Cotswold</td>
<td>7,099</td>
<td>8,000</td>
<td>901</td>
<td>12.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>8,285</td>
<td>9,111</td>
<td>826</td>
<td>10.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Gloucester</td>
<td>12,007</td>
<td>12,843</td>
<td>836</td>
<td>7.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Stroud</td>
<td>10,074</td>
<td>11,043</td>
<td>969</td>
<td>9.6</td>
<td>0.9</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>7,247</td>
<td>8,548</td>
<td>1,301</td>
<td>18.0</td>
<td>1.7</td>
</tr>
<tr>
<td>Gloucestershire</td>
<td>59,172</td>
<td>63,190</td>
<td>4,018</td>
<td>6.8</td>
<td>0.7</td>
</tr>
<tr>
<td>ENGLAND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.1</td>
</tr>
</tbody>
</table>

LEARNING AND SKILLS COUNCIL GLOUCESTERSHIRE

Demographic Change in Gloucestershire and its Implications for LSC Funded Provision

Figure 4. Gloucestershire’s Population Aged 16-24 Years 2004-2014


- The County’s population aged 16-24 will increase by 4,018 over the 10-year period 2004-2014, an increase of almost 7% (an annual growth rate of 0.7%), higher than the national increase over the same period (4.1%).
- Beyond 2004 the 16-24 year old population increases to a peak of over 64,000 in 2011, before starting to fall again.
- The population of 16-24 year olds in Cheltenham will fall by 5.6% between 2004 and 2014. The Tewkesbury district shows the largest increase in Gloucestershire (18.0%), with the other four districts having increases above both the County and national averages.
- In 2014, the urban districts of Cheltenham and Gloucester will have the largest population of 16-24 year olds of Gloucestershire’s districts, with 13,644 and 12,843 respectively – accounting for almost 42% of the County’s total. The Cotswold district will have the lowest number of 16-24 year olds (8,000).

Figures 5 and 6 show the distribution of 16-24 year olds, as a proportion of the total population, across Gloucestershire according to the 2001 Census.

The maps show that the population of young people aged 16-24 tend to be concentrated in the urban areas of the County, such as Cheltenham, Gloucester, Stroud, Cirencester and Tewkesbury. The rural areas of Gloucestershire, notably most of the Cotswold and Forest of Dean districts, tend to have below average concentrations of young people.
The maps show a high concentration in certain areas that can be attributed to the presence of boarding schools or residential further or higher education institutions. For example, areas around Hartpury College in the Forest of Dean district and Rendcombe College and the Royal Agricultural College in the Cotswold district show up as some of the most densely populated areas of Gloucestershire in terms of 16-24 year olds.
Figure 5. Distribution of 16-24 Year Old Population Using 2001 Census Data
– Data Mapped by Census Output Area with Parish Boundary Overlay

Source: 2001 Census Atlas of Gloucestershire, Gloucestershire County Council Environment Directorate Research Team
Figure 6: Distribution of 16-24 Year Old Population Using 2001 Census Data (Cheltenham and Gloucester) – Data Mapped by Census Output Area with Ward Boundary Overlay.
Within the broad category of 16 to 24 year olds, the 16-18 year old age group is of particular interest to the Learning and Skills Council as it is the key group of people to engage in learning. Alan Johnson, former Minister of State for Employment Relations, Industry and the Regions, spoke about the importance of ‘Raising Retention and Attainment at 16’. At the Staying on at 16 Conference in December 2003 he mentioned that,

“Reaching the 16 year milestone marks a critical point in young people’s lives, as they start to make the transition from compulsory education to adult life and learning. Many young people make this transition well – but too many do not. They simply drop out at 16, disengaged from learning and heading fast for low-skilled, low-paid employment or, even worse, unemployment… One in four 16 to 18 year olds had dropped out of education and training at the end of 2000, significantly above the OECD and European averages. These figures demonstrate how such individual choices are badly damaging the nation’s competitiveness.”

The priority of the LSC with regard to the 16-18 year old age group is retention in learning beyond compulsory school age, to improve the qualification and skill level of the future workforce.

3.2.1. 16-18 Year Olds

Figure 7. Change of 16-18 Year Old Population 2004-2014

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2014</th>
<th>Change Number</th>
<th>Per Cent</th>
<th>Annual Growth Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td>4,655</td>
<td>4,045</td>
<td>-610</td>
<td>-13.1</td>
<td>-1.4</td>
</tr>
<tr>
<td>Cotswold</td>
<td>2,750</td>
<td>2,812</td>
<td>62</td>
<td>2.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>3,013</td>
<td>3,238</td>
<td>225</td>
<td>7.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Gloucester</td>
<td>4,318</td>
<td>4,198</td>
<td>-120</td>
<td>-2.8</td>
<td>-0.3</td>
</tr>
<tr>
<td>Stroud</td>
<td>3,918</td>
<td>3,884</td>
<td>-34</td>
<td>-0.9</td>
<td>-0.1</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>2,772</td>
<td>2,864</td>
<td>92</td>
<td>3.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Gloucestershire</td>
<td>21,424</td>
<td>21,041</td>
<td>-383</td>
<td>-1.8</td>
<td>-0.2</td>
</tr>
<tr>
<td>ENGLAND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-3.8</td>
</tr>
</tbody>
</table>


**Figure 8. District Population of 16-18 Year Olds in Gloucestershire 2004-2014**

- The County’s 16-18 year old population is projected to fall over the 10-year period by 383 to 21,041 in 2014. This represents a reduction of 2% at an annual growth rate of -0.2%.
- The reduction in the County’s 16-18 year old population is lower than the national reduction (-3.8%) for the same period.
- The County’s reduction in the 16-18 year old population is only found, however, in half of Gloucestershire’s six districts. Cheltenham (-13.1%), Gloucester (-2.8%) and Stroud (-0.9%) show falls, while the Forest of Dean (7.5%) has the largest increase.
- By 2014, Gloucester (4,198) will have the largest population aged 16-18 in Gloucestershire, with Cheltenham also having a population above 4,000. The Cotswold district (2,812) will have the smallest population aged 16-18 of Gloucestershire’s districts, closely followed by Tewkesbury (2,864).
- The overall reduction of the 16-18 year old population across Gloucestershire, shown in Figure 7, masks the fluctuating trends within the period, as shown in Figure 4. The 16-18 year old population of Gloucestershire is set to peak at 22,323 in 2007, before steadily falling to 2014).
3.2.2. 19-24 Year Olds

Figure 9. Change of 19-24 Year Old Population 2004-2014

<table>
<thead>
<tr>
<th>Location</th>
<th>2004</th>
<th>2014</th>
<th>Change Number</th>
<th>Change Per Cent</th>
<th>Annual Growth Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td>9,806</td>
<td>9,599</td>
<td>-207</td>
<td>-2.1</td>
<td>-0.2</td>
</tr>
<tr>
<td>Cotswold</td>
<td>4,350</td>
<td>5,189</td>
<td>839</td>
<td>19.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>5,272</td>
<td>5,873</td>
<td>601</td>
<td>11.4</td>
<td>1.1</td>
</tr>
<tr>
<td>Gloucester</td>
<td>7,690</td>
<td>8,645</td>
<td>955</td>
<td>12.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Stroud</td>
<td>6,156</td>
<td>7,159</td>
<td>1,003</td>
<td>16.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>4,475</td>
<td>5,684</td>
<td>1,209</td>
<td>27.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Gloucestershire</td>
<td>37,748</td>
<td>42,148</td>
<td>4,400</td>
<td>11.7</td>
<td>1.1</td>
</tr>
</tbody>
</table>


Figure 10. District Population of 19-24 Year Olds in Gloucestershire 2004-2014

- Gloucestershire’s population aged 19-24 is set to increase by almost 12% between 2004 and 2014, an increase of 4,400 to 42,148 in 2014.
- The increase in the population size of this age group accounts for 110% of the total increase in the 16-24 year old population.
- Nationally, the population aged 19-24 is set to increase by 8.3% between 2004 and 2014, a figure well below the County’s increase.
• The County’s population aged 19-24 years old is set to peak at 42,645 in 2012, before levelling out (see Figure 4).
• The Cheltenham district (-2.1%) is the only district that shows an overall reduction in the 19-24 year old population over the 10-year period. Tewkesbury is set to have an increase of 27%, with the Cotswold (19.3%), Gloucester (12.4%) and Stroud (16.3%) districts also having growth in the 19-24 year old population greater than the County average.
• Cheltenham (9,599) and Gloucester (8,645) are projected to have the largest populations aged 19-24 in 2014, with Cotswold (5,189) and Tewkesbury (5,684) having the smallest. This reflects the patterns shown in the 16-18 year old population across the County.


Gloucestershire’s total population is forecasted to increase over the next 10 years. The Tewkesbury district is set to have the largest growth in this period, although the County’s population in 2014 will still be concentrated in Cheltenham and Gloucester, as well as the Stroud district.

The County’s population aged 16 to 18 years is due to start falling beyond the peak in 2007. Over the next 10 years, the population of Cheltenham, Gloucester and Stroud is projected to fall. However, despite this, the three districts will have the largest concentration of 16 to 18 year olds in 2014.

The number of 19 to 24 year olds in Gloucestershire, over the next 10 years, is set to increase, reaching a peak in 2012. All of the County’s districts are projected to have growth in this population, with the exception of Cheltenham, which shows a reduction. The Tewkesbury district will have the largest growth in the County.

In 2014, the Cheltenham, Gloucester and Stroud districts will have the largest population aged 19-24 years, with Cotswold and Tewkesbury having the smallest. This is a similar picture to the 16-18 year old population across Gloucestershire.

It must be noted that when looking at population change across Gloucestershire, certain geographic issues should be taken into account. One of the main issues concerns the Tewkesbury district and its geographical nature. The Tewkesbury district borders on the urban fringe of both Gloucester and Cheltenham, and local planning policy suggests that most of the population increase in the district will actually be based around the County’s two main urban centres. Thus, the population increase may well actually have demand and supply implications on the neighbouring districts of Gloucester and Cheltenham, rather than the Tewkesbury district as a whole (see Appendix 7.1.).
4. LSC Targets for Structured Learning Participation

The Learning and Skills Council’s Vision is that,

“By 2010, young people and adults in this country will have the knowledge and skills to match the best in the world.”\(^2\)

In order to achieve this, the LSC have made it their Mission,

“To raise the number of people learning new skills – and gaining qualifications – by providing high-quality education and training that puts people first.”\(^3\)

To monitor and evaluate the success, or otherwise, of the policies and initiatives that the LSC have implemented – in order to achieve the Vision and carry out the Mission – it is important to focus on a number of key areas, and compare progress in these areas against specific targets.

As discussed in chapter 3.2. Focus on Young People, the Learning and Skills Council have identified key age groups to target and monitor, in terms of both participation in structured learning and achievement of qualifications.

4.1. Current 16-18 Participation Rates and National Targets

The 16 to 18 year old population is of particular concern to the LSC in terms of retention within the education and learning system beyond compulsory school age. A greater proportion of the population within this age group continuing in education and training consequently improves the skill levels of the nation’s future workforce.

Figure 11. 2003 Rates of 16-18 Year Old Participation in Structured Learning

<table>
<thead>
<tr>
<th>Type of Structured Learning</th>
<th>FE</th>
<th>WBL</th>
<th>6th Form</th>
<th>Independent</th>
<th>HE</th>
<th>Total</th>
<th>Base 16-18 Population</th>
<th>Participation Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td>726</td>
<td>238</td>
<td>991</td>
<td>659</td>
<td>286</td>
<td>2,900</td>
<td>4,022</td>
<td>72.1</td>
</tr>
<tr>
<td>Cotswold</td>
<td>799</td>
<td>196</td>
<td>600</td>
<td>122</td>
<td>212</td>
<td>1,929</td>
<td>2,966</td>
<td>65.0</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>1,059</td>
<td>371</td>
<td>418</td>
<td>47</td>
<td>228</td>
<td>2,123</td>
<td>3,365</td>
<td>63.1</td>
</tr>
<tr>
<td>Gloucester</td>
<td>1,064</td>
<td>468</td>
<td>1,140</td>
<td>128</td>
<td>240</td>
<td>3,040</td>
<td>4,441</td>
<td>68.5</td>
</tr>
<tr>
<td>Stroud</td>
<td>1,149</td>
<td>353</td>
<td>1,053</td>
<td>249</td>
<td>287</td>
<td>3,091</td>
<td>4,411</td>
<td>70.1</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>514</td>
<td>206</td>
<td>972</td>
<td>109</td>
<td>254</td>
<td>2,056</td>
<td>3,032</td>
<td>67.8</td>
</tr>
</tbody>
</table>

Gloucestershire 5,311 1,832 5,175 1,315 1,506 15,139 22,236 68.1

Sources: ILR, PLASC, HESA, DfES, ONS Mid-Year Estimates of Population

Note: See Appendix 7.2. for details of participation rate calculation methodology and 16-18 population re-basing.

\(^3\) Learning and Skills Council Annual Report and Accounts 2002/03, LSC (2004)
• Currently, over 15,100 16 to 18 year olds are in structured learning in Gloucestershire. This figure represents a participation rate of slightly above 68% of the County’s 22,200 population aged 16 to 18.
• At a County level, the bulk of the 16 to 18 year old population in structured learning participate in Further Education and Local Education Authority (LEA) Sixth Forms – almost 10,500 of the 15,100.
• Sixth forms in the County’s Independent Schools account for a further 1,300 pupils.
• The remainder of 16 to 18 year old pupils are educated in Higher Education (1,506) and on Work-Based Learning Schemes (1,832).

4.1.1. Focus on District Participation

• **Cheltenham** has the highest participation rate in the County, with 72% of 16 to 18 year olds in structured learning. The district has the highest participation in Independent Sixth Forms (659 pupils), with 4 of the County’s 9 Independent Schools located within the district. Cheltenham has relatively low participation in Work-Based Learning, given the size of the 16-18 year old population.
• The **Cotswold** district has the lowest total number of 16 to 18 year olds in structured learning in Gloucestershire (1,929). Although the participation rate (65%) is above that of the Forest of Dean, and is only 3 percentage points below the County average, the district has the lowest HE participation in the County (212) and, with only 196 participants, the lowest participation in Work-Based Learning.
• Participation in the **Forest of Dean** district is the lowest on the County, at 63%. The district’s participation is dominated by Further Education – of the 2,123 learners, 50% participate in Further Education. A further 20% participate in LEA Sixth Forms and 18% in Work-Based Learning. The district has the lowest participation in Independent School Sixth Forms (47) – with none located in the district.
• **Gloucester** has the second highest number of participants in the County (over 3,000), although only has the third highest participation rate behind Cheltenham and Stroud. With 1,140 16 to 18 year old learners, the district has the highest number of pupils in LEA Sixth Forms. The district also has the highest number of learners in Work-Based Learning in the County (468).
• The **Stroud** district has the second highest participation rate in the County, behind Cheltenham, with over 70% of the district’s 16 to 18 year old population participating in structured learning. Stroud also boasts the highest number of participants of the six districts in Gloucestershire. Of the 3,091 16 to 18 year old learners in the district 1,149 participate in Further Education – the highest FE figure of any district in the County.
• The **Tewkesbury** district has a participation rate (68%) slightly below the County average. The district has the lowest participation in Further Education with no FE institution being located within the borough. Sixth Form participation accounts for 47% of the district’s learners aged 16 to 18 years.
4.1.2. Comparison to LSC Targets for Participation

In view of the ‘Mission’ (see Section 4. LSC Targets for Structured Learning Participation), the LSC has set a target of raising national participation of 16 to 18 year olds in structured learning to 80% by 2004. This figure provides a benchmark against success, at both the national and local level, of policies implemented to raise opportunity and participation in post-16 education. Figure 12. provides a comparison of the County’s 16 to 18 participation to the national target for 2004, and the progress required to meet these targets across the County by the given date.

Figure 12. Comparison of Current 16-18 Year Old Participation with National Targets

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td>4,254</td>
<td>3,403</td>
<td>2,900</td>
<td>-503</td>
</tr>
<tr>
<td>Cotswold</td>
<td>2,828</td>
<td>2,262</td>
<td>1,929</td>
<td>-333</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>3,155</td>
<td>2,524</td>
<td>2,123</td>
<td>-401</td>
</tr>
<tr>
<td>Gloucester</td>
<td>4,369</td>
<td>3,495</td>
<td>3,040</td>
<td>-455</td>
</tr>
<tr>
<td>Stroud</td>
<td>4,141</td>
<td>3,313</td>
<td>3,091</td>
<td>-222</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>2,816</td>
<td>2,253</td>
<td>2,056</td>
<td>-197</td>
</tr>
<tr>
<td>Gloucestershire</td>
<td>21,563</td>
<td>17,250</td>
<td>15,139</td>
<td>-2,111</td>
</tr>
</tbody>
</table>

Sources: ILR, PLASC, HESA, DfES, Gloucestershire County Council Environment Directorate Research Team Population Projections, Re-based ONS Mid-Year Estimates
Note: The 2004 population has not been re-based.

- Gloucestershire’s population aged 16 to 18 years is set to rise to 21,424 in 2004, and if the County is to achieve the national participation target of 80%, then 17,250 16 to 18 year olds are required to be in structured learning.
- Currently there are 15,139 learners aged 16 to 18, thus an increase of 2,100 learners is required to hit the target by 2004.
- In 2003, no district meets the LSC’s participation target.
- The largest shortfall in the County is in Cheltenham, with an increase of over 500 participants needed to meet the 2004 target. Cheltenham accounts for almost one quarter of the County’s total shortfall.
- To meet the 80% target, Gloucester requires an increase of over 450 in the number of participants by 2004, the Forest of Dean requires an increase of 400 learners and the Cotswold district requires 330. Stroud currently has a shortfall of 220 participants, while Tewkesbury has the lowest shortfall of fewer than 200 learners.
4.2. The Demographic Effect on Future 16-18 Year Old Participation

Given certain rates of participation in structured learning, the demographic trends outlined in this report will have an effect on the absolute participation numbers in Gloucestershire over the coming years. It is of interest to examine the demographic impact on future participation to help explore the concept of demand for structured learning in the County over the next 10 years, given certain scenarios. This in turn should provide the impetus to investigate future supply of and demand for LSC funded learning provision.

Two main scenarios are investigated in the upcoming sections. The first reflects a continuation of current (2003) participation rates on future 16 to 18 year old populations in Gloucestershire. The other assumes that the national LSC target of 80% participation is achieved and maintained from 2004, and again is applied to the future 16 to 18 year old populations. The scenarios look at the situation in 10 years time (2014), as well as at the projected peak in the County’s 16-18 year old population in 2007, where absolute participation will be at a maximum for the period studied.

4.2.1. Current Participation Levels in the Future

Figure 13. Application of Current 16-18 Year Old Learner Participation Rates to Future Populations

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td>72.1</td>
<td>4,619</td>
<td>3,330</td>
<td>4,045</td>
<td>2,916</td>
</tr>
<tr>
<td>Cotswold</td>
<td>65.0</td>
<td>2,853</td>
<td>1,856</td>
<td>2,812</td>
<td>1,829</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>63.1</td>
<td>3,184</td>
<td>2,009</td>
<td>3,238</td>
<td>2,043</td>
</tr>
<tr>
<td>Gloucester</td>
<td>68.5</td>
<td>4,521</td>
<td>3,095</td>
<td>4,198</td>
<td>2,874</td>
</tr>
<tr>
<td>Stroud</td>
<td>70.1</td>
<td>4,183</td>
<td>2,931</td>
<td>3,884</td>
<td>2,722</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>67.8</td>
<td>2,962</td>
<td>2,008</td>
<td>2,864</td>
<td>1,942</td>
</tr>
<tr>
<td>Gloucestershire</td>
<td>68.1</td>
<td>22,323</td>
<td>15,198</td>
<td>21,041</td>
<td>14,325</td>
</tr>
</tbody>
</table>

Sources: LSC, Gloucestershire County Council Environment Directorate Research Team Population Projections, Re-based ONS Mid-Year Estimates
Note: 2007 and 2014 populations have not been re-based.

- Assuming that current 16-18 year old participation rates across Gloucestershire continue into the future, the number of learners in the County will increase to a peak of 15,198 in 2007 before falling to 14,325 in 2014; a level below the current (2003) total.
- Participation in Gloucestershire, between present day and the population peak year of 2007, will increase by less than 1% - an absolute increase in participants of 59.
- The overall learner participation in the County will fall by 5% (814 participants) in the 10-year period to 2014.
• A falling population beyond the peak year of 2007 means that, assuming participation rates remain constant, the County’s total participation will fall by 873 (5.7%) between 2007 and 2014.
• Two of Gloucestershire’s districts will see an increase in participation between 2003 and 2007. Cheltenham will have the largest absolute increase (430), followed by Gloucester (55). Stroud will show the largest reduction (-160), along with the Forest of Dean (-114).
• Between 2007 and 2014, with the exception of the Forest of Dean (which shows a small increase of 34), all of the County’s districts will show a reduction in participation. Cheltenham will have the largest drop (-414), followed by Gloucester (-221) and Stroud (-210).
• The Cheltenham district (17) is the only Gloucestershire district to show an overall increase in participation over the period 2003-2014. The Stroud district (-369) has the largest overall fall followed by Gloucester (-166). Tewkesbury shows a reduction of 114 participants, with the Cotswold district showing a fall of 100 participants and a reduction of 80 in the Forest of Dean.

4.2.2. Meeting Target Levels in the Future

Figure 14. Application of LSC Target 16-18 Year Old Learner Participation Rates to Future Populations

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population</td>
<td>Participation</td>
</tr>
<tr>
<td>Cheltenham</td>
<td>80.0</td>
<td>4,619</td>
</tr>
<tr>
<td>Cotswold</td>
<td>80.0</td>
<td>2,853</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>80.0</td>
<td>3,184</td>
</tr>
<tr>
<td>Gloucester</td>
<td>80.0</td>
<td>4,521</td>
</tr>
<tr>
<td>Stroud</td>
<td>80.0</td>
<td>4,183</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>80.0</td>
<td>2,962</td>
</tr>
<tr>
<td>Gloucestershire</td>
<td>80.0</td>
<td>22,323</td>
</tr>
</tbody>
</table>

Sources: LSC, Gloucestershire County Council Environment Directorate Research Team Population Projections, Re-based ONS Mid-Year Estimates
Note: 2007 and 2014 populations have not been re-based.

• Assuming that the LSC target of 80% for 16-18 participation is reached by the target date of 2004, and continues at that level in future years, the number of 16-18 year olds in Gloucestershire participating in structured learning will increase by almost 1,700 between 2003 and 2014. This represents an overall increase of over 11%.
• Gloucestershire will have an initial increase of over 2,700 participants (18%) between 2003 and the 16-18 year old population peak year of 2007, before falling by over 1,000 participants (-5.7%) between 2007 and 2014.
• Between 2003 and 2007, the largest increase in the number of participants across Gloucestershire is found in the Cheltenham district. This can be attributed to the fact that, initially, a large increase in
participation is required in the district to hit the 80% target, from 2003 levels, given 2004 population trends. Gloucester also shows a relatively large increase, with a rise of over 420 participants.

- The lowest increase, between 2003 and 2007, can be found in Stroud (255). Tewkesbury will have an increase of 314, with Cotswold showing a rise of 353 participants.
- Beyond 2007, five of the six districts in Gloucestershire will show reductions in participation. The Forest of Dean is the only district that will have a slight increase. Cheltenham will have the largest reduction in participation (-459), while falls in Gloucester (-258) and Stroud (-239) will also be sizeable.
- However, over the total period 2003-2014 all six of the County’s districts will see an overall increase in the 16-18 participation numbers. With the largest increase in the Forest of Dean (467) and the lowest in Stroud (16).

4.3. Key Points – 16-18 Participation and LSC Targets

To monitor the successes of post-16 education provision policy, the LSC places importance on monitoring rates of participation in structured learning beyond compulsory school age.

Currently in Gloucestershire there are 15,139 16 to 18 year olds in structured learning, a participation rate of slightly greater than 68%. Across Gloucestershire there are inequalities in 16 to 18 participation, with Cheltenham having the highest rate while the Forest of Dean has the lowest.

At a national level, the LSC has set itself the goal of increasing participation of 16 to 18 year olds in structured learning to 80% of the country’s 16 to 18 year old population by 2004. This benchmark is used to evaluate progress made by the policies introduced to increase participation and retention in this age group. In 2003, the County was performing at a level below this national target, and needs to increase participation by over 2,100 learners in 2004. No district is currently performing above the target level.

Given certain participation rates, future population dynamics will effect absolute participation in 16-18 education, and thus may impact on future demand for LSC-funded provision. It is an important issue to investigate in terms of attempting to determine potential under- or over-provision of places given the current circumstances in Gloucestershire.

Assuming that current participation rates continue to 2014, participation will fall in the County from current figures by 5%. However, this masks the fact that participation is set to increase slightly between 2003 and 2007, before falling again to 2014.

If the County is to meet the LSC target of 80% participation in 2004, and this rate continues into the future, the County is set to see a larger increase in participation. Participation in the County will increase by 11% between 2003
and 2014 (as opposed to the drop in participants shown if current trends continue).
Again this masks the sharp rise between 2003 and 2007 (an 18% increase – which is initially due to the increase required to raise participation rates to 80% from 2003 levels), and the fall in participation between 2007 and 2014 of almost 6%.

Assuming participation rates remain constant over the next 10-years, there will be a small reduction in participation totals over the longer-term. However, should the County reach its participation targets in 2004, and these rates continue into the future, there will be a marked increase in participation numbers. Both scenarios witness fluctuation within the period.
5. Current and Future Demand for LSC Funded 16-18 Year Old Structured Learning

A key part of the LSC planning system is anticipating future demand for structured learning in Gloucestershire. Identifying potential demand for the funding of provision for 16 to 18 year olds in the County allows the LSC to put in place structures and policies to match future scenarios. Key decisions concerning changes in the supply of provision, or the influencing of future demand, need to be identified early in the planning process to allow a proactive – rather than reactive – response to suit the needs of the County’s learners.

Chapter 4. outlined overall current participation rates in structured learning in the County, as well investigating scenarios for future levels of participation. This chapter, however, outlines methods in calculating current and future demand solely for LSC funded provision, looking at the effects of the findings on future supply of learning provision for 16 to 18 year olds in Gloucestershire.

5.1. The Current Demand for LSC Funded Structured Learning

LSC-funded structured learning comprises three main streams of provision. These are Further Education, Work-Based Learning and Maintained Sixth Forms.

Figure 15. LSC Funded Provision in Gloucestershire, 2003

<table>
<thead>
<tr>
<th>Type of Provision</th>
<th>2003 Participants</th>
<th>Proportion of 16-18 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Further Education</td>
<td>5,311</td>
<td>25.5</td>
</tr>
<tr>
<td>Work-Based Learning</td>
<td>1,832</td>
<td>8.8</td>
</tr>
<tr>
<td>Sixth Form</td>
<td>5,175</td>
<td>24.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12,318</td>
<td>59.1</td>
</tr>
</tbody>
</table>

Sources: ILR, PLASC

- Current participation in LSC funded learning stands at 12,318 learners, almost 60% of the County’s 16 to 18 year old Population.
- Over one quarter (5,311) of the County’s 16 to 18 year old population is learning through Further Education.
- 10% (just under 2,000) of the County’s 16-18 population are placed in Work-Based Learning.
- Of the County’s participants, over 5,100 learn in the County’s maintained Sixth Forms, representing just below one quarter of the County’s population aged 16 to 18.
- 40% of 16 to 18 year olds in Gloucestershire do not participate in LSC funded structured learning. The majority of those are 16 year olds who are currently in year 11 at school, with other groups not requiring
LSC funded provision including those in Higher Education or at Independent School sixth forms. However, 2004 Connexions Destinations data suggest just under 5% of 16 to 18 year olds are not in education, employment or training (NEET) and so do not demand LSC provision, and a further 10% are in employment – such groups are areas of concern to the LSC as they have clearly left the structured learning environment.

5.2. Future Demand for LSC Funded Structured Learning

A number of methods can be adopted to investigate future demand for LSC funded provision in Gloucestershire, each of which have varying degrees of accuracy and simplicity. One of the most simplistic methods to calculate demand assumes that current trends for demand (as outlined in 5.1.) remain constant over the next ten years, and thus future variation in demand reflects the changing demographic nature of the population of 16 to 18 year olds in Gloucestershire. This assumes that the proportion of the County’s 16 to 18 year old population not demanding LSC funded structured learning (e.g. as they wish to enter employment) also remains constant over time.

A further method of demand calculation takes the first method a step further by assuming that the LSC succeeds in increasing retention within the education and training system. The Gloucestershire LSC is aiming to reduce the proportion of NEETs in the County by 2 percentage points to just over 2% in 2010. This, coupled with a desired reduction in the number of 16 year olds entering employment at the expense of structured learning, will serve to increase demand above the basic levels displayed in the first method.

5.2.1. Current Demand Levels in the Future

Figure 16. Demand for LSC Funded Provision in Gloucestershire Given Current Demand Rates, 2003-2014

<table>
<thead>
<tr>
<th>Type of Provision</th>
<th>Proportion of 16-18 Population</th>
<th>Demand for LSC Funded Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Further Education</td>
<td>25.5%</td>
<td>5,311</td>
</tr>
<tr>
<td>Work-Based Learning</td>
<td>8.8%</td>
<td>1,832</td>
</tr>
<tr>
<td>Sixth Form</td>
<td>24.8%</td>
<td>5,175</td>
</tr>
<tr>
<td>TOTAL</td>
<td>59.1%</td>
<td>12,318</td>
</tr>
</tbody>
</table>

Sources: ILR, PLASC, Office for National Statistics Mid-Year Estimates, Gloucestershire County Council Environment Directorate Research Team Population Projections

- Given current demand rates for 16 to 18 year olds in Gloucestershire, demand for LSC funded provision will increase to a peak of 13,202 learners in 2007, before falling back to 12,443 in 2014.
- Over the 10-year period, demand for LSC funded provision in the County will only increase by 125, however, this masks the demand increase of almost 900 between 2003 and 2007.
- Demand for FE places will increase by 54 learners over the whole period, although a rise in demand of 381 will occur between 2003 and 2007.
- WBL will have an overall increase in demand of 19 learners between 2003 and 2014, although the increase between 2003 and 2007 will be over 130 participants.
- Demand for maintained Sixth Form places will increase by 53 over the period 2003-2014, however the increase in demand for the period 2003-2007 will be over 370 learners.

5.2.2. Reducing the Number of 16-18 Year Olds in Employment or Who Are NEET

The LSC is aiming to reduce the proportion of the County’s 16-18 year old population that are not in education, employment or training (NEET) by 2 percentage points by 2010. Given current levels of NEETs in the County, this would see a reduction to just 2% of Gloucestershire’s total population aged 16 to 18 years.

Another LSC aim is to increase retention in the education and training system beyond compulsory school age, thus consequently reducing the number of 16 to 18 year olds in employment without training. Given that currently almost 10% of the County’s 16 to 18 year olds are in all types of employment, eradication of employment places without training would leave only 7% of 16 to 18 year olds not in LSC funded structured learning provision.

These two points alone would increase basic demand by almost 10%.

*Figure 17. Demand for LSC Funded Provision in Gloucestershire Given a Reduction in the Number of 16-18 Year Olds in Employment or NEET, 2003-2014*

<table>
<thead>
<tr>
<th>Type of Provision</th>
<th>2003</th>
<th>2007</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Further Education</td>
<td>5,311</td>
<td>6,228</td>
<td>5,870</td>
</tr>
<tr>
<td>Work-Based Learning</td>
<td>1,832</td>
<td>2,148</td>
<td>2,025</td>
</tr>
<tr>
<td>Sixth Form</td>
<td>5,175</td>
<td>6,068</td>
<td>5,720</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>12,318</strong></td>
<td><strong>14,444</strong></td>
<td><strong>13,615</strong></td>
</tr>
</tbody>
</table>

Sources: ILR, PLASC, Office for National Statistics Mid-Year Estimates, Gloucestershire County Council Environment Directorate Research Team Population Projections

- Given a reduction in the NEET population and those in employment without training at age 16 to 18 years in Gloucestershire, the demand for LSC funded provision will increase by 1,297 (10.7%) between 2003 and 2014.
- This, however, masks the increase in demand for provision of 2,126 learners between 2003 and the peak year of 2007 – an increase of over

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4 Connexions Destinations Data, 2004
17%. Following 2007, the demand for LSC funded provision will fall by 830 by 2014.

- Assuming that the distribution of demand amongst the three streams of funding (FE, WBL and Sixth Form) remains at 2003 levels throughout the period, FE will continue to have the largest demand throughout the period. The level of demand for sixth form provision will remain slightly below that of FE, with continued low demand for WBL.
- The demand for FE provision will increase by 917 between 2003 and the peak year of 2007 to over 6,000 learners. Although, this will fall between 2007 and 2014 such that the overall increase in demand will be just over 550 learners for the period 2003-2014.
- There will be an overall increase in demand for Work-Based Learning provision of just below 200 participants between 2003 and 2014. However, the peak demand for WBL will stand at 2,150 in 2007, an increase of over 300 participants from the 2003 demand figures.
- Between 2003 and 2014, demand for sixth form provision will increase by almost 550 learners. Demand will reach a peak of 6,068 learners in 2007, an increase of almost 900 participants from 2003.

5.3. Supply of LSC Funded Structured Learning

Given both scenarios outlined in this chapter, demand for LSC funded provision of structured learning will increase in Gloucestershire to a peak in 2007, before falling to a level above that of present day in 2014. Such trends in changing demand over the next 10 years will have a number of implications for the supply of LSC-funded provision. For example, if demand increases then the supply of funded places would need to increase in response to this. This increase in supply may well be covered by capacity already available in the system or may, in extreme cases, need to be fuelled by the extension of or creation of new institutions.

It is important to identify, in advance, the changing structure of demand for such provision in the County, so that plans can be put in place to meet the changing demand in a proactive manner. This is in opposition to a reactive approach that would choke potential demand due to the time lag involved with first identifying this change, and then the time it would take to effect the required changes in supply – altogether a less efficient and effective approach to the planning system.

Given the demographic-based demand scenarios outlined in the chapter, although there will be an increase in the demand to 2007, the overall increase over the 10-year period is negligible. Such situations would suggest that major structural change to increase the supply of LSC funded provision is not necessary on two fronts. Firstly, the increases are relatively small in terms of absolute number of places and the effect is reduced once this increased demand is spread throughout the County. The second reflects the nature of the short-term increase in demand. Beyond 2007, demand for LSC funded provision will fall and thus the major increase in supply is only a short-term
issue. Temporary short-term measures are a more efficient approach to meeting such demand rather than longer-term, more permanent actions. To understand the major supply issues facing the LSC in terms of funding structured learning in Gloucestershire, it is important to investigate the specific issues facing the three main funding streams: Maintained sixth forms, work-based learning and further education.

5.3.1. Supply Issues Concerning Maintained Sixth Forms

Figure 18. Sixth Form Capacity in Gloucestershire - Demand Scenario 1, 2003-2014

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th></th>
<th>2007</th>
<th></th>
<th>2014</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sixth Form Capacity</td>
<td>5,785</td>
<td>5,175</td>
<td>5,546</td>
<td>5,228</td>
<td>5,785</td>
<td>5,175</td>
</tr>
<tr>
<td>Participation</td>
<td>610</td>
<td></td>
<td>239</td>
<td></td>
<td>557</td>
<td></td>
</tr>
</tbody>
</table>

Source: Gloucestershire LEA, LSC

- Assuming that the first demand scenario (current participation applied to future populations) holds true then demand for sixth form provision funded by the LSC will increase between 2003 and 2007 before falling again to 2014.
- Using current figures supplied by the Local Education Authority (LEA), sixth form capacity in 2005 will be 5,785, which when using 2003 participation levels shows an excess provision of 610 places.
- The demand for sixth form provision in 2007 will rise to 5,546, still below the current capacity figure by some 240 places.
- Demand will then fall to 5,228 in 2014, thus creating an excess capacity of over 550.
- Figure 18 suggests that if the basic demand scenario holds true, current sixth form capacity will meet levels of demand over the next 10 years, and in fact raises the issue of a degree of over-provision in sixth forms in Gloucestershire.

Figure 19. Sixth Form Capacity in Gloucestershire - Demand Scenario 2, 2003-2014

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th></th>
<th>2007</th>
<th></th>
<th>2014</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sixth Form Capacity</td>
<td>5,785</td>
<td>5,175</td>
<td>6,068</td>
<td>5,720</td>
<td>5,785</td>
<td>5,175</td>
</tr>
<tr>
<td>Participation</td>
<td>610</td>
<td></td>
<td>-283</td>
<td></td>
<td>65</td>
<td></td>
</tr>
</tbody>
</table>

Source: Gloucestershire LEA, LSC

- Figure 19 models demand for LSC funded provision in the County given that the NEET rate is reduced from current levels (4%) to 2% of the population aged 16 to 18 years, and no 16 to 18 year old is in employment without any form of training.
- Such a reduction increases demand for LSC funded provision above current levels, to the point where demand for sixth form places will outstrip the supply of places (at current levels) by over 280 learners.
However, by 2014 demand will fall back below supply levels, such that the spare capacity will be 65 places.

Although current capacity levels could not cope with this short-term increase in demand, capacity levels in 2005 will suffice for demand levels in 10 years time. Thus, a short-term increase is required as opposed to more permanent long-term measures.

### 5.3.2. Supply Issues Concerning Further Education

Demand for Further Education, as with sixth form and Work-Based Learning provision, will increase until 2007 given the projected population trends. FE, unlike maintained sixth form provision, theoretically has limitless capacity. Thus, the projected increase in demand for FE provision can be met by an increase in class sizes or course frequencies and requires very little structural or policy change.

Given a boom in demand, there may be well the need to increase the physical capacity of FE stock in the County, in terms of building new classrooms or even a new institution. However, the increase in demand outlined in this report indicates that such long-term measures are not required, as demand will start to fall in Gloucestershire beyond the peak year of 2007.

### 5.3.3. Supply Issues Concerning Work-Based Learning

Supply issues for Work-Based Learning are a lot more complex than those of Further Education or maintained Sixth Forms. In the latter two it is possible to increase supply of provision to meet increases in demand by increasing class sizes, building more classrooms and hiring more teachers. However, for Work-Based Learning, increasing supply is a more complicated issue.

Whereas demand for sixth form and FE places solely comes from the pupil side, demand for WBL comes in a two-pronged form – not only do learners demand work-based training, but provision is also reliant on demand from employers to employ and train these learners. Thus, the demand from the employers provides the supply of places to the learners. This supply must also be matched by the supply of the structured learning side of the course organised by the County’s WBL providers.

No matter how large the increase in demand on the pupils’ side, participation levels will not be able to increase if the County’s employers do not demand such work-based training.

Thus, supply cannot increase unless more employers are willing to take on such learners and demand from industry is fuelled, and the WBL providers must also be willing to supply the formal training side to the scheme.

The supply aspect of WBL is further complicated by the nature of sector-specific labour demand in the County. Provision of Work-Based Learning, as mentioned previously, is reliant on demand from the County’s employers. This demand very much reflects the economic environment and thus will change over time and throughout the various employment sectors and industries.
Nationally, for every 3 16 to 18 year olds demanding WBL, there is only 1 available placement. An excess demand on the part of the learner is also reflected in Gloucestershire.

Increasing the supply of WBL in the County to meet current demand levels, as well as the projected short-term year-on-year increase to 2007, requires a recruitment drive to increase the demand on the employers’ side as well as increasing the number of places on the WBL providers’ side. To further improve the efficiency and effectiveness of the WBL system, the LSC should also try to improve the system matching employers, providers and learners. This will reduce the number of placement terminations due to learner unsuitability and will thus help reduce the gap between supply and demand.

Recent employer recruitment drives have increased the number of WBL places on offer in the County to levels above Gloucestershire’s targets, although these efforts have also increased the demand from the County’s 16 to 18 year old population for WBL, and thus have not been able to eradicate this supply gap.

5.4. Key Points – Demand for LSC Funded 16-18 Year Old Structured Learning and The Supply Implications

Currently, over 12,300 16 to 18 year olds are participating in LSC funded structured learning in Gloucestershire. This represents about 60% of the County’s total population aged 16 to 18 years.

The majority of the County’s participants are within the Further Education (43%) and Sixth form (42%) streams of learning, each of which account for about one quarter of the 16 to 18 population in Gloucestershire. Work-Based Learning accounts for the remainder of participants, representing about 9% of the total population aged 16 to 18 years.

Of the 40% of the County’s 16 to 18 year old population who do not participate in LSC funded structured learning, a large majority are within the education and training environment. Such examples include those in Year 11, independent schools, higher education and employment with training. However, a minority are in employment without any further training or are not in education, employment or training (NEET).

Anticipating future demand is a complex process, but is very useful in identifying changing requirements for service provision, funding and policy. The anticipation of future demand serves as a proactive approach to meeting the needs of future 16 to 18 year olds in Gloucestershire.

Given current demand levels and future population trends, demand for 16-18 year old LSC funded structured learning places will increase by about 880 by 2007, before falling by 760 in 2014. This represents an overall increase of about 125 places in Gloucestershire between 2003 and 2014.

Demand for provision of further education, work-based learning and maintained sixth form places will all increase in the County by 2014, with all three streams peaking in 2007.
LEARNING AND SKILLS COUNCIL GLOUCESTERSHIRE
Demographic Change in Gloucestershire and its Implications for LSC Funded Provision

Should the LSC achieve its goal of reducing the number of NEETs in Gloucestershire, as well as the number of 16 to 18 year olds in employment without training, by retaining 16 year olds in the education and training environment, demand for LSC funded provision will consequently increase. Given a scenario whereby the NEET population is reduced to just 2% of the County’s 16 to 18 year old population, and all employment without training is eradicated amongst 16 to 18 year olds, then the demand for LSC funded provision will increase by almost 1,300 between 2003 and 2014. Demand, through this scenario, is 1,172 places (10%) higher than using the assumption that current demand will continue into the future. Again, demand in the County for LSC funded provision will peak in 2007, before falling back to 2014. Such a pattern is displayed for all three funding streams.

The identification of future demand for LSC funded provision in Gloucestershire brings about a number of issues concerning future supply of LSC funded places. Overall, the nature of this short-term increase in demand to 2007, followed by a projected reduction, implies that longer-term, more permanent, structural or policy changes are not required. A more efficient approach to meeting potential demand is to use existing spare capacity where it is available, and where it isn’t, short-term measures should be identified and adopted.

Current capacity in maintained sixth form provision in the County should be able to cover most, if not all, of the projected short-term increase in demand, while theoretically, capacity in the county’s Further Education colleges is limitless. Supply of Work-Based Learning provision is a more complex issue however. The increase in supply of WBL is very much reliant on increased demand from employers for taking on such learners, and not just a case of increased funding on the LSC’s part.

It must be reiterated that the future demand figures calculated in this report focus specifically on the demographic impact upon demand for LSC funded provision and hence do not take account of external influences.
6. Conclusions

6.1. Summary of Findings

Gloucestershire’s total population will continue to increase over the 10-year period between 2004 and 2014. The 16 to 18 year old population will increase to a peak in the County in 2007, before starting to fall, while the 19-24 year old population will peak in 2012. The concentration of 16 to 24 year olds in the County will remain in the ‘Central Severn Vale’ including the urban areas of Cheltenham and Gloucester as well as the Stroud district, a pattern that will not vary greatly over the period to 2014.

Current 16 to 18 year old participation levels in structured learning in Gloucestershire stand at 68% of the total 16 to 18 year old population. However, there is significant variation throughout the County, with the Forest of Dean having the lowest participation rate and Cheltenham the highest. At a national level, the LSC has set a participation rate target of 80% of the total 16 to 18 year old population in 2004. Given current trends, the County is performing below this objective, with an increase of almost 2,100 learners between 2003 and 2004 required to hit the target.

Assuming that current participation rates continue to 2014, participation amongst 16 to 18 year olds is set to increase slightly to a peak level in 2007, before falling back to a level in 2014 that is 5% below that at present. However, should the County reach the 80% participation rate target, amongst 16 to 18 year olds, by 2004 and remain at this level for the following 10 years, then participation will increase greatly over this period.

Demand for LSC funded provision amongst 16 to 18 year olds currently stands at 12,300 places, in Maintained Sixth Forms, Further Education and Work-Based Learning. Given current demand rates amongst 16 to 18 year olds for LSC funded learning, demand will increase to a peak in 2007 before falling back to levels in 2014 that are only slightly greater than those at present. However, should the LSC succeed in its goal to reduce the level of NEETs (16 to 18 year olds not in education, employment or training), as well as reducing the number of 16 to 18 year olds in employment without training, demand for LSC funded provision will show a greater increase between 2004 and 2014.

This changing demand has a number of implications in terms of the supply of provision by the LSC. Demand will increase in the short-term, but in the long-term demand is falling. Thus short-term, less permanent, measures would be a more effective and efficient approach to meeting future demand. Current sixth form capacity should cope with the short-term rise in demand, similarly FE provision should be able to respond. However, the complex nature of the supply and demand function of WBL requires a more complicated approach to increasing the supply of learner places.
6.2. Recommendations

1. This report investigates the important underlying effect of demographic change on participation and LSC funded provision of structured learning in Gloucestershire. It provides a summary overview of future scenarios, although it must be noted that any future structural or policy change, which will have knock on effects on demand and participation, have not been accounted for in the analysis. It is recommended that this report should be used as reference material for further detailed analysis on specific aspects of future participation and demand in and across Gloucestershire.

2. This report outlines the short-term nature of increased demand for LSC funded provision, amongst 16 to 18 year olds, in Gloucestershire through demographic change, and indicates that the most effective and efficient approach to meeting this demand is to employ less permanent short-term measures to cope with such a scenario. It is important to identify demand trends in advance so that measures can be put into place to cope with these changes, in order to minimise inconvenience to those wishing to participate in LSC funded provision. In light of the trends described in the report, it is important for the LSC to consider what specific measures are required to meet the changing demand for provision over the next 10 years, and beyond, through Gloucestershire’s Strategic Area Review (StAR).
7. Appendix


The map below shows the population density across the Tewkesbury district, using 2001 Census data. The map clearly shows that the district’s population is concentrated around Gloucester and Cheltenham, in such settlements as Churchdown, Innsworth, Brockworth, Shurdington and Bishop’s Cleeve. These settlements have been the major centres of housing development in the district over the past decade and shows that population change will have a large effect (on education and skills) on the neighbouring districts of Cheltenham and Gloucester, as well as the Tewkesbury district itself.

*Figure 20. Population Density in the Tewkesbury District – 2001*
7.2. 16-18 Participation Rate Calculation Methodology

Participation amongst 16-18 year olds in structured learning takes into account LSC funded learning (further education, maintained school sixth form and work-based learning), as well as non-LSC funded provision (independent school sixth forms and higher education). Participation is measured at a County level, as well as at the district of residence level.

Further education participation totals can be obtained from the LSC’s Individual Learner Record (ILR) database.

Work-based learning participation totals can also be obtained from the ILR database.

Maintained sixth form participation totals can be obtained from the Pupil Level Annual School Census (PLASC), held by the LEA and LSC.

Independent sixth form pupil numbers are supplied at a County level to the LSC by the Department for Education and Skills (DfES). However, in order to provide accurate participation figures at a district level, it is necessary to distribute the County figure throughout Gloucestershire’s six districts using the following estimation process:

Two data sources are used to derive the District level Independent Sixth Form pupil numbers. As mentioned above, the LSC is supplied with a County total from the DfES, while individual school pupil figures and residential/day student breakdowns are obtained from the Independent Schools Directory UK (www.indschools.co.uk).

- The Independent Schools Directory provides figures, for individual schools, on the number of pupils in the sixth form, as well as a breakdown of the number of day and residential students for the whole school (not just the sixth form).
- The district figures are produced by firstly calculating the number of residential students (as they are included as resident in the district of the school), and then calculating the number of day students (as they may not necessarily reside in the district of the school), and combining the two.
- To calculate the residential students:
  - For the purpose of these estimates it is assumed that the day student and residential student split is uniform by age and thus the proportion of residential students in the sixth form is calculated by applying the overall proportional breakdown of the school to the total number of sixth form students.
  - The assumed number of residential sixth form students is then summed to district totals depending on the district that the school is located.
- As the total number of sixth form pupils from the two sources differs, it is important to constrain the district distribution to the official LSC total for Gloucestershire provided by DfES. A district proportion of residential pupils is calculated by dividing the district total by the total number of pupils from the Independent Schools Directory for the County. The
district proportions are then applied to the DfES County total to give the final district residential independent school population.

- Given the calculated residential independent sixth form population, it is then possible to calculate the remaining (day) pupils, and distribute them by district:
  - The County total for day pupils is calculated by subtracting the residential total (calculated above) from the DfES total.
  - Once the County total has been obtained the district figures are obtained by using the district distribution of LEA sixth form pupils (the district LEA sixth form pupil totals divided by the County total), applying these proportions to the County day pupil total obtained above.
  - The total number of independent school sixth form pupils for each district is then calculated by summing the residential and day pupil totals from the methods described above.

- The 2003 calculation example is below:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution Name</td>
<td>District</td>
<td>Boys</td>
<td>Girls</td>
<td>Total</td>
<td>Residential %</td>
<td>Residential 6F</td>
</tr>
<tr>
<td>Cheltenham College</td>
<td>Cheltenham</td>
<td>170</td>
<td>77</td>
<td>247</td>
<td>83.8</td>
<td>207</td>
</tr>
<tr>
<td>Cheltenham Ladies College</td>
<td>Cheltenham</td>
<td>0</td>
<td>300</td>
<td>300</td>
<td>73.5</td>
<td>221</td>
</tr>
<tr>
<td>Dean Close School</td>
<td>Cheltenham</td>
<td>100</td>
<td>93</td>
<td>193</td>
<td>54.9</td>
<td>106</td>
</tr>
<tr>
<td>King's School</td>
<td>Gloucester</td>
<td>57</td>
<td>38</td>
<td>95</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Rendcombe College</td>
<td>Cotswold</td>
<td>25</td>
<td>35</td>
<td>60</td>
<td>32.5</td>
<td>20</td>
</tr>
<tr>
<td>St Edwards School</td>
<td>Cheltenham</td>
<td>56</td>
<td>45</td>
<td>101</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Westonbirt School</td>
<td>Cotswold</td>
<td>0</td>
<td>60</td>
<td>60</td>
<td>56.5</td>
<td>34</td>
</tr>
<tr>
<td>Wycliffe College</td>
<td>Stroud</td>
<td>135</td>
<td>68</td>
<td>203</td>
<td>62.4</td>
<td>127</td>
</tr>
<tr>
<td>Wynstones School</td>
<td>Stroud</td>
<td>9</td>
<td>12</td>
<td>21</td>
<td>2.1</td>
<td>0</td>
</tr>
<tr>
<td><strong>COUNTY TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>552 728 1,280 714</td>
</tr>
</tbody>
</table>

Source: Independent Schools Directory UK

<table>
<thead>
<tr>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>District</td>
<td>Proportion (%) of County Total (Column E)</td>
</tr>
<tr>
<td>Cheltenham</td>
<td>41.6</td>
</tr>
<tr>
<td>Cotswold</td>
<td>4.1</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>0</td>
</tr>
<tr>
<td>Gloucester</td>
<td>0</td>
</tr>
<tr>
<td>Stroud</td>
<td>9.9</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>0</td>
</tr>
<tr>
<td><strong>GLOUCESTERSHIRE</strong></td>
<td><strong>55.8</strong></td>
</tr>
</tbody>
</table>
Higher education participation figures are obtained from the Higher Education Statistical Agency (HESA). Figures used represent the number of the County’s usual residents aged 16-18 years who are in higher education. This includes those studying in Gloucestershire and those studying out-of-County. This does not include students who usually live out-of-County but study within Gloucestershire’s higher education institutions, and therefore live in the County during term-time.

To obtain the participation rate, the participation totals (a sum of participation amongst the five types of structured learning) are divided by a population total for the 16-18 year old population, and are then multiplied by 100.

The population total used in the participation rate calculation is a re-based form of the Mid-Year Estimates of Population (MYEs) produced by the Office for National Statistics. The original MYEs include students as resident at their term-time location and thus this does not reflect a suitable base for the participation rate. It is not a suitable base because the participation figures include students at their residential (non term-time) location. Thus, to re-base the original population estimates, it is necessary to subtract the number of students who attend the County’s higher education institutions from out-of-County, and add in the number of the County’s residents who attend higher education institutions that are out-of-County.

<table>
<thead>
<tr>
<th>District</th>
<th>LEA Sixth Form Numbers 2003</th>
<th>LEA Sixth Form Distribution</th>
<th>DfES Independent Sixth Form Pupil Total</th>
<th>Residential Independent Sixth Form Pupils</th>
<th>Day Independent Sixth Form Pupils</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td>991</td>
<td>19.15</td>
<td>548</td>
<td>111</td>
<td>659</td>
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<tr>
<td>Cotswold</td>
<td>600</td>
<td>11.60</td>
<td>54</td>
<td>67</td>
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<td>Forest of Dean</td>
<td>418</td>
<td>8.08</td>
<td>0</td>
<td>47</td>
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<td></td>
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<td>Gloucester</td>
<td>1,140</td>
<td>22.03</td>
<td>0</td>
<td>128</td>
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<tr>
<td>Stroud</td>
<td>1,053</td>
<td>20.35</td>
<td>130</td>
<td>118</td>
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<td>Tewkesbury</td>
<td>972</td>
<td>18.79</td>
<td>0</td>
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<td><strong>GLOUCESTERSHIRE</strong></td>
<td><strong>5,175</strong></td>
<td><strong>100.00</strong></td>
<td><strong>1,315</strong></td>
<td><strong>734</strong></td>
<td><strong>581</strong></td>
<td><strong>1,315</strong></td>
</tr>
</tbody>
</table>

Sources: LSC, DfES – Note, numbers may not sum due to rounding.