Effects of Sparsity on Provision and Providers with a Special Focus on South West England

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The Effects of Sparsity on Provision and Providers
With a Special Focus on South West England
RCU ref. 05.231

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Executive Summary

1. The project examined provision and learner data in sparsely populated areas of England, with a particular focus on the South West region. It compared patterns of participation, learner success and progression in sparsely and densely populated areas and tested the case for the development of a sparsity factor in the funding methodology for post-16 learning. (Section 1.1)

2. The methodology for the project was based on the identification of six categories of relative sparsity, based on 2001 Census data, which were then applied to the learner datasets for 2003/04 and 2004/05. (Section 3.1.2)

3. Participation per head of population is lower in sparsely populated areas than in urban areas and the correlation with the degree of sparsity is relatively consistent. (Section 4.1.2)

4. However, there are variations in this pattern between regions and other factors combine with population density to determine participation levels. Relative deprivation levels are closely related to population density but impact differently in different areas. Participation levels increase with the level of deprivation in urban areas, but decrease with the level of deprivation in rural areas. (Sections 4.3.2 – 4.3.4)

5. Economic factors are also important. More than half the working population living in sparsely populated areas work in an urban area and there are complex patterns of employment and economic activity rates that influence participation rates. (Sections 4.3.6 – 4.3.9)

6. Participation by 16-18 year-olds is lower in sparsely populated areas and the pattern of participation is different. The share of learning delivered by school sixth forms is higher in sparsely populated areas and the share delivered by work-based learning providers is lower. However, there is no evidence of a lack of participation by young people in vocational curriculum areas. (Sections 4.3.10 & 4.3.11 and 5.1.1 & 5.1.2)

7. Mapping of the location of learning for selected work-based learning programmes indicated a lack of accessibility for rural learners in some areas of the South West. Health & Social Care WBL appears limited in parts of Somerset, Dorset and Wiltshire and Construction provision in North Cornwall, Mid & North Devon, Dorset and Wiltshire. However, these conclusions are partly undermined by poor quality location records for some providers. (Sections 5.1.5 – 5.1.10 and Appendix 2)

8. Around 16% of the South West population live in sparsely populated areas but only 7% of learning centres with Skills for Life provision are located in these areas. Centres in sparsely populated areas typically offer fewer distinct learning aims and have lower enrolments per learning aim. Average Skills for Life group sizes in some rural areas are less than a quarter of the level found in urban centres. (Section 6.2.2 & 6.2.4)
9. Most centres in sparsely populated areas offering Skills for Life provision offer no learning aims above Level 2. However, tracking of 2003/04 Skills for Life learners into the 2004/05 national datasets found that the proportion continuing with learning was only marginally lower for rural residents. Around 40% of returning Skills for Life learners progress to a higher level of study. (Section 6.2.5 and Section 6.3)

10. Learners in sparsely populated areas travel further to their place of learning than urban learners, but longer travel distances increase the likelihood of learner success rather than decreasing it. Overall, success rates are lowest for learners from densely populated areas and highest for learners from sparsely populated areas. This holds true for further education and Skills for Life learning but the pattern is more complex for work-based learning and adult & community learning. (Section 7.1)

11. Multi-level data analysis confirmed that relative sparsity has a positive effect on learner success rates, but the impact has a low level of statistical significance. Other factors tested by the modelling had much higher significance as a predictor of success, including deprivation levels, gender, curriculum area and level of study. (Section 8.2)

12. Multi-level modelling also revealed that sparsity only becomes a significant predictor of success rates when combined with other factors, including relative deprivation. Relative sparsity had the effect of increasing the likelihood of success, other things being equal. (Section 8.3)

13. Provider interviews endorsed the conclusion that the impact of population sparsity on learners was strongest when combined with rural deprivation. They described a range of strategies that they felt to be necessary to overcome barriers to participation and success for learners in sparsely populated areas. Many of these strategies (for example transport) were firmly embedded and providers felt these had raised participation and retention. This meant that performance indicators did not show disadvantage for rural learners, but providers stressed that such strategies had high internal costs and consequences. In particular resources were re-directed from other areas, including learner social facilities and management tiers. (Sections 9.1 and 9.2)

14. The report found no case for providing a blanket funding uplift for provision for learners from sparsely populated areas. However there is a case for targeted interventions by LSC to preserve first steps provision in sparsely populated areas and to raise participation in areas characterised by rural deprivation. The evidence produced by the report confirmed provider perceptions that effective responsiveness to the needs of sparsely populated communities has knock-on effects within providers in terms of additional financial costs and organisational pressures. These factors should be taken into account in inspections and in the development and implementation of the Framework for Achievement. (Section 10)
1. Research Brief and Methodology

1.1 Research Brief

1.1.1 The project was commissioned by LSDA on behalf of the LSC South West Region in October 2005. The aspects of the project relating to LSDA passed to the Learning and Skills Network (LSN) when the new body was formed.

1.1.2 The brief for the research was to investigate the pattern of provision and learner behaviour in sparsely populated areas of England and compare these to the data for more densely populated areas. The project was designed to have a particular focus on Apprenticeship Frameworks and Skills for Life provision, within a wider context of overall provision and participation. The research was required to take into account (but not re-test or replicate) previous research conducted on behalf of LSDA and LSC on the impact of population sparsity.

1.1.3 One key aim of the research was to determine whether or not there was a case for population sparsity to be an element within the LSC’s funding methodology or to be taken into account in the consideration of New Measures of Success\(^1\) for the sector. It was agreed in the scoping of the research project that justification for any funding-based intervention would require evidence that offering provision in sparsely populated areas consistently depressed success rates and/or necessitated higher operating costs.

1.1.4 The main data analysis for the report relates to the national datasets for 2003/04, since these were fully available at the outset of the research process. Where relevant, emerging findings have been tested using the 2004/05 dataset, which became fully available towards the end of the project. This includes the analysis of Skills for Life progression, which was based on tracking 2003/04 learners into the 2004/05 datasets.

1.1.5 The research used a combination of national and South West Region data to test hypotheses suggested by previous research. Where figures are presented in the report for the South West Region, parallel analysis has also been conducted for the Eastern Region as a control measure. Reference is only made in the report to the Eastern Region analysis where there were significant variations between the results in the two regions.

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\(^1\) For more information on the New Measures of Success see [www.lsc.gov.uk/nms](http://www.lsc.gov.uk/nms).
1.2 Methodology

1.2.1 The project consisted of four main research phases. These were:

1. Desk research and establishment of key research questions.
2. Data interrogation, harnessing the main national datasets for post-16 learning.
3. Tracking the progression of Skills for Life learners.
4. Testing of emerging findings with relevant stakeholders and providers.

1.2.2 Phase 1 of the research considered the evidence provided by a number of past investigations of the impact of population sparsity on providers and learners. It was agreed during the scoping phase of the project that a prima facie case for a funding based intervention to support providers serving sparsely populated areas would require some or all of the following conditions:

- The delivery of adequate provision in sparsely populated areas would have to result inevitably in higher unit costs or lower income potential (for example if sparsity were a particularly robust predictor of lower participation).
- Learners from sparsely populated areas would have to display consistently lower success rates (controlled for other factors).
- Current arrangements would have to contribute consistently to a mis-match between demand and supply or a lack of progression in sparsely populated areas.
- Additional funding would have to offer the prospect of changing these characteristics.

1.2.3 As a result of the desk research, and consideration of the required conditions for a funding-based intervention, the following key research questions were agreed with LSDA and LSC:

- Is population sparsity a significant factor in predicting participation and success rates, once allowance is made for other characteristics?
- How clear is the evidence of the impact of delivering in sparsely populated areas on average group sizes, curriculum mix and progression rates?
- Do travel to learn distances have a consistent impact on retention and success rates?
- What can be learned from providers serving mixed sparsely and densely populated areas about successful strategies to cope with population sparsity?
- Where there is measured under-participation in certain vocational areas is this driven by demand or supply factors (or both)?

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2 This aspect is discussed fully in Section 2 of the report.
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- What characterises the curriculum delivered in sparsely populated areas and what are the cost implications?
- How do progression rates from Skills for Life provision differ in different areas?
- Are there gaps in current datasets that prevent us from fully understanding the impact of population sparsity?
- Overall, does the evidence base suggest that any special interventions are required to support providers serving sparsely populated areas?

1.2.4 Phase 1 also resulted in a tightening of the definition of sparsity for the purposes of the research. This took the most commonly-used definition of population sparsity (less than one resident per hectare) and expanded it to six categories of relative sparsity that can be used to track future participation patterns. This was crucial to the methodology as it allowed the testing of possible impact factors against a graded measure of sparsity. The project has established a link between learner ward and the six categories of relative sparsity that can be used by the LSC in future interrogations of the learner datasets.

1.2.5 Phase 2 of the research used the six categories of relative population sparsity to interrogate the national learner datasets of provision within further education, work-based learning, adult & community learning, University for Industry and school sixth form provision. This link was used to test the impact of population sparsity on participation and learner success rates. To begin with this is presented using bivariate analysis in the report (comparing relative sparsity to a single other variable) but this is then explored in more detail using multi-level modelling techniques. The latter approach tests the robustness of population sparsity as a predictor of learner behaviour compared to a wide range of other factors.

1.2.6 The learner datasets have also been used to test a range of other possible impacts of population sparsity on learners and providers, for example assessing average cohort sizes for Skills for Life provision and the extent to which local centres offer progression opportunities. In Phase 3 of the research the 2003/04 Skills for Life cohort was tracked into the 2004/05 national datasets. This was done to examine the proposition that Skills for Life learners might be less likely to progress into further learning in sparsely populated areas, especially if such progression necessitated travel to a less convenient venue.

3 The Government Statistics website (www.statistics.gov.uk) notes that “choosing a suitable urban and rural definition is complicated by the number of different definitions in use - no single classification meets the needs of all users. The definitions previously used were conflicting as they were based on different approaches”. This led to the Review of Urban and Rural Definitions and a joint project to produce a harmonised classification of both urban and rural areas for England and Wales. The Office for National Statistics (ONS), Department for Environment, Food and Rural Affairs (Defra), DCLG, the Countryside Agency (CA) and National Assembly for Wales (NAW) sponsored the project. Under the new classification, Output Areas were described as urban or rural depending on whether the majority of the population fell inside a settlement of population 10,000 or more. The main focus of the project has been the development of more detailed classifications for rural areas, which are further divided into town & fringe, villages and hamlets & isolated dwellings. For more information see the Data Guide to the Rural and Urban Area Classification 2004 at http://www.statistics.gov.uk/geography/downloads/Rural_Urban_Metadata.pdf.

4 This aspect is discussed in more detail in Section 3 of the report.

5 ILR F05 2003/04 (FE, UfI and ACL), ILRw 03/04 (WBL) and PLASC 04 (school sixth forms).
1.2.7 The final phase of the research involved the testing of emerging findings from the research with the LSC, LSN, providers with rural recruitment areas and other stakeholders. A special expert symposium was assembled at the end of May 2006 to advise on additional elements for the research process and discussions also took place with seven large providers serving a mixture of sparsely and densely populated areas in the South West and Eastern Regions. Details of both groups are recorded in Appendix 1.
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2. Past Research Evidence

2.1 Research into the Implications of College Isolation
(Aitken & Whalley, RCU, April 2002)

2.1.1 In 2002 a group of six colleges commissioned RCU to
use evidence from the 1999/2000 Individualised Student
Record (ISR 19) to test the impact of geographical isolation
on their recruitment patterns and curriculum offer. The six
colleges considered themselves to be the most
geographically remote colleges in England and typically
had no alternative providers of mainstream further
education within thirty or forty miles of their main sites.

2.1.2 The colleges believed they were obliged to deliver a comprehensive further education
curriculum offer to meet community needs, but faced practical limits on recruitment levels due
to population sparsity. The result was felt to be low average group sizes and high average
operating costs. A methodology was devised to test the evidence for these perceptions using
ISR 19. The six colleges were each compared with a matched pair college in their own region
that had broadly similar overall student numbers. All the matching colleges served urban or
partly urban markets and none had an overall profile of high deprivation for its student intake.
A second control group was established of 35 randomly-selected colleges from within the
same regions as the isolated colleges group.

2.1.3 The main findings from the research were as follows:

- The matched pair colleges typically had more than eight times as many working age
  residents within a 30 minute driving time of their college as the isolated colleges.
- The isolated colleges offered more qualifications than other colleges, but most
  generated less total guided learning hours per qualification.
- The isolated colleges offer qualifications in 77% of curriculum areas (based on the
  sub-programme area definition used at the time, but this was slightly less than the
  matched pairs group). However the potential market for each sub-programme area
  for the matched pair colleges was much higher, based on local working population
  numbers. The isolated colleges also had substantially fewer medium-sized and large
  companies that could be targeted for commercial income.
- The isolated colleges were more likely to offer a full range of provision (Entry/Level 1
  up to Level 4) than other colleges.
- Most of the isolated colleges had significantly fewer alternative providers recruiting
  from their main recruitment areas than their comparator institutions.
- There was no consistent link between distance travelled and retention rates.
2.2 Funding Vocational Learning in Rural Areas  
(Fletcher, LSDA Project RR535, January 2004)

2.2.1 The overall aim of this project was to examine whether the take-up of learning opportunities by people in rural areas differed significantly from the pattern found in urban areas. It was felt that substantially different take-up patterns might indicate a need for either funding-based intervention or targeted learner support.

2.2.2 The research was based on ten local LSC areas with low population density and a high proportion of country dwellers as defined by consumer databases. In particular, the research used the MOSAIC classification of residential neighbourhoods to link to further education participation and success data (2001/02 academic year).

2.2.3 The main findings of the research were as follows:

- There was no evidence of lower overall participation in rural areas, whether for general post-16 provision, vocational learning or work-based learning.
- Within rural areas there were lower levels of participation for certain groups, for example those living in social housing (council-owned houses).
- This applied especially to participation in work-based learning (particularly Retail, Customer Service & Transportation) and to participation in further education provision in Construction, Health, Social Care and Public Services.
- There was evidence of movement into urban areas by rural residents to access provision, but this was less evident for under-participating groups in rural areas.

2.2.4 The study concluded that the data did not support a case for a general uplift in funding for learners (or providers) located in rural areas, but it suggested a case in certain circumstances for the use of the LSC’s local initiative funding to overcome barriers to participation in under-participating rural communities.
2.3 A Study of Area Costs and Sparsity
(Frontier Economics for LSC, October 2002)

2.3.1 The research was commissioned by the LSC to identify ways forward in developing consistent area cost weightings across the different strands of funded post-16 provision. The report initially considered area cost weightings and used Labour Force Survey evidence to produce estimates of wage differentials between LSC Regions. The proposed weightings were, in general, inversely related to relative population density.

2.3.2 The second element of the research considered evidence for linking an element of the funding methodology to population sparsity. The report noted that sparsity factors did form part of some public sector funding systems, but that this was generally based on presumed rather than measured cost differences.

2.3.3 The researchers went on to classify colleges in terms of relative sparsity, based on the location of their main sites. The report concluded the there was relatively little correlation between sparsity and measures of financial health but it did comment on a lack of sufficient data to carry out a fine-grained analysis of sparsity effects.

2.3.4 As a result the report recommended further research to generate detailed evidence of the link between sparsity and the costs of learning providers.

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6 For example local government and health authority allocations in England and Wales and additional support for colleges in remote locations under the Scottish Further Education Funding Council model.

7 Executive Summary, page 3.
2.4 Issues Affecting Education and Training in Sparsely Populated Areas
(GHK on behalf of the LSC Evaluation and Good Practice Team, June 2003)

2.4.1 In 2003 the LSC published an investigation of the issues surrounding the provision of education and training in sparsely populated areas and a good practice guide with case studies of successful strategies.

2.4.2 The research built on previous research in the sector (including the RCU and Frontier Economics reports). It sought to identify barriers to both provision and participation in sparsely populated areas and paid particular attention to learners from potentially disadvantaged groups. The research leant heavily on interviews with providers and learners from six sparsely populated local LSC areas. This gave an insight into the perceptions of those involved in education and training in the areas, although the report’s authors noted that it reported, rather than evaluated, strategies as a result.

2.4.3 The report confirmed that providers serving sparsely populated areas operated with smaller average group sizes, but indicated some advantages of this in terms of learner preferences. It speculated on links between this and high rates of participation, retention and achievement in some sparsely populated areas. The report also identified benefits of operating in sparsely populated areas, including low staff turnover and the stability that this brought. However, there were also disadvantages. Low learner numbers meant courses were often uneconomic to run and some learners identified a lack of choice in their areas.

2.4.4 Transport was identified as a major factor, resulting in higher costs for learners and/or providers to ensure that provision was accessible. Many of the providers felt obliged to provide subsidised transport and/or networks of outreach provision. Local provision was generally valued by learners but led to high visibility for learners accessing some sensitive areas of provision, for example adult basic skills. Transport costs were also high for staff operating across several locations and for attendance at external training events.

2.4.5 The report commented on the limited pool of employers operating in sparsely populated areas and identified this as a particular barrier to effective work-based learning provision.

2.4.6 The accompanying good practice guide identified a range of strategies, including collaborative working, joint needs analysis work, innovative use of ICT, effective outreach and mobile provision, subsidised transport and interventions to improve the relevance of transport provision and joint marketing campaigns.
2.5 Provision of, and Learner Engagement with, Adult Literacy, Numeracy and ESOL Support in Rural England: a Comparative Case Study.
(Atkin, Rose & Shier National Research and Development Centre for Adult Literacy and Numeracy April 2005)

2.5.1 The research examined the issues surrounding the delivery of the DfES’s Skills for Life agenda in six rural counties, while noting that many of the issues raised also had wider implications. The research was partly driven by a concern that the policy agenda was largely supported by urban case studies and pilots. The main source of the evidence in the report was 103 questionnaire responses and 214 learner interviews.

2.5.2 The report examined the availability and take-up of provision in adult literacy, numeracy and English for Speakers of Other Languages (ESOL) in rural areas. It noted that there was no strong history of such provision in many rural areas and as a result there was a weak infrastructure and a lack of suitably qualified tutors.

2.5.3 The report also noted that seasonal demand factors, combined with low overall volumes, make it difficult for providers to deliver suitable opportunities. Partnership working could help to overcome these problems, but partnerships were also harder to sustain in rural areas where fewer providers are based and the physical distance between providers is higher. Despite the low number of learning providers in many rural areas, responsibility for matters that influence rural participation spans a large number of agencies and this was also felt to make partnership working difficult.

2.5.4 Progression from community based Skills for Life provision was felt to be more difficult and this proposition is specifically tested later on in the current report. Community-based delivery was often the expressed preference of learners, but cost-effective childcare was felt to be difficult to provide in rural outreach centres and the curriculum offer tended to be shaped by what was viable. The report contained evidence that the needs of rural ESOL learners were very different to those of other rurally-based Skills for Life learners.

2.5.5 Most of the report’s recommendations related to increased, or more flexible, funding to support rural provision. There were also recommendations for better partnership working and improved information and guidance, particularly in respect of progression opportunities.
3. Defining Population Sparsity

3.1 Sparsity Classification

3.1.1 Section 1.2.4 discussed the detailed approach being adopted by the Countryside Agency, Defra and other partners to the classification of areas. This involved different levels of geographical precision (down to Census output areas) and a combination of rural/urban and settlement descriptors.

3.1.2 For the purpose of the current research it was decided to base the analysis on a simpler approach. This took the most frequently used definition of sparsity in Government planning documents (a population density of less than one person per hectare (pph)) and applied five further measures of increasing population density. This single graded approach allowed the project to test whether relative sparsity produced consistent effects and the six classifications have been described in the table below, supported by illustrative examples from the South West of England. Nationally 1,665 of the 8,050 wards in England fall into the definition of “sparse”. 949 are “semi-sparse” and 676 are “rural clusters”.

### South West Examples of Six Classifications of Relative Sparsity

<table>
<thead>
<tr>
<th>Persons per hectare</th>
<th>Label</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>Sparse</td>
<td>Most rural wards in the South West</td>
</tr>
<tr>
<td>1 - 2.49</td>
<td>Semi-sparse</td>
<td>Rural area between Truro and Redruth; villages on the southern fringes of Dartmoor; North-west fringe of Barnstaple; area between Taunton and Bridgwater; area around Bournemouth airport.</td>
</tr>
<tr>
<td>2.5 - 4.99</td>
<td>Rural clusters</td>
<td>Fringes of Camborne north of the A30; villages to the west of Saltash; fringes of Newton Abbot; Wool (between Poole and Weymouth); area around M5 junction 23 north of Bridgwater; Ilfracombe.</td>
</tr>
<tr>
<td>5 - 19.99</td>
<td>Urban fringes</td>
<td>St. ives; Saltash; Penryn (near Falmouth); Bideford; outskirts of Torquay, Exeter, Taunton, (North) Bournemouth, (East) Bristol, Gloucester and Cheltenham.</td>
</tr>
<tr>
<td>40 - 240</td>
<td>Dense</td>
<td>Central areas of Plymouth, Torquay, Exmouth, Exeter, Taunton, Bridgwater, Bournemouth, Weston-super-mare, Barnstaple, Bath, Bristol, Swindon etc.</td>
</tr>
</tbody>
</table>

Source: RCU derivation from Census 2001 data, based on average population density per ward.

3.1.3 The maps on the following two pages show how concentrations of the different categories are distributed across the South West and across England and Wales in general. The approach distinguishes between city/town centres and outer suburbs and between market towns and larger villages.

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8 All Census data used in this report have been rolled forward to reflect actual ages during the academic years under investigation.
Sparsity Categories

Sparsity categories by ward
- Sparse (1665)
- Semi-Sparse (949)
- Rural Clusters (676)
- Urban Fringes (2174)
- Urban Semi-Dense (1926)
- Dense (1460)

Source: Census 2001

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JR/05/231
4. Analysis of Overall Participation Levels

4.1 Overall Participation in Publicly-funded Learning

4.1.1 This section is based on combined learner data from further education, adult & community learning, work-based learning, University for Industry and school sixth form provision in 2003/04. This gives an aggregate figure for the number of residents in each ward (or group of wards) participating in publicly-funded post-16 learning (irrespective of whether the provision is LSC-funded). However the figures do not include learning delivered by higher education institutions (HE data are not released at this level of disaggregation) or independent school learning. *Fuzzy matching* techniques have been used to remove duplicates from the datasets, for example individuals learning at more than one institution or in more than one part of the sector. These duplicates have been identified based on the assumption that two learners with the same gender, date of birth and full postcode are likely to be the same person.

4.1.2 The chart below compares the rate of participation per head of the 16-74 population in each area category. Participation is below the English average in each of the three rural categories. Rural clusters are often close enough to urban areas for learning to be deemed accessible or have populations that justify outreach centres, but participation rates in these areas are broadly similar to those in sparsely populated wards.

### 2003/04 Participation Rates by Area Categories

![Participation Rates by Area Categories](chart.png)

Source: Census 2001, ILR F05 03/04, ILRw 03/04 & PLASC04.

---

9 Both ILR 2003/04.
10 ILRw 2003/04.
11 Learndirect return for 2003/04
12 PLASC 2004.
4.1.3 The next chart illustrates the same data as a variation from the national average, where the national average is set to zero on the vertical scale. The black line represents a best fit line for the dataset. This indicates a negative relationship between sparsity and overall participation rates, although care must be taken given the small number of groupings involved. However the patterns in the most densely and most sparsely populated areas diverge from the trend-line.

2003/04 Participation Rates as Variation from the English Average

Source: Census 2001 and ILR F05 03/04, ILRw 03/04 & PLASC04.

4.1.4 It is important to stress that the inverse relationship depicted above does not necessarily indicate disadvantage for learners living in sparsely populated areas. This is because there are other differences, including socio-demographic characteristics and prior qualification levels, between the areas.
4.2 Regional Variations

4.2.1 There is also considerable variation in these patterns between regions. The chart below shows regional variations by area type. In each case the variation shown is an indexed comparison of the area type to the average participation figure for that region. The East of England, East Midlands and West Midlands show a relatively smooth inverse relationship between population sparsity and participation levels. This is also reflected in Greater London for relevant categories (numbers of residents in the three rural categories are too low to generate robust data). In the North East participation levels are broadly consistent across the urban and semi-rural categories but drop considerably in sparsely populated areas (mainly Northumberland). In the North West, participation levels are well above average in the most densely populated areas, low in suburban areas around the major cities but broadly consistent in other areas. The South East and Yorkshire & the Humber both have quite mixed patterns while the South West is the only region showing a broadly positive correlation between relative sparsity and participation.

Source: Census 2001 and ILR F05 03/04, ILRw 03/04 & PLASC04.
Figures suppressed where base population in a cell is less than 15,000.
4.3 Regional Case Study: South West England

4.3.1 The analysis so far has compared overall participation rates with relative population sparsity. However population density is only one of many factors impacting on participation (and success rates) and this section of the report introduces some other factors by examining the South West region in more detail. Later sections of the report expand this further by using multi-level analysis to assess the relative impact of different factors.

4.3.2 Socio-demographic factors consistently emerge from educational research as key determinants of post-16 participation (and success). The chart below compares the socio-demographic mix in different areas by linking the six population density categories to the Index of Multiple Deprivation (IMD). The IMD was generated by the Office of the Deputy Prime Minister and now falls under the remit of the Department for Communities and Local Government (DCLG). The IMD ranks more than 32,000 super output areas in England according to their level of relative deprivation based on a number of factors including education, health, crime and employment statistics. As the IMD is a ranking, a low number indicates a high level of relative deprivation. The chart shows the proportion of learners aged 16 or over from each South West area type falling into sixteen bands within the Index.

Breakdown of South West Learners in Each Area Type by Relative Deprivation Level

Source: Census 2001, Index of Multiple Deprivation 2004 and ILR F05 03/04, ILRw 03/04 & PLASC04.
4.3.3 The chart shows a close correlation between relative population density and deprivation levels as measured by the IMD ranking. Around a third of South West learners who live in densely populated areas also live in a neighbourhood that falls into the 10,000 most deprived in England. This contrasts with just 1.5% of learners living in sparsely populated areas. More than half of the South West’s learners from semi-sparse areas live in a neighbourhood ranked as one of the 10,000 least deprived in the country. The contrast between sparse and semi-sparse areas in the chart may be an indication of the affluent profile of some rural locations as a result of inward migration and renovation of rural properties.

4.3.4 The next two charts show contrasting pictures for the impact of relative deprivation on participation levels. In densely populated parts of the South West there is a mild but consistent relationship. Participation is highest in the most deprived areas. In sparsely populated areas (in all bar the most affluent bandings where absolute numbers are relatively low) participation rises as the level of deprivation falls.

South West 16+ Participation Rates by Relative Density and IMD Ranking

Source: Census 2001, Index of Multiple Deprivation 2004 and ILR F05 03/04, ILRw 03/04 & PLASC04.
4.3.5 This is an important finding and one that is reinforced by later multi-level analysis. In urban areas of the South West participation rates are higher in more deprived areas (presumably reflecting the targeting of LSC funding and the availability of ESF-supported provision in Cornwall’s Objective 1 area). In sparsely populated areas of the South West residents in relatively deprived areas are less likely to participate than those in relatively more affluent areas. Where relative population sparsity is combined with pockets of rural deprivation participation rates are likely to be low. The patterns shown in the above charts were almost exactly replicated when tested in the Eastern Region.

4.3.6 The link between sparsity and lower participation is clearer for 16-18 year-olds than adults. For many adults participation in education and training is linked to, or influenced by, their work activity. The chart below shows the importance of travel to work patterns in considering the accessibility of learning provision. More than half of the region’s employed residents who live in a sparsely populated area work in an urban or urban-fringe location. For residents of rural clusters the figure rises to over 60%. Only just over a quarter of residents of sparsely populated areas also work in a sparsely populated area. These figures are broadly in line with findings for the Eastern Region. This indicates that urban-based provision may still be accessible to many employed rural residents, providing arrangements are sufficiently flexible to allow learning to be combined with work responsibilities.

**Comparison Between Home and Work Location in the South West**

![Comparison Between Home and Work Location in the South West](source: 2001 Census.)
4.3.7 As might be expected, car ownership is positively correlated to relative population sparsity, with only around 10% of households in sparsely populated areas having no private transport compared to over a quarter of households in densely populated areas. However, a further 42% of households in sparsely populated areas of the South West have only one car and this may reduce access to learning if that car is in use for travel to work (around 60% travel to work by car).

4.3.8 Occupational patterns vary considerably between areas and there have been trends in the last few decades for relatively affluent households to locate to rural or semi-rural locations. Census figures for the South West indicate that there are more managerial and professional workers in sparse areas than in any other category of area. This is partly, but not entirely, explained by the inclusion of farm and rural small business owners within the managerial category. The chart also suggests that the proportion of the workforce in elementary and processing jobs (where Skills for Life needs could be assumed to be high) is lower in sparsely populated areas.

**Occupational Breakdown for Employed South West Residents**

![Occupational Breakdown Chart](chart.png)

Source: 2001 Census.
4.3.9 Economic activity is not evenly spread across the areas. The chart below shows that the proportion of South West residents who are retired is higher than other areas, and age profile data reflects this. The chart also shows the high proportion of self-employment in sparsely populated areas. This may reduce the demand for employer-supported learning activities, for example *Train to Gain*. 20% of South West employed adults in sparsely populated areas work from home compared to 10% or less in urban areas. The industrial profile also varies. Manufacturing, retail and public sector employment account for a significantly lower percentage of the jobs held by residents of sparsely populated areas.

**Differences in Economic Activity Between South West Areas**

![Economic Activity Chart]

Source: 2001 Census.

4.3.10 The pattern of provision of learning for 16-18 year-olds shows some interesting differences in different area types within the South West. Further education colleges (including tertiary and sixth form colleges) account for 55% of learner volumes in densely populated areas of the South West but only 52% in sparsely populated areas. In densely populated areas 23% of 16-18 learners attend school sixth forms, but the role of sixth forms increases in less populated areas, rising to almost 31% in sparsely populated areas. Many rural schools provided extended community provision, although access to vocational learning (14-19) may be restricted where post-16 provision is heavily dependent on the school sector. Work-based learning, in contrast, is positively related to population density. 21% of 16-18 learners from densely populated parts of the South West attend work-based learning but this drops to 16% in sparsely populated areas. This reflects the difficulties of delivering work-based learning in rural areas (see Section 2.2).
4.3.11 The figures in the previous section may partly explain why, in contrast to 19+ participation, 16-18 participation\(^{15}\) in the South West declines slightly as population becomes more sparse. The relationship is shown in the chart below. The rural clusters figure is interesting, although base figures are lower, as this category includes many of the market towns where rural secondary schools are based. The gap of 3.4 percentage points between the participation rates in densely and sparsely populated areas may seem relatively narrow, but it equates to 986 “missing” learners across the South West.\(^{16}\)

### South West 16-18 Participation by Area Type

<table>
<thead>
<tr>
<th>Sparsity Category</th>
<th>16-18 year olds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pop</td>
</tr>
<tr>
<td>Dense</td>
<td>28,483</td>
</tr>
<tr>
<td>Urban Semi-Dense</td>
<td>51,455</td>
</tr>
<tr>
<td>Urban Fringes</td>
<td>42,522</td>
</tr>
<tr>
<td>Rural Clusters</td>
<td>10,809</td>
</tr>
<tr>
<td>Semi-Sparse</td>
<td>20,203</td>
</tr>
<tr>
<td>Sparse</td>
<td>29,006</td>
</tr>
</tbody>
</table>

Source: 2001 Census, ILR F05 03/04, ILRw 03/04 & PLASC04.

\(^{15}\) These figures for 16-18 participation should not be confused with staying-on rates, which measure retention in learning immediately after compulsory schooling. The 16-18 figures are based on three age cohorts (equivalent to Years 12, 13 and 14). This causes some distortion in areas where direct progression to higher education is the norm, as HE data could not be included in the project dataset.

\(^{16}\) The pattern is even clearer in the Eastern Region, where the 16-18 participation rate is 63% in densely populated areas but drops in a steady and consistent pattern to 58% in sparsely populated areas.
5. Curriculum Patterns

5.1 Work-based Learning

5.1.1 The chart below records the proportion of learners aged 16-18 and 19+ from the South West region who were engaged in work-based learning in 2003/04. Both sets of bars confirm lower participation in work-based learning as the degree of population sparsity increases. Providers taking part in the expert symposium and in subsequent interviews cited an absence of work placements in sparsely populated areas as a key factor. This resulted in high travel costs and complex journeys for trainees, compounded by the fact that off-the-job and placement elements were often delivered well away from each other.

Proportion of South West Learners Engaged in Work-based Learning in 2003/04.

5.1.2 The lack of easily accessible work-based learning opportunities may be contributing to the lower overall participation rate in sparsely populated areas, but there is evidence to suggest that some of the learning activity is displaced into other forms of vocational learning. In the South West in 2003/04 learners from sparsely populated areas accounted for 15.1% of all enrolments in further education and work-based learning. The chart on the following page records the proportion of enrolments\textsuperscript{17} from each area type broken down by sector subject area. Participation in vocational areas such as Engineering & Manufacturing Technologies; Leisure, Travel & Tourism; Health, Public Services & Care and Information & Communications Technology are in line with the shares of overall enrolments. The share of land-based enrolments by residents of sparsely populated areas is more than twice the overall share.

\textsuperscript{17} Further education, adult & community learning, UfI and work-based learning only. PLASC data did not identify post-16 courses in 2003/04.
5.1.3 The project brief called for further investigation of participation in industrial classifications relating to four Apprenticeship frameworks: Care; Construction; Retail and Public Services. This followed evidence in the LSDA 2002 research that there was under-participation in these areas in some rural communities.\(^{18}\) There is no automatic link between curriculum divisions (which map broadly to occupations) and industry statistics (which can include a range of occupations). However, the chart on the following page uses Labour Force Survey evidence to examine the pattern of employment in the South West. This has been linked to Sector Skills Council footprints to look at the relative importance of broad occupational sectors. Jobs linked to Construction skills and Retail are important sources of employment in the region, as are the industrial groupings linked to Care and Public Sector employment.

\(^{18}\) See Section 2.2.
5.1.4 Section 2 of this report noted anecdotal evidence from past research indicating a lack of employment and work placement to support work-based learning in sparsely populated areas. It is not easy to provide hard evidence to test this from the national datasets, since the learner record records the location of taught elements (A23 field) but not the location of placements. These can be the same when NVQs are delivered in the workplace but this is not the norm across work-based learning.
5.1.5 Appendix 2 contains a series of maps that represent an attempt to provide evidence of the link between home location, the location of work-based learning provision and the impact of relative deprivation. The analysis is based on imperfect data especially in respect of the location of learning field, which is not well-completed in work-based learning. However, the maps go at least part-way towards filling the current evidence gap.

5.1.6 The maps examine provision in the South West in 2004/05 in Sector Subject Areas that match the four apprenticeship frameworks set out in the project brief. Section 3.1.3 identified wards in the South West with sparse population. Within the maps in Appendix 2 areas with sparse population bases have been colour-coded according to their relative level of deprivation. This is based on the Index of Multiple Deprivation ranking at a super output area level (see Section 4.3.2). Red stars on the maps show the locations of learning (not placement) for learners enrolled on relevant work-based learning programmes.

5.1.7 The first map is based on Sector Subject Area (SSA) 1.3, which covers Health & Social Care provision. It indicates relatively extensive provision in much of Devon and Cornwall, but elsewhere in the region provision is largely limited to major population centres. In Somerset, Dorset and Wiltshire in particular there are substantial areas of population sparsity with no easily accessible provision. This accuracy of this analysis depends on the accuracy with which providers have completed the location of learning (A23) field. The largest provider in the South West in this curriculum area had 2,553 learners but no valid postcodes in A23.

5.1.8 The second map is based on SSA 1.4, which covers Public Services. Only 650 South West residents were enrolled on work-based learning courses in this SSA in 2004/05, with the main qualifications being the NVQ in Public Services and the NVQ in Providing Security Services. The vast majority of enrolments related to military trainees. There were 14 learning locations within the South West and 1 in Hampshire identified on the learner record. Many were in sparsely populated areas.

5.1.9 The third map is based on SSA 5, which covers Construction, Planning & the Built Environment. The most common learning aims were the Construction Award and NVQs in Wood Occupations, Trowel Occupations, Installing & Commissioning Electrotechnical Systems & Equipment and Plumbing. Almost all learners had a valid A23 field. There appear to be substantial areas of North Cornwall, Mid and North Devon, Dorset and Wiltshire where residents of sparsely populated areas have no easily accessible provision.

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19 This includes large volume courses such as the Certificate in Health and Safety in the Workplace, the Certificate in Food Hygiene and the NVQ in Care where taken by work-based learners.
The fourth map is based on SSA 7.1, which covers Retailing & Wholesaling. The most common learning aims were NVQs and Certificates in Retail Operations. Six providers had more than 100 trainees and the A23 field was complete for almost all learners. Provision of work-based learning in Retail & Wholesaling is almost entirely restricted to urban areas, dictated by the presence of significant retail outlets.
THE EFFECTS OF SPARSITY ON PROVISION AND PROVIDERS

Place of study for learners on courses for SSA 1.3: Health & Social Care overlayed on the Rank of Indices of Deprivation for SOA's that are classed as "Sparse."

Source: Indices of Deprivation 2004
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THE EFFECTS OF SPARSITY ON PROVISION AND PROVIDERS

Place of study for learners on courses for SSA 1.4: Public Services overlayed on the Rank of Indices of Deprivation for SOA's that are classed as "Sparse."

Source: Indices of Deprivation 2004
ILRw 2004/05
JR:05/231
THE EFFECTS OF SPARSITY ON PROVISION AND PROVIDERS

Place of study for learners on courses for SSA 5: Construction, Planning and the Built Environment overlayed on the Rank of Indices of Deprivation for SOA's that are classed as "Sparse."

Source: Indices of Deprivation 2004
ILRw 2004/05
JR:05/231
THE EFFECTS OF SPARSITY ON PROVISION AND PROVIDERS

Place of study for learners on courses for SSA 7.1: Retailing & Wholesaling overlaid on the Rank of Indices of Deprivation for SOA's that are classed as "Sparse."

Source: Indices of Deprivation 2004
ILRw 2004/05

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6. Skills for Life Provision

6.1 Distribution of Provision

6.1.1 This section examines pattern of provision of Skills for Life learning and the extent to which progression from Skills for Life provision is influenced by population density. As in previous sections, this has been achieved by applying a particular focus to the South West of England, but parallel tests have been run on data for the East of England to ensure that findings have a general relevance.

6.1.2 Appendix 3 contains a map recording the distribution of centres in which Skills for Life learning was delivered in 2004/05, based on the A23 location of learning field in post-16 learner records. There are difficulties with the accuracy of this field (see Section 5.1.5), but the map gives an indication of the extent of localised delivery. The map records the place of learning for any Skills for Life learning aims, with the most commonly recorded aims relating to key skills, Basic Literacy, ESOL, Basic Numeracy and GCSEs in Mathematics and English.

6.1.3 Areas with sparse population bases have been colour-coded on the map according to their relative level of deprivation. This is based on the Index of Multiple Deprivation ranking at a super output area level (see Section 4.3.2). Red stars on the maps show the locations of centres linked to Skills for Life aims. The location of these centres is highly dispersed, indicating the existence of community outreach provision in many sparsely populated areas. In addition to this some areas are served by mobile provision which cannot be identified from the A23 field. The A23 field was incomplete for several thousand Skills for Life learning aims, especially in work-based learning.

6.1.4 Centres known to be delivering at least some Skills for Life provision were widely dispersed in Cornwall, Devon and West Gloucestershire. However in East Gloucestershire, Somerset, Dorset and Wiltshire there was little evidence of provision outside major settlements. In Cornwall there appears to be especially widespread coverage of Skills for Life provision in sparsely populated areas associated with relatively high deprivation and this may show the impact of Objective 1 funding.

20 Not available for school sixth forms.
6.2 Characteristics of Skills for Life Delivery

6.2.1 The research compiled a database of learners and delivery centres linked to learning aims that met the LSC’s definition of Skills for Life provision in 2003/04 and 2004/05. As well as considering the location of centres, analysis has identified the average cohort undertaking Skills for Life learning in different area types.

6.2.2 The table below sets out the location of Skills for Life provision and the pattern of provision in centres delivering at least one Skills for Life aim. Around 16% of the South West adult population live in sparsely populated areas, but only 7% of the Skills for Life centres found in the datasets were in sparsely populated locations. In contrast 18% of the centres offering Skills for Life provision were in densely populated areas, where 17% of the South West adult population live. Semi-dense and urban fringe areas both have a higher share of Skills for Life centres than they have population proportions, for example 27% of adult South West residents live in semi-dense areas but over a third of Skills for Life centres are located there.

<table>
<thead>
<tr>
<th>Sparsity</th>
<th>Total Centres</th>
<th>All Learning Aims</th>
<th>SfL Learning Aims</th>
<th>Number of Distinct Aims</th>
<th>Distinct Skills for Life Aims</th>
<th>Enrolments per Distinct Aim</th>
<th>Enrolments per Distinct SfL Aim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dense</td>
<td>141</td>
<td>208,948</td>
<td>27,554</td>
<td>5,462</td>
<td>717</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>Urban Semi-Dense</td>
<td>266</td>
<td>272,869</td>
<td>36,333</td>
<td>8,350</td>
<td>1,167</td>
<td>33</td>
<td>31</td>
</tr>
<tr>
<td>Urban Fringes</td>
<td>216</td>
<td>180,803</td>
<td>20,821</td>
<td>5,928</td>
<td>972</td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td>Rural Clusters</td>
<td>49</td>
<td>24,374</td>
<td>2,075</td>
<td>1,089</td>
<td>221</td>
<td>22</td>
<td>9</td>
</tr>
<tr>
<td>Semi-Sparse</td>
<td>62</td>
<td>29,141</td>
<td>3,010</td>
<td>1,153</td>
<td>213</td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>Sparse</td>
<td>56</td>
<td>48,491</td>
<td>5,239</td>
<td>1,524</td>
<td>204</td>
<td>32</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>790</td>
<td>764,626</td>
<td>95,032</td>
<td>23,506</td>
<td>3,494</td>
<td>33</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: ILRF04 04/05, ILRw 04/05.

6.2.3 The chart shows that there were 48,491 learning aims (enrolments) at the 56 centres offering Skills for Life provision in sparsely populated areas and 5,239 of these (11%) were on Skills for Life provision. In contrast, 13% of enrolments at centres in densely populated areas were on Skills for Life provision. Viability may play a part in these patterns. The 56 centres in sparsely populated areas linked to 1,524 distinct qualifications (separate learning aims), an average of 27 per centre. Centres in densely populated areas had a higher average number of distinct qualifications, 39 per centre.

6.2.4 There is evidence that centres in sparsely populated areas have lower group sizes as well as a lower number of qualifications on offer. The average number of enrolments (learning aims) per qualification offered is 32 in centres in sparsely populated areas and is even lower in those found in other rural locations. In centres in densely populated areas the average cohort size is 38 per distinct learning aim. For Skills for Life qualifications, average “group” sizes drop as low as 9 in centres found in rural clusters, which is less than a quarter of the average volumes for Skills for Life aims offered in densely populated areas. This will increase average delivery costs per learner.
6.2.5 The table below uses the location of learning field (A23) to assess the opportunity to progress from Skills for Life provision to high level study in different areas. The table once again shows the pattern for the South West region but the evidence was broadly comparable for the East of England. The table shows, for each type of area, the number of centres at which the highest learning aim offered was at Entry Level (0 on the table), Level 1, Level 2 and so on. For example 26 centres in densely populated areas (around one in five of all centres in this type of area) offered progression right through to Level 4 and more than two-thirds had some provision at Level 2 or above. 9 of the 56 centres in sparsely populated areas (16%) offered at least some Level 4 learning and two-thirds again offered some progression routes at Level 2 and above.\(^{21}\) 39 of the centres in sparsely populated areas had no provision above Level 2 and average Skills for Life group sizes were in single figures in many rural locations.

### South West Region Curriculum Analysis for Centres with Skills for Life Provision

<table>
<thead>
<tr>
<th>Area Type</th>
<th>Highest Level on Offer at a Centre</th>
<th>Number of Centres in this Category</th>
<th>Total Learning Aims</th>
<th>Skills for Life Aims</th>
<th>Number of Distinct Aims</th>
<th>Number of Distinct SfL Aims</th>
<th>Enrolments per Distinct Aim</th>
<th>Enrolments per Distinct SfL Aim</th>
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<td>32</td>
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</table>

Source: ILRF04 04/05, ILRw 04/05.

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\(^{21}\) This includes some main sites as well as outreach centres, for example land-based colleges.
6.3 Progression from Skills for Life Provision

6.3.1 This section tests the impact of relative sparsity on progression from Skills for Life provision. Learners on Skills for Life provision in 2003/04 were flagged and a trawl was undertaken of 2004/05 learner records to identify those continuing in publicly-funded learning (for any learning aim). This was done using a fuzzy matching process, where learners with identical postcodes, dates of birth and gender are assumed to be the same individual.

6.3.2 The table below is based on the whole of England. It shows the proportion of learners that took a Skills for Life qualification in 2003/04 and were subsequently identified in 2004/05 dataset. Skills for Life learners living in sparsely populated areas were slightly less likely to continue in learning in the following year, although the difference is less than 1% compared to the average for the three urban classifications. The figure is lowest for learners living in semi-sparse areas, with a deficit of almost 2% compared to urban fringe areas, but even this gap does not indicate a major progression issue. In the South West region the proportion of returning Skills for Life learners from sparsely populated areas was higher than any other category although the figures for rural clusters and semi-sparse areas was below the urban average.

### Proportion of Skills for Life Learners Returning in the Following Academic Year

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<th>55.0%</th>
<th>55.5%</th>
<th>56.0%</th>
<th>56.5%</th>
<th>57.0%</th>
<th>57.5%</th>
<th>58.0%</th>
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</tr>
<tr>
<td>Urban Fringes</td>
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</tr>
<tr>
<td>Rural Clusters</td>
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<td></td>
</tr>
<tr>
<td>Semi-Sparse</td>
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</tr>
<tr>
<td>Sparse</td>
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<td></td>
</tr>
</tbody>
</table>

Source: ILRs F05 03/04 & F04 04/05, ILRw 03/04 & 04/05.
Base: All England 693,045 2003/04 learners.
6.3.3 The table below compares the highest learning aim for Skills for Life learners matched across the 2003/04 and 2004/05 datasets. Around 40% of returning learners had progressed to a higher level and around 60% were studying at a similar or lower level. Relative sparsity of population in a learner’s home area had no significant impact on these figures.

### Highest Learning Aim in 2004/05 for Returning 2003/04 Skills for Life Learners

<table>
<thead>
<tr>
<th>2003/04 highest aim</th>
<th>2004/05 highest aim</th>
</tr>
</thead>
<tbody>
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<td>No Level/Level Not Assigned</td>
<td>No Level/Level Not Assigned</td>
</tr>
<tr>
<td>Entry Level</td>
<td>Entry Level</td>
</tr>
<tr>
<td>Level 1</td>
<td>Level 1</td>
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<td>Level 2</td>
<td>Level 2</td>
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<tr>
<td>Level 3</td>
<td>Level 3</td>
</tr>
<tr>
<td>Level 4+</td>
<td>Level 4+</td>
</tr>
</tbody>
</table>

Source: ILRs F05 03/04 & F04 04/05, ILRw 03/04 & 04/05.
Base: All England 294,110 2003/04 learners with initial highest aim below Level 3.
7. Success Rates

7.1 Correlation Between Population Density and Success Rates

7.1.1 This section of the report examines the link between relative population density and learner success rates in 2003/04. The formal measurement of success rates requires the tracking of individual learners across several academic years and this is only possible using personalised data. Personal data are not generally available to external researchers and it was agreed with the LSC that success rate calculations would be based, for the purposes of this report, on a combination of in-year retention and learner achievement. This produces a success rate figure for all learning aims that were undertaken in a given year and expected to complete in that year. It differs marginally from published success rates in that it does not take account of learners on long programmes who had withdrawn prior to the start of the year. It was agreed that this difference would not invalidate comparisons between geographical areas.

7.1.2 The datasets confirmed a correlation between relative population density and the physical distance travelled to access provision. For example, the average 16-18 year-old in the South West travelled over 15km to their place of learning (where this was recorded) compared to a figure of 28km for learners living in sparsely populated areas. It might be assumed that this would have an impact on learner retention, but past research has given mixed messages on this.

7.1.3 The two charts on the following page show the relationship between the home location of 16-18 and 19+ residents and their success rates. This suggests that learners from sparsely populated areas have higher success rates than learners from the three urban categories and this finding holds true for both 16-18 year-olds and adult learners. Around 62% of the learning aims taken by 16-18 year-olds from densely populated areas during 2004/05, and expected to be completed in that year, were indeed completed successfully. In sparsely populated and semi-sparsely populated areas this rises to more than 68%. However, multi-level analysis in Section 8 of the report suggests that factors other than population density explain the variations observed in the charts.

7.1.4 For adult learners there is a clear distinction between rural and urban areas. Around three quarters of the learning aims taken by adult learners in the three rural categories were successfully completed, but this dropped to just over two-thirds in the most densely populated areas. Anecdotal evidence from the providers interviewed suggested that learners with longer or more complex journeys required a higher initial commitment to begin learning and this paid dividends in subsequent retention rates.

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22 2003/04 was the most recent complete year available as a national dataset when the project was being conducted. School PLASC records contained no retention or achievement information in 2003/04 so this section only relates to other forms of learning. Work-based learning’s contribution to the figures is based on the success for individual aims, not whole framework completion.

23 This is based on the straight line distance between home location and location of learning.

24 See Section 2.
The Effects of Sparsity on Provision and Providers
With a Special Focus on South West England
RCU ref. 05.231

Success Rates for South West Learners by Area Type 2003/04

Source: Census 2001, ILR F05 03/04, ILRw 03/04.
Success rates here reflect the proportion of learning aims that were active at the start of 2003/04, and were expected to be completed during the year, that were both completed and achieved.
The Effects of Sparsity on Provision and Providers
With a Special Focus on South West England
RCU ref. 05.231

7.1.5 Previous research has found that “pull-factors” are as important as “push-factors” in explaining retention behaviour. Learners in sparsely populated areas may face fewer alternative options (for example employment opportunities or alternative providers) than learners in urban areas. There are also differences in the curriculum mix in different areas, as discussed in Section 5. Rural areas have a higher reliance on school sixth form provision and a lower proportion of work-based learning provision than urban areas for 16-18s. For adult learners, adult & community learning providers account for a higher proportion of learners in rural areas, whereas the college proportion is higher in urban areas. This may also mask differences in the typical length of learning programmes.

7.1.6 The chart below tests the influence of travel distance as well as home location.25 The table compares straight-line journey from home to location of learning for all learners other than distance learners. Some of the longer journeys may be misleading (for example a failure to record term-time address for residential learners) but the broad pattern is very clear. Across all areas success rates are lower the shorter a distance the learner travels. Part of the explanation for the high success rate in sparsely populated areas may therefore be the longer average journey (and the extra initial commitment this requires).

Success Rates in Each Area Type Set Against Distance Travelled (Kilometres)

Source: Census 2001, ILR F05 03/04, ILRw 03/04. (South West England only)

25 RCU’s National Retention Survey (1998), found evidence that the perceived complexity of a learner’s journey to study was inversely related to the likelihood of completion but that length of journey was positively correlated.
7.1.7 Further investigation of the South West dataset indicated that the higher success rates in sparsely populated areas held true in further education at all levels of study up to (and including) Level 3. There was no consistent relationship between area type and success rates for Level 4 provision delivered by colleges.

7.1.8 In work-based learning the pattern was much less consistent. The chart below shows that Construction success rates are higher the more dense the population of an area, whereas area type has no consistent impact for the other main framework areas.

Success Rates in South West WBL for Selected Curriculum Areas

Source: Census 2001, ILRw 03/04. (South West England only)
7.1.9 The pattern for work-based learning retention was broadly similar in the Eastern Region. For adult and community learning, residents from sparsely and densely populated areas of Eastern Region had almost identical success rates, but these dipped slightly for other area types. The charts below show the South West results for adult & community learning (which demonstrates no consistent pattern) and Skills for Life learning aims (which shows higher success rates in rural areas).

**South West Adult & Community Learning Success Rates by Area Type**

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**South West Skills for Life Learning Success Rates by Area Type**

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Source: Census 2001, ILR 03/04. (South West England only)
8. Multi-Level Analysis of Success Rates

8.1 Purpose of Multi-Level Analysis

8.1.1 The previous section found that, for many learners, there was an inverse relationship between population density and success rates. As a result, providers serving sparsely populated areas could be expected to benefit in terms of both their measured performance and the success element within the funding methodology. In order to test the robustness of relative sparsity as an explanation of success rates, this section of the report uses multi-level modelling techniques to compare the impact of population sparsity to that of other influences on success rates.

8.1.2 The research used the MLWiN software program to isolate the impact of different effects. This is a multi-level analysis program that tests for the impact of changes in one variable on a given outcome (in this case success) controlled for the impact of all other factors in the model.

8.1.3 If the program finds that the factor makes no difference to the probability of success it assigns it an outcome of 1. If the factor appears to increase the likelihood of success, other things being equal, it gives it a score above 1 and if it appears to reduce the likelihood of success it gives it a score below 1. It also tests how much we can rely on the outcome by calculating the confidence limits (margin for error). If the neutral value of 1 falls within these confidence limits this means it is possible that the factor has no net effect on success. Confidence limits will always be narrow for large volume indicators (e.g. gender) and wide for smaller sub-groups (e.g. some ethnic minority groups).

8.1.4 This section of the report also uses a second multivariate analysis tool called Chaid, which is an abbreviation of Chi-squared Automated Interaction Detector. This program searches large bodies of data to identify combinations of variables that cause maximum variation in a given outcome, in this case the likelihood of learner success. Chaid analysis produces a family tree ranking of variables in terms of their relative importance as an explanation of the chosen outcome. The advantage of using Chaid in the context of this report was that it put the relative impact of population sparsity in context alongside a range of other factors impacting on success rates.
8.2 MLWIN Multi-Level Analysis

8.2.1 The chart below shows the outcome of a test for the impact of relative sparsity on the success rates of 16-18 year-old learners in the South West. It reveals that, once other influences are taken into account, relative population sparsity has no significant impact on the likelihood of learner success. The model works by taking one category as the norm (in this case residency in an urban fringe location). The program then examines the effect of varying learner location while holding other key factors (gender, ethnicity, study level, curriculum area etc.) constant. The chart indicates, using the blue bars, whether each location type increased (<1) or decreased (<1) the likelihood of learner success. The vertical line shows the confidence limits for the measure, which depend on the number of base cases in that category. For all area types the confidence limits straddled 1, meaning there is a possibility that there is no significant influence. Urban fringe, semi-sparse and sparse locations registered positive impacts on success rates relative to an urban fringe location, but in each case the confidence limits included a result of 1.

Impact of Location on the Success Rates of South West 16-18s in 2003/04


8.2.2 The finding that population sparsity has no significant impact on the success rates of 16-18 year-olds means that the apparent relationship between the two variables, observed in Section 7.1.4, is better explained by other factors. These would include both learner characteristics and the curriculum mix. Tests in the Eastern Region also revealed no significant impact of population density on 16-18 year-olds’ success rates.
8.2.3 The charts below show some of the stronger determinants of success revealed by the multi-level modelling. Curriculum area, for example, is a significant influence. Compared to a base of Social Science qualifications, two programme areas have positive and significant impacts and nine have negative and significant impacts for 16-18 year-olds in the region.27 Gender (higher for females) and level of study (higher for Entry Level) are also stronger predictors of likely success rates.

Impact of Curriculum Area on the Success Rates of South West 16-18s in 2003/04

Impact of Gender on the Success Rates of South West 16-18s in 2003/04

Source for both charts: Census 2001, ILRF05 2003/04 & ILRw 2003/04.

27 Land-based provision has low numbers relative to other areas and hence very wide confidence limits.
8.2.4 The chart on the following page examines the impact of relative population density on the success rates of adult learners, again using urban fringes as the control group. The results for adult learners show a positive and significant result in semi-sparse and sparse areas. This is indicated by the fact that the blue bar is positive and that the confidence limits do not encompass a value of 1. In other words sparsity does appear to be a factor in the success rates of adult learners in these areas but it leads to higher success. These findings were replicated in tests run on Eastern Region data.

8.2.5 However, supporting the evidence emerging from the analysis of 16-18 year-old success rates, factors such as gender, curriculum area and study level all recorded stronger results as predictors of adult success rates.
Impact of Location on the Success Rates of South West 19+ Learners in 2003/04


8.2.6 The conclusion from the MLWiN modelling is that population sparsity, by itself, does not lead to low success rates. Where there is an impact, for example on adult learners, this tends to increase rather than reduce success rates. However other factors, such as curriculum mix, study level and gender, are stronger determinants of success rates.
8.3 Chaid Analysis

8.3.1 The Chaid program works by taking an initial outcome measure and searching all combinations of a range of variables to find the characteristics that have the biggest impact (positive or negative) on the outcome. In this case the outcome is successful completion of a learning aim.

8.3.2 In the 2003/04 learner record 45,774 learning aims were undertaken by 16-18 year-olds and were due to be completed within the academic year. 65% of these aims were successfully completed. In the diagram that follows this is recorded as shown here:

8.3.3 Chaid then searches for combinations of variables that most increase or decrease the 65% figure. In the diagram on the following page these are presented in a family tree diagram. The higher up the diagram a factor appears, the stronger its influence is on success rates.

8.3.4 The model considered a range of factors that were either contained in the learner record or (deprivation and relative population density) able to be derived from learner postcodes. The strongest influence on success rates is the NVQ level of the learning aim. 33,431 learning aims were taken at Entry, Level 1 and Level 3 and 70% were successfully completed. This compared to only 54% success rate for Level 2 aims (and the small number of Level 4 aims taken in further education and work-based learning by 16-18 year-olds).

8.3.5 The second tier predictors were relative deprivation (for the left hand branch of the family tree diagram) and gender (for the right hand branch). The deprivation bands are based on a condensed version of the Index of Multiple Deprivation banding, with bands 1 & 2 representing the highest level of deprivation. Among the Entry, Level 1 and Level 3 group, relatively high levels of deprivation reduce success rates while relative affluence increases success rates. Among the cohort for the right hand branch of the tree diagram (mainly Level 2 aims) males had lower success rates compared to females.

8.3.6 Relative sparsity appears as a third tier factor in both branches of the diagram, and then only for certain groups of learners. One example is young people taking Entry, Level 1 and Level 3 aims and who live in areas with medium to low deprivation (bands 4 & 5). For those in dense or semi-dense areas (sparsity categories 1 & 2) success rates are lower. For those in semi-sparse or sparse areas (categories 5 & 6) success rates are higher. Where sparsity appears on the right hand branch of the diagram the impact is, once again, to raise success rates in sparse areas. The lowest success rates in the diagram (49%) relates to males studying Level 2 aims who live in dense or semi-dense urban areas.

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28 The model determines the split based on common patterns within the data.
8.3.7 In the 2003/04 learner record 63,375 learning aims undertaken by learners aged 19 or over were due to be completed within the academic year. 72% of these aims were successfully completed.

8.3.8 As with the 16-18 Chaid analysis, the most significant factor determining success rates was NVQ equivalency level for the learning aim. However on this occasion Chaid found significance in the split for each NVQ level and began a “family tree” branch for each. In order to make the results easier to interpret, each of these branches is presented as a separate diagram on the next four pages. Red circles in a branch indicate that no further sub-divisions were found to be significant.

8.3.9 Sparsity came out as a second tier factor in two of the four branches, Entry Level and Level 2. Success rates rose to 82% for Entry Level qualifications this was further increased to 86% where learners lived in one of the three rural area categories. In dense or semi-dense areas it fell to 76%. At the third tier, success by rural Entry Level learners was further increased if they were female. Ethnicity (white) and deprivation level (low) increased success rates for urban Entry Level learners.

8.3.10 For Level 2 learners, residency in a sparse or semi-sparse location (categories 5 & 6) increased success rates from 65% to 69%.

8.3.11 Sparsity was a third tier factor for Level 1 learners and Level 3/4 learners. In both cases it was ranked below deprivation level as well as NVQ Level. Where it appeared in a diagram, relative sparsity tended to increase success rates.
19+ South West Learners Chaid Page 3 of 4

Level 2
13,661
Success Rate 65%

Sparsity

Categories 1 to 4
10,103
Success Rate 64%

Sparsity

Categories 4 and 5
3,385
Success Rate 64%

Categories 5 and 6
3,358
Success Rate 69%

Categories 1 to 3
3,341
Success Rate 62%

Categories 6 to 8
3,377
Success Rate 67%
8.4 Link Between Success Rates and Deprivation

8.4.1 The multi-level analysis has confirmed that the deprivation level associated with a learner’s home area is a strong influence on success rates, at times operating in conjunction with sparsity indicators. The chart below explores the impact of deprivation levels further. The horizontal axis shows the Index of Multiple Deprivation score for the home areas of 16-18 year-olds in the South West. This is based on the raw deprivation score, not the ranking that was used earlier in the report. As a result a high score represents a high level of deprivation. The vertical axis shows the odds of success predicted by the MLWIN model, other things being equal. As before, an odds figure of 1 represents a neutral impact. For 16-18 year-olds this occurs at an IMD score of 18. The equivalent score for the Eastern Region was around 16.

Projected Relationship Between IMD Raw Score and Success Rates for South West 16-18 Year-olds

9. Perceptions of Providers

9.1 Managing the Impact of Sparsity

9.1.1 Providers of services to sparsely populated areas expressed the views that some of their difficulties might not be discernible within learner records. They felt that they had been required to adopt strategies to overcome barriers to participation over the years that preserve the learners’ experience, but have knock-on consequences. For example many providers incurred high transport costs (said to be confirmed as above average by financial benchmarking evidence) in an attempt to compensate for poor public transport provision. Some of the interviewees funded direct transport, others worked with local transport companies to ensure subsidised travel for learners. Both approaches involve substantial costs and this was said to reduce the amount of discretionary funding for other aspects of learner provision, for example social facilities. In any case, social events and enrichment activities are harder to sustain where learners have fixed departure times and/or long journeys.

9.1.2 One college senior manager explained that the institution was successful by any external yardsticks but that the pressures caused by serving a sparsely populated area were still significant. Learners had no alternative providers within a reasonable travelling distance and this meant that some provision had to be sustained despite it not being viable. One interviewee noted:

> If all we did was to meet the needs of learners who presented themselves we would be even more financially sound but the College needs to reach out to engage with learners and this costs.

9.1.3 It was suggested that (confidential) financial benchmarking exercises indicated that colleges serving rural areas of the South West offered lower salaries than equivalent providers. Published financial records were felt to show that South West colleges had lower surpluses, threatening the sustainability of provision and making it more difficult to respond to policy initiatives (for example 14-19). Long journeys and formal bussing arrangements mean learners have to be on site for full days and timetables need to be balanced to reflect this. However this can damage space and staff utilisation figures.

9.1.4 Work-based learning provision was felt to be particularly hard to sustain in sparsely populated areas. Providers incurred substantial staff travel costs conducting workplace assessments and travel times were unpredictable. There were parallel issues for the costs of servicing outreach provision and attending staff development events.
9.2 Decisions on Provision

9.2.1 Providers gave examples of remote areas with no significant post-16 vocational provision, as a result of provision being uneconomic for the main provider. Some of the providers had recently closed community learning centres, which they felt had served a crucial social as well as educational function in rural areas, because learner numbers meant they were not viable. One example was cited of a Strategic Area Review that had identified a gap in provision in a sparsely populated area. The Local LSC had been willing to help establish provision by making capital funding available, but projections of revenue funding meant that the plan was not viable.

9.2.2 One college noted that mergers brought fewer benefits in sparsely populated areas, since the distances between sites could rule out rationalisation of provision. Travel distances had also made it more difficult for the interviewed colleges to respond to the Increased Flexibility initiative and several providers had concern about the potential for delivering the 14-19 Learner Entitlement in dispersed communities. One college reported an average travelling time of one and a half hours between its two construction centres. This meant equipment, curriculum offer and staffing had to be similar in both centres for all provision below Foundation Degree (where learners were willing to travel).

9.2.3 Staff travel between venues is another area in which providers identified additional costs. One adult and community learning service operated in 400 sites spread over a wide area and served by a poor road network. They partially off-set this by using locally-based staff, but this meant low after class contact hours and difficulties in ensuring high quality teaching and learning.

9.2.4 Many adult and community learning services appear to have subsidised low class sizes in rural locations with higher volumes in urban areas. Some of the older shire counties lost their ability to do this when some of their urban areas were made unitary. Where Skills for Life class sizes were small there was pressure to run mixed ability groups in rural areas, which was felt to be far from ideal. Several providers recognised the additional difficulty of the visibility of Skills for Life provision in rural communities.
9.3 Other Issues

9.3.1 Some issues that are affecting providers across the country were felt by the providers to have particular impact in sparsely populated areas. An example was given of the relative fragility of adult provision, which starts from a lower level of viability (low class sizes) and is therefore more vulnerable to current re-prioritising of resources. One provider’s adult numbers had halved in three years. In Cornwall there is a particular issue of past European reliance on ESF, which was felt to have allowed some difficult issues to be postponed but not avoided.

9.3.2 Some providers expressed doubts at the ability to make significant improvements in the accessibility of learning by using e-learning. This approach was felt to work very well with some client groups but was less effective with the hard to reach groups that increasingly form the target for adult learning. In some cases the target was to deliver first steps provision in local centres and build confidence to undertake e-learning as a progression route.

9.3.3 An interesting point was raised regarding the correlation between population sparsity and economic characteristics in rural areas. Some providers described their local economies as being in low skill equilibrium and this contributed to limited aspirations and motivation for some learners. It also reduced the potential for effective employer engagement. Where colleges and large training providers were also significant local employers they play a wider role in helping to stimulate the skill base of the local economy but this put strain on management capacity. Several providers talked about operating lean management teams as a consequence of the need to make savings in non-delivery elements of the budget. This reduced their capacity to respond to major policy initiatives or to generate bid-related funding.

9.3.4 Some of the colleges using financial benchmarking have been advised that their marketing spend is relatively high. This is put down to the need to ensure a presence in local media in a number of different areas in comparison to providers serving a tight urban area. Advice and guidance and open events delivered in local communities also have higher marginal costs because of the low population base.
10. Conclusions and Recommendations

10.1 The report has shown relative population sparsity to be a significant factor in explaining the pattern of participation, success and progression by learners. However, the picture is complex and at times contradictory. Participation per head of population is lower in sparsely populated areas, but the effect is closely linked to the level of relative deprivation in an area. Success rates, on the other hand, are higher for learners in sparsely populated areas once the figures are controlled for other factors.

10.2 Providers serving sparsely populated areas incur higher costs in terms of transport for learners and staff and operate with lower average group sizes. Where a provider serves mixed urban and rural areas lower group sizes can be offset by higher figures in urban centres, but this option is not open to a provider with a predominantly rural market. Other cost factors work in favour of providers serving sparsely populated areas, for example lower levels of competition, lower staff turnover and lower salary levels in local labour markets.

10.3 Providers serving sparsely populated areas have developed strategies to overcome barriers to participation and retention over the years. These help to explain why the analysis of learner records do not indicate severe disadvantage for rural learners. However, the strategies have consequences in other areas of a provider's operations and may reduce overall effectiveness and responsiveness.

10.4 A funding uplift for learners recruited from sparsely populated areas would be a relatively crude measure. Sparsely populated areas are characterised by a wide range of socio-demographic circumstances and public datasets are not flexible enough to be able to distinguish between pockets of rural deprivation and more affluent settlements. Furthermore, a majority of working residents in sparsely populated areas work in urban locations and may have the option of accessing learning in these areas. It would be difficult to structure a residency-based uplift to ensure that it reflected genuine additional costs on the part of the provider.

10.5 This does not mean that there is no case for strategic intervention to off-set the implications of population sparsity. Each LSC region (with the exception of Greater London) contains areas with population sparsity and it would be appropriate for each region to have a formal strategy for helping providers to address the needs of learners in sparsely populated areas. This should include innovative options to ensure access to high quality vocational learning where traditional apprenticeship options are difficult to sustain (for example through capital support for the 14-19 Learner Entitlement in sparsely populated areas).
10.6 In particular strategies should address two major issues, the preservation of access to first steps provision in isolated communities and interventions to raise participation by young people and adults in areas where sparsity is combined with relative deprivation. Past support (LSC and externally-funded) has concentrated on capital funding and this has not always been sufficient to ensure viable funding in the long-term. The LSC should identify opportunities to support vulnerable but strategically important provision through flexible revenue funding.

10.7 In addition to practical support, providers serving sparsely populated areas wanted recognition that the LSC and inspectors understood the consequences of responding to the needs of learners in sparsely populated areas. Providers argued that urban disadvantage had been recognised by the widening participation uplift and by acknowledgement that providers serving relatively deprived areas would tend to display lower success rates. The case for equivalent consideration of rural disadvantage is complicated by mixed evidence from learner data. Success rates are higher for learners in sparsely populated areas overall, but there is evidence of under-participation and lower success rates in areas characterised by pockets of rural deprivation.

10.8 There is enough evidence within past research studies and within this report to indicate that learner and employer responsiveness places different, and often higher, burdens on providers serving sparsely populated areas. It will be important to ensure high levels of awareness of these issues among LSC staff and within the Inspectorate. In particular, the development and implementation of the Framework for Excellence should recognise the influence of relative sparsity of provider costs and key performance indicators. The report has shown that relative sparsity can be taken into account when analysing learner records and the LSC should consider applying sparsity analysis in generating benchmarks to support the Framework for Excellence.

10.9 There is also a need to ensure that the formation and evaluation of policy includes consideration of implementation in sparsely populated areas. For example, providers are concerned that the implementation of the Government’s 14-19 Learner Entitlement will present particular difficulties in sparsely populated areas and that strategies to address these issues have been insufficiently piloted during the pathfinder phase. The LSC and DfES need to take account of the pattern of recruitment from relatively sparsely populated areas when planning pilot areas and impact assessments. Some consideration is already given to rural issues but sparsity is a more complex factor and one that needs to be linked to measures of rural deprivation.
10.10 Some analysis in the report was hampered by the absence of robust data on the location of learning and the limitations of data on school sixth form provision. The LSC should continue efforts to enhance the school sixth form record (enhanced post-16 data will be available within the 2006/07 record) and to encourage accurate completion of location of learning fields. The LSC should consider inclusion of the location of placements within the work-based learning as an indicator of the accessibility of work-based learning and the assessment costs of providers.

10.11 The LSC should consider adding relative sparsity as a derived field within the learner record to support future research and enable LSC staff to monitor the impact of strategies aimed at sparsely populated areas.
Appendix 1:
Organisations and Individuals Advising on Emerging Findings

Expert Symposium

- Mick Fletcher (Independent consultant working with LSN and RCU)
- Pam Roberts (Somerset Adult Learning & Leisure Service)
- Peter Daye (Somerset County Training)
- Chris Jones (Somerset County Training)
- David Henley (Kingston Maurward College)
- Heather Porter (Somerset LSC)
- Jill Stanley (Bournemouth & Poole LSC)
- Ian Clark (Devon & Cornwall LSC)
- Louise Clatworthy (Somerset LSC)

Provider Interviews

- Mike Pope, Cornwall College
- Miles Cole, Suffolk County Council Adult & Community Learning Service
- Jill Francis, College of West Anglia
- Holly Cole, Somerset Adult Learning & Leisure Service
- Marilyn Watsham, Suffolk College
- David Dodd, North Devon College
- George Bright, Wiltshire College
Appendix 2:
Location of learning for residents in the South West undertaking work-based learning in 2004/05.

This appendix contains maps showing the location of learning for four curriculum areas linked to work-based learning frameworks in 2004/05. Areas with a sparse population base (less than 1 person per hectare) have been colour-coded according to their relative level of deprivation. This is based on the Index of Multiple Deprivation (IMD) ranking at a super output area level (see Section 4.3.2).

The key shows the colour associated with each band of IMD ranking. The figure in brackets shows the number of areas in the South West falling into each band, for example there are no sparsely populated areas in the South West among the 8,000 most deprived areas and only 5 in the next 1,000. Yellow areas within the South West do not have sparse populations.

Finally, the red stars on the map show the locations of learning (not placement) for learners enrolled on relevant work-based learning programmes.
Appendix 3:
Location of learning for residents in the South West
undertaking Skills for Life learning in 2004/05.

This appendix contains maps showing the location of learning for learners undertaking Skills for Life provision in 2004/05. This includes learners in further education, work-based learning and adult provision.

Areas with a sparse population base (less than 1 person per hectare) have been colour-coded according to their relative level of deprivation. This is based on the Index of Multiple Deprivation (IMD) ranking at a super output area level (see Section 4.3.2).

The key shows the colour associated with each band of IMD ranking. The figure in brackets shows the number of areas in the South West falling into each band, for example there are no sparsely populated areas in the South West among the 8,000 most deprived areas and only 5 in the next 1,000. Yellow areas within the South West do not have sparse populations.

Finally, the red stars on the map show the locations of learning (not home location) for learners enrolled on Skills for Life learning aims.
## THE EFFECTS OF SPARSITY ON PROVISION AND PROVIDERS

Place of study for learners on courses for Skills for Life overlayed on the Rank of Indices of Deprivation for SOA's that are classed as "Sparse."

### Rank of Multiple Indices of Deprivation 2004

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Source: Indices of Deprivation 2004
ILR F04 2004/05, ILRw 2004/05
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