

Education, Skills and Training Domain within IMD2007 in Leicestershire

October 2008

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I. Introduction

Education, skills and training are recognised as major contributors to future economic growth and success. Developing a sustainable economy depends on a workforce that is able to accommodate changing environments and advancing technology. Therefore, young people's disengagement from education and training puts pressure on the economy through increased levels of worklessness or skill shortages. Research has shown that low attainment is frequently associated with the socio-economic background of pupils, thus creating a cycle of deprivation within families and places. Education is considered key to social mobility. However, recent figures have suggested that the gap in attainment is widening between pupils from deprived and undeprived backgrounds.

'A child from a deprived background is 193 times more likely to leave school without a single good GCSE than they are to get three As at A-level. Reforming our schools and strengthening our families is the key to building a better, happier and fairer society.' Michael Gove - Shadow children's secretary in a speech to the Institute for Public Policy Research

While numbers entering higher education may be rising, reports have suggested that the current education system limits progression of pupils from poorer backgrounds with even less working class pupils now entering the top universities. Employers are also reporting that too many young people are leaving schools with insufficient basic skills to enter and remain in

the labour market. This consequently has long term impacts on the economy. Improving education and skills in deprived areas is widely acknowledged as a priority in combating poverty and securing a sustainable economy with national, regional and Local Area Agreements incorporating indicators around the monitoring of skills and qualifications, for both young people and adults.

Locally, Leicestershire prides itself on its educational attainment, consistently achieving above average results at Key Stages 1 to 4. In 2007, Key Stage 3 results for Leicestershire were rated second in the country. Although, due to this over performance at Key Stage 3, value added at Key Stage 4 is low, overall attainment and engagement of young people in the County is well above average and showing steady improvement. In terms of adult skills, 27.9% of adults were qualified to level 4 or above in Leicestershire in 2006, compared to 24.8% for the East Midlands and 27.1% nationally suggesting residents in Leicestershire are also relatively highly skilled. This report will explore education, skills and training in Leicestershire at a neighbourhood level by analysing education and skills data from the Index of Deprivation 2007. It will attempt to explain how this domain can help us understand more about education, skills and training in small neighbourhoods across Leicestershire and identify any changes since the 2004 index at a local level.

2. Indices of Deprivation 2007

Indices of Deprivation were first published in 2004 (IMD2004) to capture the extent of deprivation in small neighbourhoods, referred to as Lower Super Output Areas (LSOAs). These neighbourhoods, containing between 1,000 and 3,000 people, are categorised according to similar housing type with the aim to group together similar people. The indices are based on a variety of indicators grouped under the following seven domains headings:

- ◆ Income
- ◆ Employment
- ◆ Health Deprivation and Disability
- ◆ Education, Skills and Training
- ◆ Barriers to Housing and Services
- ◆ Crime
- ◆ Living Environment

These domains are weighted and combined to create an overall Index of Multiple Deprivation score (IMD).

This index was updated in 2007, using the same criteria and methodology allowing direct comparisons to be made over time at a neighbourhood level.

Schools measuring deprivation of pupils are now beginning to use the indices of deprivation to analyse the proportion of deprived pupils rather than the more commonly used free school meal indicator. The deprivation index can

also be used to assess the eligibility criteria for provision or funding to improve outcomes in deprived neighbourhoods.

3. The Education, Skills and Training domain

The Education, Skills and Training (EST) domain is split into two sub-domains. One is a measure of young people's educational attainment and the other is a measure of skills and qualifications held by adults. The young people sub-domain combines six indicators:

- ◆ Average scores at Key Stage 2
- ◆ Average scores at Key Stage 3
- ◆ Average scores at Key Stage 4
- ◆ Pupil absentee rates
- ◆ Numbers not entering Higher Education
- ◆ Rates of young people remaining in post-16 education

The adult sub-domain is measured using one indicator:

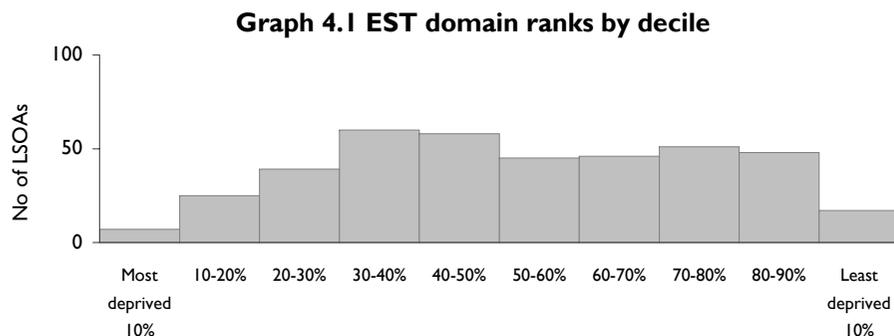
- ◆ The proportion of adults (25-54) with no or low skills or qualifications

This EST domain aims to measure both the 'flow and stock' of education, skills and training in neighbourhoods. An area that produces high standards of education and rates of engagement in young people can be considered successful in providing resources for future economic growth and so maintaining a flow of skills. An area with high proportions of adults with skills

and qualifications gives an indication of the current workforce and therefore the current stock of skills. A combination of both sub-domains can therefore offer an overall picture in terms of potential growth and current skills. To summarise, the domain uses low attainment and disengagement of pupils and low skills of adults as a measure of employment, skills and training deprivation within neighbourhoods.

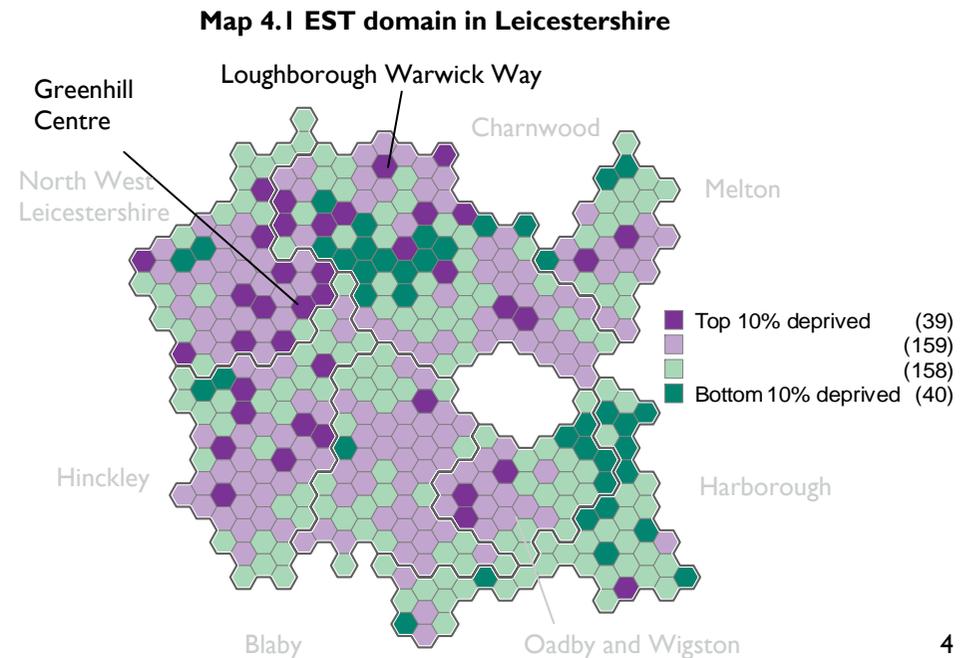
4. Education, Skills and Training in 2007

Education, Skills and Training (EST) deprivation scores are calculated for each neighbourhood in England. These neighbourhood scores are then ranked in order from 1 to 32,482 where 1 is the most deprived and 32,482 is the least deprived within England. There are 396 Leicestershire neighbourhoods in total, ranging from rank 441 to 31,330 for EST. The histogram below shows the spread of neighbourhoods within each decile showing that while only 7 neighbourhoods are within the 10% most deprived neighbourhoods in England for the EST domain, approximately half of Leicestershire neighbourhoods are still within the 50% most deprived nationally. As a county Leicestershire is ranked 96 out of 149 for EST Deprivation.



Source: Indices of Deprivation 2007 and 2004
Department for Communities and Local Government

Map 4.1 illustrates the geographical clusters of neighbourhoods by Education, Skills and Training (EST) deprivation. The cartogram represents each neighbourhood as an equally sized hexagon. (For further explanation of how the cartogram is constructed see Radburn's report on IMD2007¹). The dark purple hexagons represent the neighbourhoods within the County's most deprived 10%. The district with the highest proportion of EST deprived neighbourhoods is North West Leicestershire where clusters of deprivation are scattered around Coalville and Ibstock. By examining the indicators that make up this domain it is apparent that these areas experience high deprivation in terms of adult skills which may be a result of the decline in industry traditionally associated within the area. Clusters of low EST deprived neighbourhoods are concentrated within affluent parts of Oadby, Harborough and Loughborough.



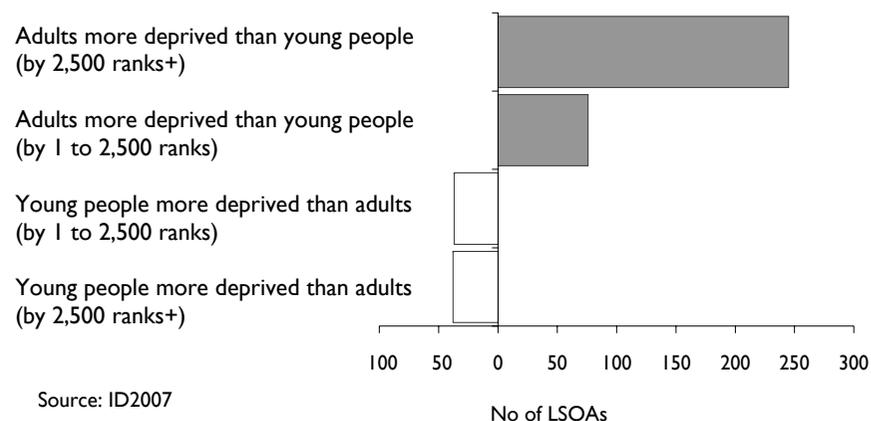
Source: ID2007

In terms of Education, Skills and Training the most deprived neighbourhood in Leicestershire is Greenhill Centre, situated within the Greenhill priority neighbourhood in North West Leicestershire. Data used to make up this domain show that the proportion of adults with no or few qualifications is high at 71% and the proportion of 17 year olds not staying on in post-16 education is 58%. Moreover, Key Stage 4 results for Greenhill Centre are the lowest in the district.

5. Difference between adult and young people sub-domains

As a county Leicestershire is ranked 119 out of 149 for young people’s education deprivation and 71 for adult skills deprivation, confirming that adult skills within Leicestershire tend to be more deprived than young people’s education. While a correlation does exist Graph 5.1 illustrates that over 60% of neighbourhoods have a higher deprivation ranking for adult skills than young people’s education by a difference of more than 2,500 places. This would suggest that the 50% weighting of adult skills in this Education, Skills and Training domain results in EST deprivation appearing higher than would be expected for a county that generates high standards of education attainment and engagement nationally. Indeed, neighbourhoods such as Thurmaston South West, Thurmaston South East and East Gosgote Central are relatively undeprived in terms of young people’s education but the levels of adult skills are placed within the most deprived 20% in the County.

Graph 5.1 Adult skills and young people’s education

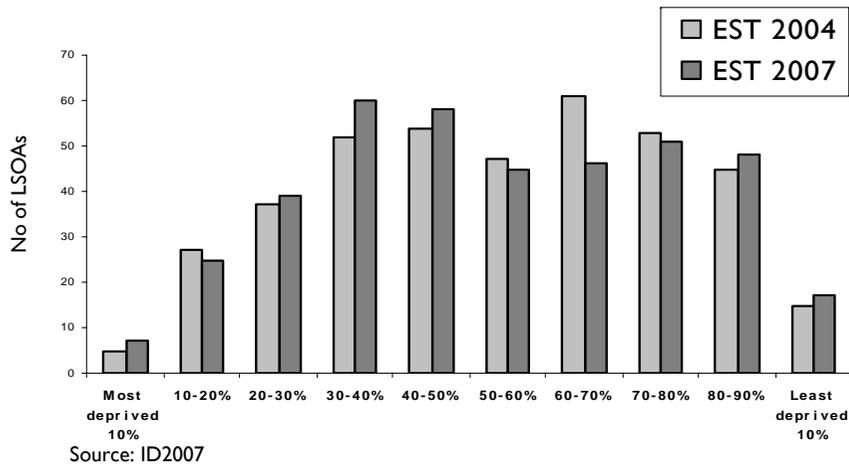


6. What has changed in Education, Skills and Training since IMD2004?

The consistency of methodology between the IMD2004 and IMD2007 allows for a unique direct comparison of domain ranks over time enabling the monitoring of change within small neighbourhoods. However, the limitation of this particular domain is that the adult skills sub-domain uses data from the 2001 census that cannot be updated until the next census is carried out. Therefore, any change in the EST domain between IMD2004 and IMD2007 will be a result of change in the young people’s data. In addition, the education data is approximately 2 years old when published, therefore any changes within neighbourhoods since 2005, as a result of population migration, school initiatives etc, will not emerge from this analysis.

The number of Leicestershire neighbourhoods both the 10% least deprived and the 10% most deprived have increased since 2004, as shown in graph 6.1. Overall, the average rank of Leicestershire neighbourhoods changed from 17,495 to 17,311. Therefore, in general terms, EST has become more deprived in Leicestershire's neighbourhoods.

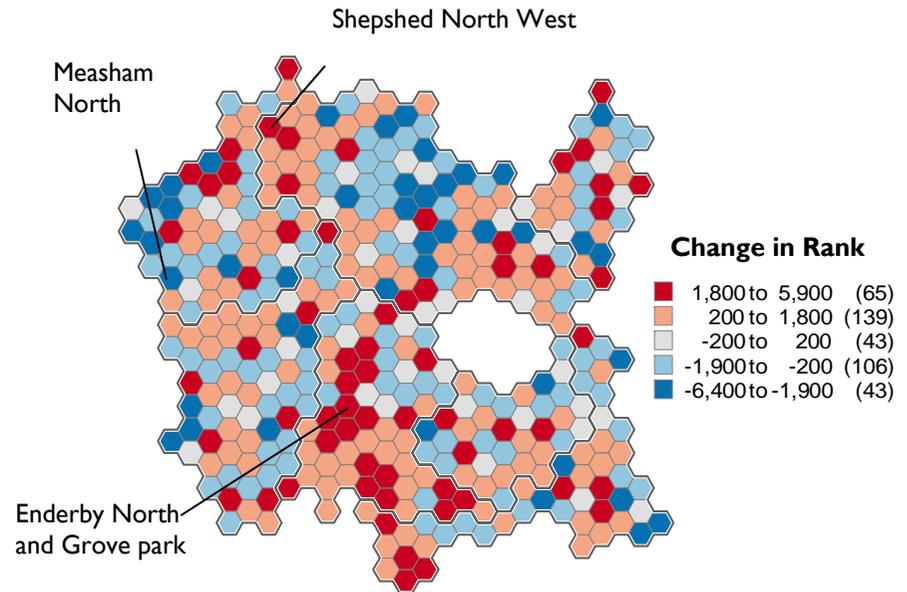
Graph 6.1 EST Domain by decile 2004 and 2007



As a county, EST deprivation in Leicestershire has moved up from rank 104 out of 149 in 2004 to 96 in 2007. Moreover, the number of neighbourhoods within the 10% most deprived for the sub-domain of young people's education has almost doubled between 2004 and 2007 with an average change in rank of 300 places, increasing in deprivation.

Map 6.1 identifies the neighbourhoods with the highest change in rank between 2004 and 2007 in England. Neighbourhoods exhibiting decreased EST deprivation are illustrated in blue and increased deprivation is depicted in red. The districts with the highest proportion of neighbourhoods exhibiting decreased EST deprivation are North West Leicestershire and Oadby and Wigston, although Charnwood neighbourhoods have decreased the highest number of ranks in total. Neighbourhoods exhibiting increased deprivation are more populated within Blaby, where 73% of neighbourhoods have become more deprived. Blaby neighbourhoods also have shown the largest rank increase in total.

Map 6.1 EST change in ranks 2004-2007



The neighbourhood that had the largest change in ranks was Measham North in North West Leicestershire, decreasing in EST deprivation by 6,394 ranks,. Another 37 neighbourhoods moved at least 2,000 ranks decreasing in deprivation although none of these were in the most deprived 20% in 2004. Enderby North, and Grove Park and Shepshed North West both increased in EST deprivation by over 5,000 ranks, placing Shepshed North West, in Charnwood, into England's 20% most deprived. Another 54 neighbourhoods moved ranks of over 2,000 rank places due to increased deprivation, 5 of which moved in to the 20% most deprived in England. The table below depicts the neighbourhoods in England's 10% most deprived for EST in 2004 and 2007. Although national ranks have changed, there has been little change over time in terms of *which* neighbourhoods are the most deprived within the county. All neighbourhoods in the 10% most deprived for EST in 2004 remain in this decile in 2007.

Table 6.1 Neighbourhoods in 10% most deprived for EST

2004	rank	2007
Greenhill Centre	1	Greenhill Centre
Loughborough Woodthorpe	2	Loughborough Warwick Way
Loughborough Warwick Way	3	Loughborough Woodthorpe
Measham Centre	4	Measham Centre
Earl Shilton East	5	Hinckley Trinity West
	6	Melton Egerton North West
	7	Earl Shilton East

Source: ID2007

7. What more do we know about Education , Skills and Training deprived neighbourhoods?

Other datasets available at neighbourhood level can offer further insight into the characteristics of deprived neighbourhoods.

7.1 Urban/Rural Classification

Leicestershire is a largely rural authority with a number of small market towns and villages. 'Barriers to housing and services' is the domain that frequently shows high deprivation within rural, relatively affluent, areas. Indeed, neighbourhoods with high deprivation in terms of barriers experience little deprivation in terms of education and skills. This can be further supported by categorising each neighbourhood according to its rural classification. Such analysis shows that 'villages and hamlets' are less likely to be EST deprived and 'urban' areas are more prominent in the most EST deprived neighbourhoods. Over 90% of neighbourhoods in the most deprived 20% are described as 'urban' areas.

7.2 Output Area Classification (OAC)

All neighbourhoods have been categorised using data from the census to describe its characteristics. Using this Output Area Classification we can identify that all Leicestershire neighbourhoods within the most deprived 10% nationally for EST are described as 'disadvantaged urban communities' whereas the majority of neighbourhoods that are in the 10% least deprived are described as 'urban fringe'. Others in this least deprived decile are either 'white collar urban' or 'countryside'.

7.3 Ethnic Diversity Classification

There has been much well documented research linking ethnicity to educational attainment. However, there has been limited research into how the ethnic segregation of neighbourhoods where pupils live can impact on pupil attainment. Recent research has provided analysis of ethnic diversity in schools in Leicestershire over time suggesting greater school segregation than residential segregation. An approach developed by Poulson et al (2001)², and adopted by Jonhston et al (2006)³ to use with schools and residential areas, can be used to identify neighbourhoods where one ethnic group is predominant compared to neighbourhoods that are more diverse. Using ethnicity data of pupils by residential postcode each neighbourhood can be classified according to its level of diversity. This classification is used to apply the following typologies to Leicestershire neighbourhoods.

White majority population

Type 1: whites predominate (> 80% white)

Type 2: white majority (50%-80% white)

Non-white majority population

Type 3: substantial white minority (30-50% white)

Type 4: substantial non-white minority (<30% white but no single ethnic group domination)

Type 5: substantial non-white majority (<30% white with one ethnic group >50%)

Type 1 neighbourhoods were the most common in Leicestershire with 84% of neighbourhoods exhibiting a 'predominantly white' typology. This is typical of an authority with low proportions of BME population. 11% of neighbourhoods were Type 2, 4% Type 3 and 1% Type 1. No neighbourhoods were found to be Type 4.

All neighbourhoods in the most deprived 20% nationally for EST were classified as Type 1 neighbourhoods. Type 5 neighbourhoods were least deprived for this sub-domain than any other types. For the sub-domain of young people's education 4 out of the 6 Type 5 neighbourhoods were in the 10% least deprived in England.

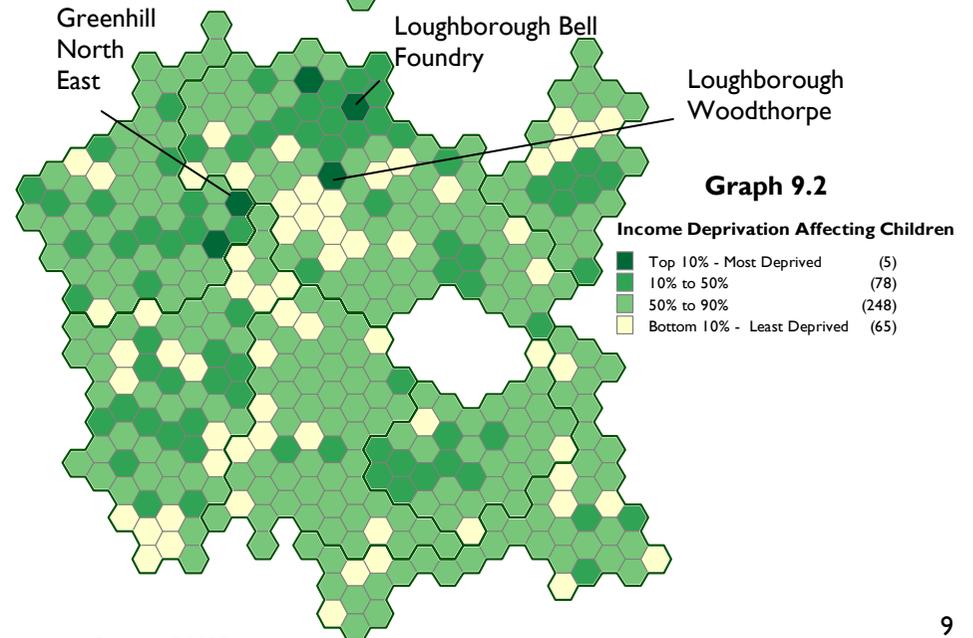
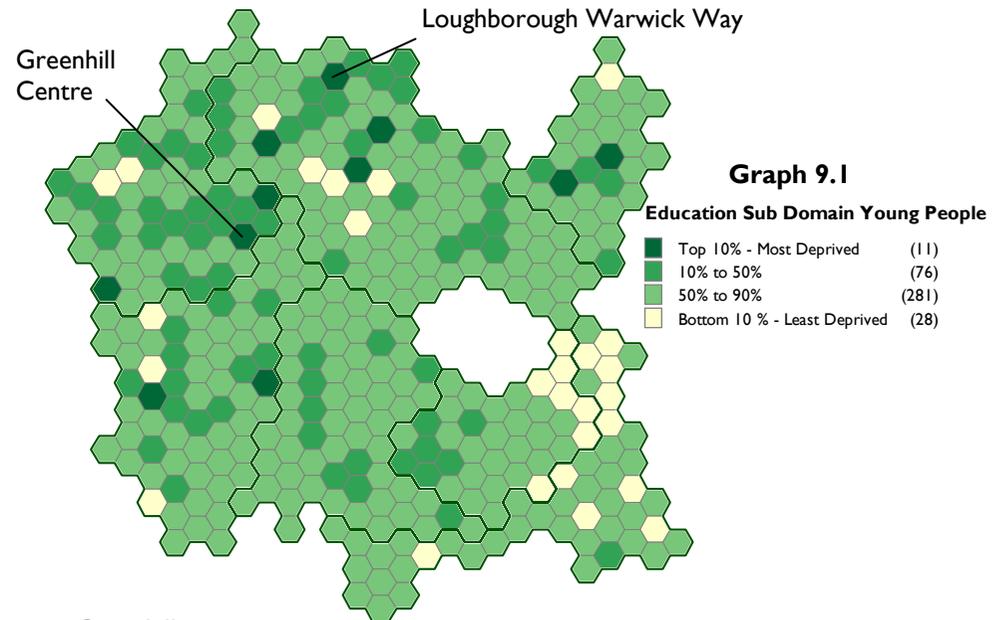
8. What more do we know about changing neighbourhoods?

In terms of rural classification 'Villages and hamlets' have decreased slightly in EST deprivation since 2004 whereas 'towns and fringe' neighbourhoods have had the largest increase in EST deprivation. OAC categories show that 'Professional city life' and 'multicultural city life' are the only neighbourhoods that have decreased in EST deprivation while 'miscellaneous built up areas' have increased the most in EST deprivation. In terms of ethnic diversity, white majority Type 1 and Type 2 neighbourhoods have had the highest increase in EST deprivation since 2004 with only Type 3 neighbourhoods showing a decreased in deprivation.

9. How does EST deprivation compared to other domains?

The Skills, Education and Training domain can also be correlated with the overall Index of Multiple Deprivation to analyse the extent to which these two domains are similar. Generally, the more deprived a neighbourhood in Leicestershire is in terms of education and skills the higher the overall deprivation. Furthermore, out of all domains EST is the most deprived domain in 180 out of 396 neighbourhoods causing EST to be more deprived than overall IMD in most neighbourhoods. Only 3 out of 32 neighbourhoods in most deprived 20% for EST are also in the most 20% most deprived for overall deprivation.

Family income is often used as a predictor of a pupil’s educational attainment, with extra funding given to schools where a high proportion of pupils are eligible for free school meals. Pupils from income deprived families often require more support to achieve within school, and to make positive transition post 16. A sub-domain of the income domain is Income Deprivation Affecting Children (IDAC). This can be correlated with the EST sub-domain of young people’s education to analyse the relationship at a neighbourhood level. Those neighbourhoods with high education deprivation also tend to exhibit high income deprivation affecting children. Out of the 33 neighbourhoods in the most deprived 20% for young people’s education 12 are also in the 20% most deprived for income affecting children. Maps 9.1 and 9.2 show how similar clusters of neighbourhoods, such as those within Coalville and Loughborough, are deprived for both from IDAC and young people’s education. The difference in deprivation between the domains is also clearly shown in these maps with only a small cluster of neighbourhoods in the 10% least deprived for young people’s education compared to IDAC.



Source: ID2007

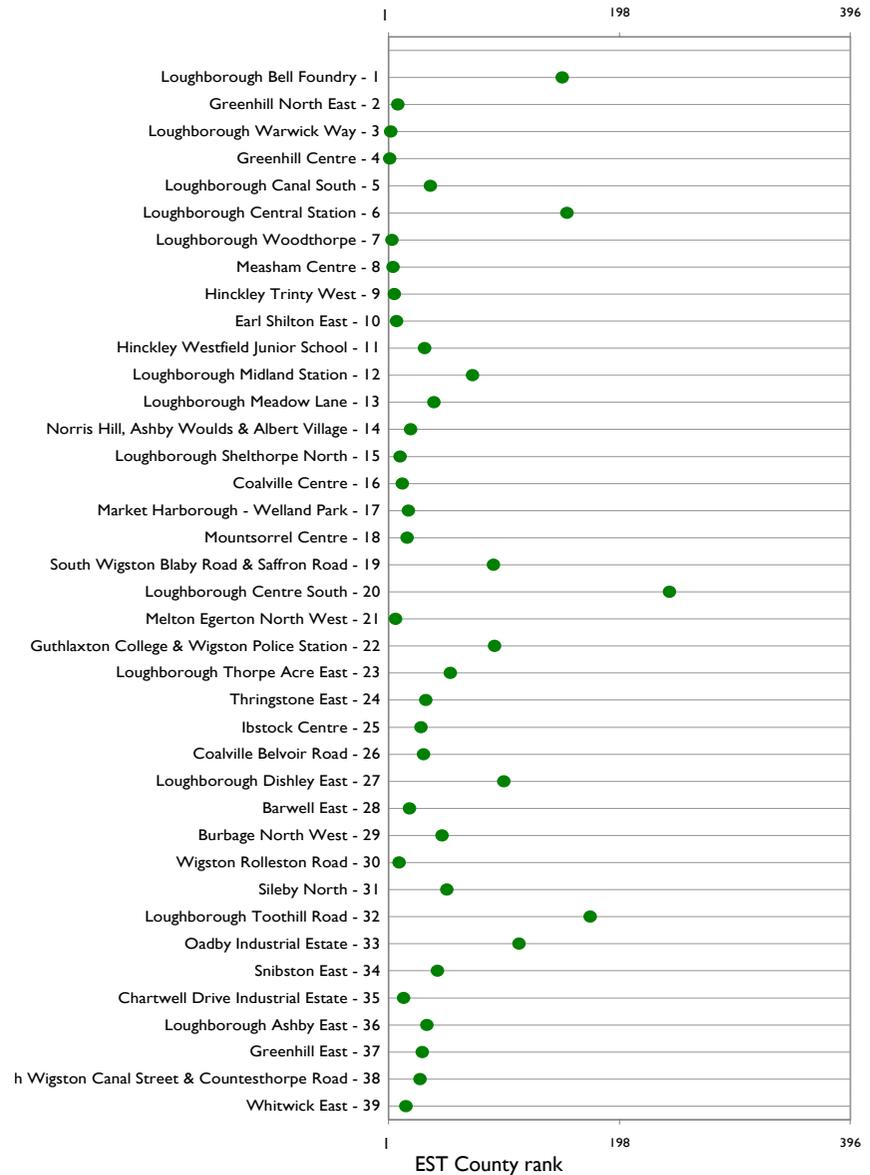
Despite education commonly appearing more deprived than income in Leicestershire, there are areas of east Oadby which are within the 10% least deprived for young people’s education but not for IDAC. Similarly, Loughborough Bell Foundry is in the 10% most deprived for IDAC, with 57% of children living in income deprived households, but young people’s education is not even in the 50% most deprived. It is apparent that while EST tends to be more deprived than other related domains, such as income, employment, and health, there are some pockets of deprived neighbourhoods that stand out as being relatively undeprived for EST.

10. How does deprivation affect EST within neighbourhoods

Loughborough Bell Foundry is an example of a neighbourhood that exhibits high deprivation but little deprivation in terms of EST. This neighbourhood is the *most* deprived in the County for Employment, Income, Health, and Crime domains, as well as overall IMD, yet is ranked around average at 149 out of 396 in the county for EST deprivation.

Graph 10.1 shows that by ordering the 10% most deprived neighbourhoods in Leicestershire by IMD rank there are a number of deprived neighbourhoods that appear relatively undeprived in terms of education and skills within the County. This suggests that there are other factors within deprived neighbourhoods that may have a positive influence levels of EST. It is possible to re-examine the datasets available about these neighbourhoods to explore this further.

Graph 10.1 EST ranks for most deprived neighbourhoods in Leicestershire

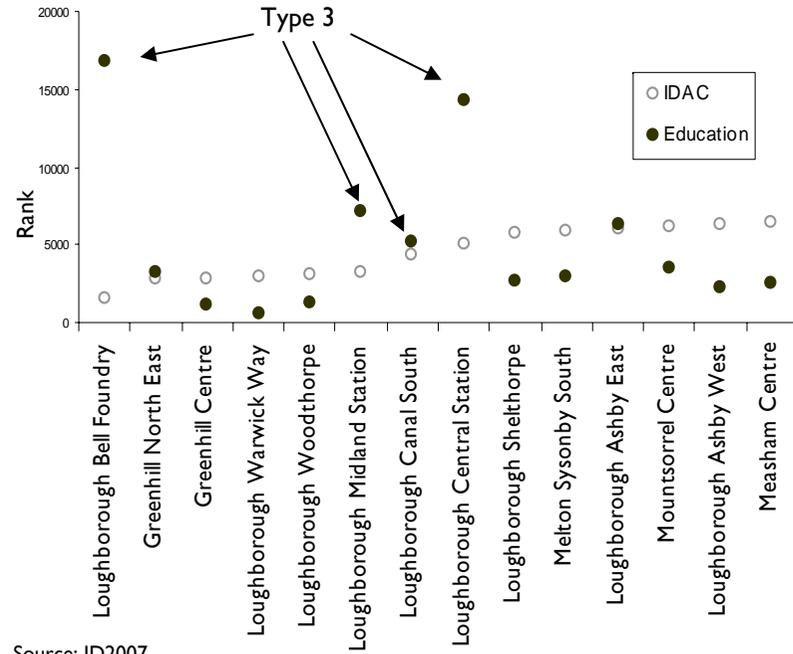


Source: ID2007

There is little difference in rural classifications for all deprived neighbourhoods regardless of EST deprivation. However, deprived neighbourhoods that are less deprived for EST are more likely to be described as ‘miscellaneous built up areas’ (such as Loughborough Centre South) or ‘multicultural city life’ (such as Loughborough Bell Foundry and Loughborough Central Station) than the commonly described ‘urban disadvantaged communities’. These areas often exhibit more diversity in terms of pupil ethnicity compared to the County as a whole. Loughborough Bell Foundry, for example, classified as Type 3, reveals a diverse ethnic pupil population of over 11 ethnic groups and no one prominent group. (White British 35%, Bangladeshi 25%, Indian 11%, White Other 10%).

The sub-domain of Income Deprivation affecting Children (IDAC) shows a similar picture in terms of differentiating between neighbourhoods where income deprived pupils are less educationally deprived than expected. If we look at the sub-domain of young people’s education for neighbourhoods that are within England’s 20% most deprived for income deprivation affecting children, all neighbourhoods that have lower education deprivation (by more than 50 ranks) can be classified as Type 3 areas. This is shown in Graph 10.2. A similar pattern exists for Type 3 areas in less deprived neighbourhoods, such as Oadby Beauchamp College and Oadby Hunters Way, where EST deprivation is over 8,000 ranks lower than IDAC.

Graph 10.2 Neighbourhoods in the most deprived quintile for IDAC



Source: ID2007

Of the 15 Type 3 neighbourhoods in Leicestershire, 12 have decreased in EST deprivation since 2004. They tend to be located either within Oadby (the less deprived) or Central Loughborough (more deprived). The communities within these neighbourhoods, particularly in Loughborough, tend to be transient, which may contribute towards the degree of change in ranks between 2004 and 2007. Indeed, a third of Type 3 neighbourhoods have decreased in EST deprivation by over 3,500 places while other types have generally increased in deprivation.

11. Conclusions

Leicestershire is a relatively undeprived county, ranked 139 out of 149 for deprivation. Analysis of employment and income domains suggest that relatively few neighbourhoods in the County experience such deprivation. However, exploration of the Education, Skills and Training domain in Leicestershire has revealed a range of deprivation scores spread across the deciles. This EST domain, particularly the sub-domain of adult skills, tends to be more deprived than other economic related domains. EST deprived areas are scattered around the County but clusters exist within North West Leicestershire and Charnwood. EST deprivation also appears to have increased since 2004, with the highest increases in Blaby district. Such observations suggests that while Leicestershire may experience low unemployment rates, low skilled employment, or hidden unskilled unemployed, may present barriers to economic growth. Despite this trend, further analysis has identified pockets of neighbourhoods within Loughborough and Oadby where education, skills and training are less deprived than would be expected, often within the most deprived neighbourhoods.

Low EST deprivation in a deprived area, such as Loughborough Bell Foundry, is particularly encouraging in terms of future economic growth since it is the standards of education for young people that will generate the potential quality of the workforce and break cycles of worklessness and benefit dependency. Whilst achieving higher levels of skills and qualifications equips young people with resources to fulfil their economic potential, the neighbourhood itself may not see the economic benefits as

people move away from deprived areas, choosing to work where their qualifications can be utilised and opening up greater choice in terms of where to live.

To gain greater understanding of these neighbourhoods and the people who live there, the associations with other datasets in this report can offer further insight into the characteristics of neighbourhoods that exhibit various levels of deprivation in education and skills in Leicestershire. The analysis in this report suggests that although relatively deprived, transient multicultural areas are showing signs of improvements through an increase in educational attainment, thus rejecting the constraints of deprivation associated with the neighbourhood such as high rates of unemployment and low income. However, caution should be used when analysing ethnic typologies due to the small number of ethnic diverse neighbourhoods within Leicestershire. Exploration into perceptions of residents living within such areas may be able to offer further insight into how deprivation effects the future aspirations within specific neighbourhoods.

12. References

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2. Poulson M. F, Johnson R. J, Forrest J, 2001, 'Intraurban ethnic enclaves: introducing a knowledge based classification method' Environment and Planning A 33 2071-2082
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