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The Black Country Consortium

**FLOORSPACE REQUIREMENTS AND LAND
DENSITY ASSUMPTIONS**

A REPORT BY: WM ENTERPRISE CONSULTANTS

Subsequent to this report Floor Space and Land Density assumption were subject to re-appraisal as a key component of the Employment Land Capacity Study methodology. This is set out in the Black Country Employment Land Capacity Study, GVA Grimley, September 2005.

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INTRODUCTION

This paper is concerned with the assumptions made in the GHK report on Spatial Implications of the Proposed Economic Strategy. In particular, it looks at the likely validity of the selected employment and land use density assumptions and the extent to which any deviations from these are likely to have material implications for the amount of employment land to be allocated.

BACKGROUND

The spatial implications of the economic strategy are effectively driven by three key factors, namely:

- the level and structure of the forecast economic activity
- the employment and site densities associated with the expected levels of economic activity
- the assumed spatial location of the economic activity.

A previous paper produced by WM Enterprise Consultants has looked at the first of these three key factors. Its findings are therefore taken as read in relation to this report, the focus of which is on employment and site densities.

ODPM GUIDANCE

Whilst the ODPM has issued indicative employment and site density figures,¹ there is recognition that any employment land allocation study needs to reflect local factors. This is because there are a number of things that ultimately determine employment and site densities, many of which are local in nature.

These include:

- industrial structure within sectors
- the mix of activities undertaken within individual industries
- the availability of land and premises and the associated cost
- the heritage of the industrial structure

etc.

Failure to reflect local factors in employment land allocations could lead to some material differences between forecast future requirements and actual future requirements.

GHK ASSUMPTIONS

In arriving at its estimate of the future employment land requirement for the Black Country, GHK has multiplied its employment estimate for each sector under each of the different scenarios by indicative employment densities for each sector and by assumed land use densities.

The indicative employment densities have been sourced from English Partnerships, with the figures originally estimated by Arup.

¹ ODPM Employment Land Reviews Guidance Notes

As such, the figures are based on national estimates and do not take account of factors local to the Black Country.

COMMENTARY

The concern with the GHK approach is that it does not reflect local conditions.

Employment Densities

Our experience is that, in practice, employment densities, particularly in manufacturing, can deviate significantly from the indicative densities used by English Partnerships.

That this is the case has been verified both by a recent survey of the occupiers of premises and by an analysis of available floorspace data undertaken by WM Enterprise in conjunction with Drivers Jonas.

In the case of the survey, a random sample of the occupiers of industrial and commercial premises were asked, *inter alia*, to provide details of the number of employees that they had, the square metres of premises occupied and the size of the site occupied.

The analysis of floorspace data was based around Valuation Office figures for the square metres of premises occupied by different activities. The level of voids was deducted from the base figures and the result divided by relevant employment totals derived from Business Inquiry statistics and estimates of self-employment.

The broad findings from this analysis and from the survey are presented in Figure 1, below, alongside the relevant English Partnerships comparators.

Figure 1: Comparison of Employment Densities Information, Undisclosed Area A, (Square Metres Per Employee)

| SECTOR | English Partnerships | Area A | |
|--------------------------|----------------------|--------|--------------|
| | | Survey | Desk Derived |
| Industry - General | 35.0 | 81.2 | 84.7 |
| Warehouse & Distribution | 50.0 | 33.3 | 39.8 |
| Office - General | 20.5 | 21.7 | 13.1 |

Whilst not suggesting that the figures contained in Figure 1, are in any way directly relevant to the Black Country, they do illustrate that the English Partnerships figures are not automatically applicable in all areas.

Specifically, the figures show a significant degree of consistency between the survey and desk derived results for manufacturing. Both of these employment densities are, however, significantly lower than the English Partnerships indicative figure for manufacturing.

There is also a degree of similarity between the survey and desk derived figures for warehousing and distribution. In contrast to the manufacturing figures, these are, however, significantly higher than the English Partnerships indicative figure for general warehousing. This again re-enforces the case for using local employment density figures.

The case for using local employment density figures for general offices is less clear-cut, with the English Partnerships figure generally supported by the survey findings. The desk derived figure is, in contrast, significantly lower than either the survey figure or the English Partnerships figure. This may be the result of definitional issues associated with the desk derived figures.

One thing that is apparent from the survey is that most businesses consider their current premises to be appropriate to their needs. As such, there is little support for the notion that manufacturing premises are occupying surplus space as a result of a decline in manufacturing activity.

Equally, an analysis of GVA figures suggests that the decline in manufacturing employment has not been matched by a decline in manufacturing output.

A Black Country Perspective

In order to gain further insight into whether or not the findings from the undisclosed area A in Figure 1 and the conclusions drawn therefrom are likely to be equally applicable to the Black Country, an estimate was made of current employment densities in the Black Country.

This was done by drawing down the 2003 floorspace statistics for the four Black Country local authority districts from the ODPM website. The floorspace areas were then divided by the relevant employment totals for the Black Country drawn from Table 3.5 of the GHK report Spatial Implications of the Proposed Economic Strategy. The detailed numbers are provided in Figure 2.

Figure 2: Apparent Black Country Employment Densities, 2003

| ACTIVITY | Floorspace (‘000 Square Metres) | Employment (‘000) | Square Metres Per Person |
|--------------------------|--|------------------------------|-------------------------------------|
| Industry - General | 9,385 | 112 | 83.8 |
| Warehouse & Distribution | 4,750 | 55 | 86.4 |
| Office - General | 1,212 | 72 | 16.8 |

Given the methodology employed, the figures for square metres per person should be treated as indicative rather than precise. Nevertheless and as shown in Figure 3, they are significantly different from the English Partnerships figures.

Figure 3: Comparison of Employment Density Information (Square Metres Per Employee)

| ACTIVITY | English Partnerships | Black Country* |
|--------------------------|-----------------------------|-----------------------|
| Industry - General | 35.0 | 83.8 |
| Warehouse & Distribution | 50.0 | 86.4 |
| Office - General | 20.5 | 16.8 |

* Indicative

It is apparent from Figure 3 that the English Partnerships indicative employment density for manufacturing significantly understates the floorspace per person employed in manufacturing in the Black Country.

Whilst the figures for warehouse and distribution could lead to a similar conclusion being drawn, it has to be borne in mind that English Partnerships provides a lower density figure for large scale and high bay warehousing of 80 square metres per person. This is not dissimilar to the calculated 86.4 square metres per person in the Black Country.

However, not all of the Black Country warehousing is large scale and high bay. As such, the English Partnerships indicative figure for warehousing would appear to be low.

Equally, the English Partnerships employment density for offices appears low. This may be due to the influence on non-city centre developments within the Black Country.

Irrespective, the above analysis suggests that greater cognisance needs to be taken of current local employment densities within the Black Country, in forecasting future employment densities and employment land requirements.

Changing Employment Densities

The GHK paper makes assumptions about how employment densities will change in the future. In general, the assumption is that manufacturing will require less space per employee in the future than it does at present, whereas other activities will require more space per employee.

There can be little doubt that manufacturing in the Black Country, the West Midlands region, the UK and in other developed economies, will need to focus increasingly on higher value added or niche products. UK wage rates and other costs are too high to support the manufacture of commodity products, other than through highly automated processes.

Highly automated processes require few people but may require a large amount of space in order to accommodate machinery. As such, increased automation may lead to an increase in the amount of floorspace per employee, not a reduction.

Concentration on niche and higher value added products may require less floorspace per employee as greater emphasis is placed on embodying design and knowledge.

Whilst it is understood that UCL is planning to undertake analysis of available data in order to gain an insight into changing employment densities, this work has not yet progressed to a point where any conclusions can be drawn. We are not aware of any other work that has been undertaken in this area.

Our own limited database of companies and their occupancy of premises suggests that some of those active in higher value added, IP related industries are crammed into their premises, whilst others have large amounts of space per person.

In the light of the above, we feel unable to comment on whether or not the GVA assumptions in relation to change over time are realistic, other than we are not aware of any study that support or refutes the assumptions.

Land Requirements (Plot Ratios)

The plot ratio assumptions appear reasonable, given that they are derived from the Black Country, albeit Walsall rather than the whole of the Black Country.

CONCLUSION

The overall concern is that the English Partnerships employment density ratios have been used in calculating the future employment land requirements of the Black Country, rather than the existing local ratios.

Our research suggests that manufacturing and warehouse / distribution ratios are particularly influenced by local factors. There is no evidence to suggest that differences between these and the English Partnerships standards are the result of industrial decline or inefficiencies. As such, there is no evidence to support the view that the English Partnerships indicative standards will become the norm.

In addition, there is no evidence to support the view that employment densities will change over time, although this does not mean that change will not occur.