

Appendix 6: Employment and Development Density Assumptions

Employment Density

Employment density assumptions have been applied to the employment change figures to calculate the floorspace requirements to accommodate employment change. We have used employment density assumptions presented in *Employment Densities: A Full Guide, July 2001*, by Arup Economics and Planning on behalf of English Partnerships and the RDAs. The work by Arup provides a range of employment densities, expressed as sq m per worker. It also considers a range of employment uses, which we have simplified for the purposes of this study.

Employment Category	Assumption
Office	<p>The work by Arups notes a range of office uses with varying densities. For the purposes of this study we have used an average of the varying densities presented.</p> <p>General offices – 19 sq m per employee Headquarters – 22 sq m per employee Serviced Business Centre – 20 sq m per employee Call Centre – 13 sq m per employee Average – 18.5 sq m per employee</p>
Other Business Space	<p><i>Again, the Arups report presents a range of industrial and light industrial employment densities. We have taken an average position.</i></p> <p>General Industrial – 34 sq m per employee Small Business Units – 32 sq m per employee High Tech/R&D – 29 sq m per employee Science Park – 32 sq m per employee Average – 32 sq m per employee</p>
Warehouse	<p><i>Two types of warehouse densities are presented. We have taken the mean position as a mixture of warehousing units will be required.</i></p> <p>General Warehousing – 50 sq m per employee Large Scale/High Bay – 80 sq m per employee Adopted – 65 sq m per employee</p>
Non-B Use Classes	<p>This covers a range of activities within the Motor Trades, Retail, Tourism & Leisure, Education & Health and Other Services sectors. As such we have adopted a broad assumption based on 40 sq m per employee based on stated benchmarks across this mix of uses where available.</p>

Research by DTZ for the South East of England Regional Assembly (SEERA) and South East of England Development Agency (SEEDA) 'Use of Business Space and Changing Working Practices in the South East' (May 2004), considered the potential impact of more flexible working patterns and increased use of technology upon employment densities. With such strong forces potentially exerting influence on the property/floorspace needs of occupiers in the future it is important to consider such issues when setting policy. The study made some of the following findings:

"Change in floorspace ratios are taking place at a slow pace, especially in the light of various forces (some operating in opposite directions) shaping it".

"...changing working practices appear to have had little impact on the use of business space".

"Over three quarters of respondents (to the business survey) suggested that no change to floorspace to worker ratio is likely due to new/changing working practices".

"In terms of new working practices and employment densities, the evidence presented in this report shows limited overall impact of changing working practices on employment density, except for some office based employment activities with increasing ICT use".

This research would suggest that there is no strong evidence, on the basis of changing working practices, to justify a significant departure from established guidance on floorspace per worker assumptions as set out in the Arup report for English Partnerships and the RDAs. However, it may be prudent to monitor future research in this area to identify whether changing working practices generate more significant floorspace impacts in the future.

Development Density Assumptions

The floorspace requirements have been translated in to land requirements using development density assumptions.

For office uses, the assumptions are hard to make due to the varied nature office developments. Town centre development may achieve site coverage of close to 100%, whereas in out of town locations this may fall to 40%. For this study we have adopted assumptions aligned to OOT business park type office development to provide a top side estimate of land requirements. This assumes two-storey development and 40% site coverage.

For other business space, warehouse and relevant non-B uses we have assumed a development density of 40% and single storey development.